



Saurashtra University

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"A PSYCHOLOGICAL STUDY OF ANXIETY MENTAL
HYGIENE AND LIFE SATISFACTION OF
NORMAL AND SPECIAL CHILDREN'S
PARENT'S OF JUNAGADH DISTRICT"

ccHGFU- IH<, FGF ; FWFZ6 VG[IJIXQ8 sDNA]âfAF/SMGF
DFTFvI5TFGL IJST IR\TF4 DFGI; S :JF:yI
VG[ÒJG; \TMOFGM DGMU{7FIGS VeI F; cc

A THESIS
TO BE SUBMITTED TO
SAURASHTRA UNIVERSITY
RAJKOT

For The Degree of
DOCTOR OF PHILOSOPHY
IN
PSYCHOLOGY

Under The Faculty of Arts
By
Sp. Teacher RADADIYA PARUL J.
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JUNAGADH
SEPTEMBER -2008

Registration No. 3296

Date : 16-Sep-2005

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DECLARATION

I hereby declare that the Research work presented in this thesis is prepared by me after studying various references. The descriptions and narrations found there in are entirely original. Therefore I declare them authentically as original. Moreover, I am responsible for the opinions and the other details found in this thesis.

I declare thesis to be my original work.

Date :

Place : Junagadh

Radadiya Parul J.
(M.A., B.Ed. Psychology)
Sp. Teacher
National Association for
the Blind Junagadh District Branch
Junagadh

CERTIFICATE

This is to certify that work embodied in this thesis entitled on "*A Psychological Study of Anxiety, Mental Hygiene and Life Satisfaction of Normal & Special Children's Parents of Junagadh District*" has been carried out by *Parul J. Radadiya* under my direct guidance and supervision. I also declare that the work done and presented in this thesis is original and Independent.

Date :

Place : Junagadh

Dr. I. D. GUJARATI
M.A., Ph.D.
Lecturer & Head
Department of Psychology
Dr. Subhash Mahila
College,
Junagadh

ଅଧିକାରୀ-୨

DGMJ(7FIGS ; XNWG ; DFH J(7FIGS ; XNWG CMJFYL B)A H HI8,
VG(jIF5S KP VFYL ; XMWSFGL ; DH4 VGJEJ4 SBJA4 ; DFH TPDH
ZF08E1 5IZA/MGL ; JFJL V ; Z TGF 5Z 50(KP ; F(5YD C). `JZGL K6L
K\S(DG(DG)I GM HgD VF%I M K# T(H ZLT(DFZF DFTFvI5TFGL S5F VG(
T)DGF pKZGL VIJZT DFGJ ;)FGL , FU6L ZCL CMJFYL C)DGMJ 7FGGL
OLU)VM H GCL# 5ZT) DNA)âGL XF/FDF) cN)N)FMGL ;)FvSFI D)A DFZ(
ÒJG ; TT 5 ; FZ SZLG(VFGN D/JL ZCL KP T)YL C)VF AWFGL K6L KP

clH7F; FcGL 5)A/J)ç V(DG(M.A. 5KL DGMJ 7FGD) Ph.D.GF
SFI D)A H)D)FJFGL TS VF5L KP T)D)A DG(DFZF 5FYIDS XF/FYL DFOLG(
VG)GFTS ;)MLGF UZ)HGM(VGJEJ VG(DCGT EFZF 30L KP DFZF SBJ)AGF
5) JOL, MTPDH DFZL ; FY(; TT ; 5SD)A VFJTF VG\$,)SM(V DFZL ; DH
IJS ; FJL K(T)DGM(C)VF EFZ DFG)KP VF SFI G(DG(DFZF 3ZD)AINSZL TZLS(
VF8, L D)BL OLU) D/JJF CD)XF NZ\$; UJO SZL VF5GFZF SBJ)ALHGMD)A
DFZMEF. X()F VG(AC)G COFFGM56)NI 5)J)SGL VF TS(K6L KP

Ph.D. ZÒ:8)XG D/JJFGL VtI)T , F)FUF/FGL DCGTYL C)DFZM
I)QFI G)PL SZL XS) KP H)D)A DG(Ph.D.GF UF. 0 TZLS(H)NF H)NF
DCFG)EJ)GF VF EFZ IJGF SP ZCL XS)m

DFZF Ph.D.GF UF. 0 OF) ZL VF. POLP U)HZFTL ; FC)A(DFZ)ZÒ:8)XG
SZFJLG(DG(; TT 5Z6F VF5LG(DFZ)SFI "5)6"SZFJ I)K(T)AN, C)T)DGM
VG(T)DGF SBJ)ALHG)GM VF EFZ DFG)KP

DFZF ; XMMGSFI DFX~YL VT ; ML ; FY[ZCLG[DG[; TT CD VG[
DFUNXG 5Z] 5F0GFZ I5TFT]I OFF] VGV VDP J; F6L ; FC]AGM TDH
TDGF WD5tGL VDLA] TYF TDGF 5]+ IAD, EF. VG[5tGL DLTFAG
TYF SBJ]ALHGMGL C]INSZLT]I , FU6LGM VG]EJ SZTL ZCL K] TDGL 56
K6L KP

DGMJ7FGGF cELQD I5TFDCc ; DFG JFI P SP N] F. ; FC]A TYF
TDGF 3ZGF NZS ; eIMGF ; FY ; CSFZGM VFEFZ DFGJF DF8[DFZL 5F; [
XaNMGYL S]S]L ZLT[VFEFZ DFG]m

DFZF ; XMMG SFI DFXDFZF ; ; ZF4 ; F; DF4 DFZF H9 zL ;]G, EF. 4
G6N zL DIGOFFA] TYF JOL, MGM C] VFEFZ DFG] KP JTDFG ; DI DFX
5MTFGL 5tGL prR;Z OLU] D/[JL XS[TDH DNA]âGF 1F]+DF]Ph.D. Y. G[
prRTD IXBZ 5F%T SZL XS[T]L IJXF/ 1108 EFZF DG[; DI 4 ; HMJ VG[
5IZI:YITGF NZS 1F]+DF] TG4 DGVG[WGYL ; FY VF5GFZ CZ5/ ; FY[
ZCGFZ DFZF ÒJG; FYL zL D]X AIP OMAZLI FGL C]VFÒJG K6L K]S[
H]MM[DFZL H]L IH7F;]5tGLG[prRTD OLU] D/[T]L 5Z6F 5ZL 5FOL
KP

VF p5ZFT 5]:T]T ; XMMG SFI DFX; FY VF5GFZ VG[; XMMG SFI G[
J]J]FG ZFBJF DF8[DFZL ; \YFGF DFGND+L zL VIG, EF. JIP 58[, TYF
; CSFI SZ ID+MEFZF D/[; CSFZ AN, C]TDGL ; NF K6L ZICXP

cc; CSFZ V[H ; O/TF K]cc H]MNGF ; CSFZYL VF ; XMMG SFI "XSI
AgI] T]F ; FWZ6 VG[IJIX08 AF/SM sDNA]âfGF DFTFvI5TF H]MM[

5\FEJI, GL IJUTM EZJFDA; ISI TF4 Tt5ZTF NFBJL TMNGM VFEFZ SD
E}, L XSF1 ; TMNGM56 C\VT0SZ65}JS VFEFZDFG}K}

VF ; FY[DFZF XMWIGAWDA ; , FC; }RG VG[DNN~5AGGFZ
DGMJ7FG IJQFI GF TPDH IJQFI S TH7M5fwI F5S OFP}JFI PJLP5F9S ; FC}A4
OFP} GNF6LIF ; FC}A4 OFP} DB, AG AR4 OFP} ; Z}XEF. 5FZ}B ; FC}A4
OFP} XFD0EF. UHZF ; FC}A s}IGJ'z 5fwIF5S VU}S<RZ I}JGI; 8L4
HG}FU-f4 OFP}DC}XEF. V}GP jIF; 4 OFP} ZTGAG 5LP ; M, }SL4 OFP} DLTFAG
WG}XF4 OFP} GI GFAG jIF; 4 OFP} HFUITAG jIF; p5ZFT DFZF ICT}K}ID+M
Z}kDF VP XFC4 INGF 0P E}VVG[NJ[DFWJL VFZP JUZ[GFDL}vVGFDL v
5}tI 1F I F 5ZMF ZLT}; TT ZFCAZ 5YNXS AGGFZ ; J}GL VFEFZL K}

p5ZMST ; XMWGSFI "NZdIFG 36F AWF ; NE"; FICTI 4 H}NF H}NF
; FDFI I SM HG", M ; XMWG 5}Z4 , 3}GAW VG[DCFXMW IGAWGF ; XMWSM
TPDH , }BSMGL 56 B}A H }NI 5}JS VFEFZL K} TPDGF ; FICTI JUZ VF
SFI "36}H D}kS}, K}

VF DCFIGAWG[Sd%} }Z 5Z :JrK4 ; }NZ VG[8}SFUF/FDA VFSFIZT
SZGFZ zL ZFH}XEF. ; M, }SLGM56 }NI 5}JS VFEFZ jI ST SZ}K}



5§Z6 - 1

IJQFI 5µX

5[. H GP

1.1	5[.TFJGF	01
1.2	IJIX08 AF/SMGF ; FDFqI . ITCF; GM5IZRI	03
1.3	Vwl I GGL V{TCFI; S E)DSF	17
1.4	; XMWGGL ; D:IF	19
1.5	5[.TJT VeIF; GF C[T]MM	20
1.6	5[.TJT VeIF; GL ptS<5GFVM	21
1.7	VUtI GF 5NMGL jI FbIF	31
1.8	5[.TJT VeIF; GF 5IZJtIM	33
1.9	; XMWGGF ; FWGM	41
1.10	5[.TJT ; XMWG IMHGF	43
1.11	VFS0FXF:+LI 5âITGMp5IMJ	47
1.12	5[.TJT ; XMWGGL VUtI GF	48
1.13	; XMWG 5§Z6MGjVFI MHG	49

5§Z6 v 2

; XMWG ; FICTI GL ; DL1FF

5[. H GP

2.1	5:TFJGF	53
2.2	; XMWG ; FICTI T5F; G\DCÀJ VG[D]I	55
2.3	IJST IRVFF Vß, [X]m	56
2.4	IJST IRVFFGF 5)LI VeIF; M	74
2.4.1	IJST IRVFFGF 5)LI VeIF; M ; FY[5:TJT ; XMWGGL T], GF	77
2.5	DFGI; S :JF:yI G\; ÆFITS DCÀJ	77
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2.8	ÒJG ; VMF VU[YI[, F 5)LI VeIF; M	97
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5§Z6 V 3

; XMWG I MHGF4 VeIF; 5âIT4 C[T]MMVG[

DFICTL V§+LSZ6

5[H GP

3.1	5[TFJGF	103
3.2	; FDFIHS ; XMWGGL jI FbI F	105
3.3	; XMWG UY6L	108
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3.14	VFSOFXF:+LI 5[I]STVM	139
3.15	5[TTT VeIF; GL DFICTLG[V§+LSZ6	145

5SZ6 - 4

; XMMG 5YDZ64 VY38G VG[5IZ6FD RRF"

5[H GP

4.0	5:TFJGF	147
4.1	5YDZ6 Vß, [X]m	147
4.2	; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFvl5TF IJX[GL ; FDFgI DFICTL	149
4.3	; DU :JT+ 5IZJtI MNXFJT)SM8Sv23-A	173
4.4	t-S; MBL 5DF6[XgI ptS<5GFVMGL U6TZL	178
4.5	r-S; MBL 5DF6[XgI ptS<5GFVMGL U6TZL	256
4.6	F-S; MBL 5DF6[XgI ptS<5GFVMGL U6TZL	266

5§Z6 - 5

; XMWGGF TFZ6MVG[; RGM

5[H GP

5.0	5[TFJGF	279
5.1	; XMWGGM; FZ	279
5.2	; XMWGGF VFWFZ[D/J, F TFZ6M	281
5.3	; DU tvS; MBL 5pF6[XgI ptS<5GFVMGF TFZ6M	282
5.4	tvS; MBL 5pF6[5ZT+ 5IZJtI "5pF6[TFZ6M	298
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5.10	GA/F DFGI; S :JF:yI GF SFZ6M	305
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5.15	5[TJT; XMWGGL DI FNF	308
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; FZ6L; JR
5S Z6v4

; FZ6L GAZ	IJUT	509 GP
1	; FWFZ6 VG[IJIX08 AF/SMGF DFTFvI5TFGL ; bIF VG[8SFJFZL NXF"JT]SM08S	150
2	; FWFZ6 AF/SMGF DFTFvI5TFGL ; bIF VG[8SFJFZL NXF"JT]SM08S	151
3	IJIX08 AF/SMGF DFTFvI5TFGL ; bIF VG[8SFJFZL NXF"JT]SM08S	152
4	A[AF/SJF/F VG[A\YL JW] AF/SJF/F SBJAGF ; FWFZ6 AF/SMGL DFTFGL ; bIF VG[8SFJFZL NXF"JT]SM08S	153
5	A[AF/SJF/F VG[A\YL JW] AF/SJF/F IJIX08 AF/SMGL DFTFGL ; bIF VG[8SFJFZL NXF"JT]SM08S	154
6	A[AF/SJF/F VG[A\YL JW] AF/SJF/F ; FWFZ6 AF/SMGF I5TFGL ; bIF VG[8SFJFZL NXF"JT]SM08S	155
7	A[AF/SMJF/F VG[A\YL JW] AF/SMJF/F IJIX08 AF/SMGF I5TFGL ; bIF VG[8SFJFZL NXF"JT]SM08S	156
8	UfdI IJ:TFZGF VG[XCZL IJ:TFZGF ; FWFZ6 AF/SMGL DFTFGL ; bIF VG[8SFJFZL NXF"JT]SM08S	157
9	UfdI IJ:TFZGF VG[XCZL IJ:TFZGF IJIX08 AF/SMGL DFTFGL ; bIF VG[8SFJFZL NXF"JT]SM08S	158
10	UfdI IJ:TFZGF VG[XCZL IJ:TFZGF ; FWFZ6 AF/SMGL I5TFGL ; bIF VG[8SFJFZL NXF"JT]SM08S	159
11	UfdI IJ:TFZ VG[XCZL IJ:TFZGF IJIX08 AF/SMGF I5TFGL ; bIF VG[8SFJFZL NXF"JT]SM08S	160
12	WNP12 ; JWL VG[WNP12 YL JW] VeIF; JF/L ; FWFZ6 AF/SMGL DFTFGL ; bIF VG[8SFJFZL NXF"JT]SM08S	161

13	WMP12 ; WL VG[WMP12 YL JW] VeIF; JF/F IJIX08 AF/SMGL DFTFGL ; bIF VG[8SFJFZL NXFJT]SM8S	162
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16	; V ST SBJAGF VG[IJEST SBJAGF ; FWFZ6 AF/SMGL DFTFGL ; bIF VG[8SFJFZL NXFJT]SM8S	165
17	; V ST SBJAGF VG[IJEST SBJAGF IJIX08 AF/SMGL DFTFGL ; bIF VG[8SFJFZL NXFJT]SM8S	166
18	; V ST SBJA VG[IJEST SBJAGF ; FWFZ6 AF/SMGF I5TFGL ; bIF VG[8SFJFZL NXFJT]SM8S	167
19	; V ST SBJA VG[IJEST SBJAGF IJIX08 AF/SMGF I5TFGL ; bIF VG[8SFJFZL NXFJT]SM8S	168
20	35 JQF" ; WL VG[35 JQFYL JW] pDZGF ; FWFZ6 AF/SMGL DFTFGL ; bIF VG[8SFJFZL NXFJT]SM8S	169
21	35 JQF" ; WL VG[35 JQFYL JW] pDZGF IJIX08 AF/SMGL DFTFGL ; bIF VG[8SFJFZL NXFJT]SM8S	170
22	35 JQF" ; WL VG[35 JQFYL JW] pDZGF ; FWFZ6 AF/SMGF I5TFGL ; bIF VG[8SFJFZL NXFJT]SM8S	171
23	35 JQF" ; WL VG[35 JQFYL JW] pDZGF IJIX08 AF/SMGF I5TFGL ; bIF VG[8SFJFZL NXFJT]SM8S	172
23-A	; DUJ :JT+ 5IZJtI MNXFJT]SM8SV t- S; MBL 5Pf6[X]I ptS<5GFVMGL U6TZL	173
24	A[AF/SJF/F ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S; MBL	178
25	A[AF/SJF/F ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t' S; MBL	179

26	A[AF/SJF/F ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF ÒJG ; ∇MDFGF 5F%TFSMGF VFWFZ['t' S; MBL	180
27	A[AF/SMJF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S; MBL	181
28	A[AF/SMJF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t' S; MBL	182
29	A[AF/SMJF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF ÒJG; ∇MDFGF VFWFZ['t' S; MBL	183
30	A[YL JW] AF/SJF/F ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S; MBL	184
31	A[YL JW] AF/SJF/F ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t' S; MBL	185
32	A[YL JW] AF/SJF/F ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF ÒJG ; ∇MDFGF 5F%TFSMGF VFWFZ['t' S; MBL	186
33	A[YL JW] AF/SJF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S; MBL	187
34	A[YL JW] AF/SJF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t' S; MBL	188
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36	UfdI IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S; MBL	190
37	UfdI IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t' S; MBL	191
38	UfdI IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF ÒJG; ∇MDFGF 5F%TFSMGF VFWFZ['t' S; MBL	192
39	UfdI IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S; MBL	193

40	UfdI IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t' S; MBL	194
41	UfdI IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL ÒJG ; ∇MDFGF 5F%TFSMGF VFWFZ['t' S; MBL	195
42	XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S; MBL	196
43	XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t' S; MBL	197
44	XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL ÒJG ; ∇MDFGF 5F%TFSMGF VFWFZ['t' S; MBL	198
45	XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S; MBL	199
46	XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t' S; MBL	200
47	XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL ÒJG ; ∇MDFGF 5F%TFSMGF VFWFZ['t' S; MBL	201
48	WMP12 p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S; MBL	202
49	WMP12 p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF 5F%TFSMGF VFWFZ['t' S; MBL	203
50	WMP12p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF ÒJG ; ∇MDFGF 5F%TFSMGF VFWFZ['t' S; MBL	204
51	WMP12p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S; MBL	205
52	WMP12p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t' S; MBL	206
53	WMP12 p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08AF/SMGF I5TFGL ÒJG ; ∇MDFGF 5F%TFSMGF VFWFZ['t' S; MBL	207

54	WMP12; WLGf VeIF; JF/F ; FWZ6 VG[IJIX08 AF/SMGF DFTFGL IJST IRTFGF 5f%TFsmGF VFWZl't' S; MBL	208
55	WMP12; WLGf VeIF; JF/F ; FWZ6 VG[IJIX08 AF/SMGL DFTFGF DFGI; S :Jf:yI Gf 5f%TFsmGF VFWZl't' S; MBL	209
56	WMP12; WLGf VeIF; JF/F ; FWZ6 VG[IJIX08 AF/SMGL DFTFGF ÒJG ; vMFGF 5f%TFsmGF VFWZl't' S; MBL	210
57	WMP12; WLGf VeIF; JF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRTFGF 5f%TFsmGF VFWZl't' S; MBL	211
58	WMP12; WLGf VeIF; JF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGF DFGI; S :Jf:yI Gf 5f%TFsmGF VFWZl't' S; MBL	212
59	WMP12; WLGf VeIF; JF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGF ÒJG ; vMFGF 5f%TFsmGF VFWZl't' S; MBL	213
60	; v}ST SBJAGF ; FWZ6 VG[IJIX08 AF/SMGL DFTFGF IJST IRvTFGF 5f%TFsmGF VFWZl't' S; MBL	214
61	; v}ST SBJAGF ; FWZ6 VG[IJIX08 AF/SMGL DFTFGF DFGI; S :Jf:yI Gf 5f%TFsmGF VFWZl't' S; MBL	215
62	; v}ST SBJAGF ; FWZ6 VG[IJIX08 AF/SMGL DFTFGF ÒJG ; vMFGF 5f%TFsmGF VFWZl't' S; MBL	216
63	; v}ST SBJAGF ; FWZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRvTFGF 5f%TFsmGF VFWZl't' S; MBL	217
64	; v}ST SBJAGF ; FWZ6 VG[IJIX08 AF/SMGF I5TFGL DFGI; S :Jf:yI Gf 5f%TFsmGF VFWZl't' S; MBL	218
65	; v}ST SBJAGF ; FWZ6 VG[IJIX08 AF/SMGF I5TFGF ÒJG ; vMFGF 5f%TFsmGF VFWZl't' S; MBL	219
66	IJEST SBJAGF ; FWZ6 VG[IJIX08 AF/SMGF DFTFGF IJST IRvTFGF 5f%TFsmGF VFWZl't' S; MBL	220
67	IJEST SBJAGF ; FWZ6 VG[IJIX08 AF/SMGL DFTFGF DFGI; S :Jf:yI Gf 5f%TFsmGF VFWZl't' S; MBL	221

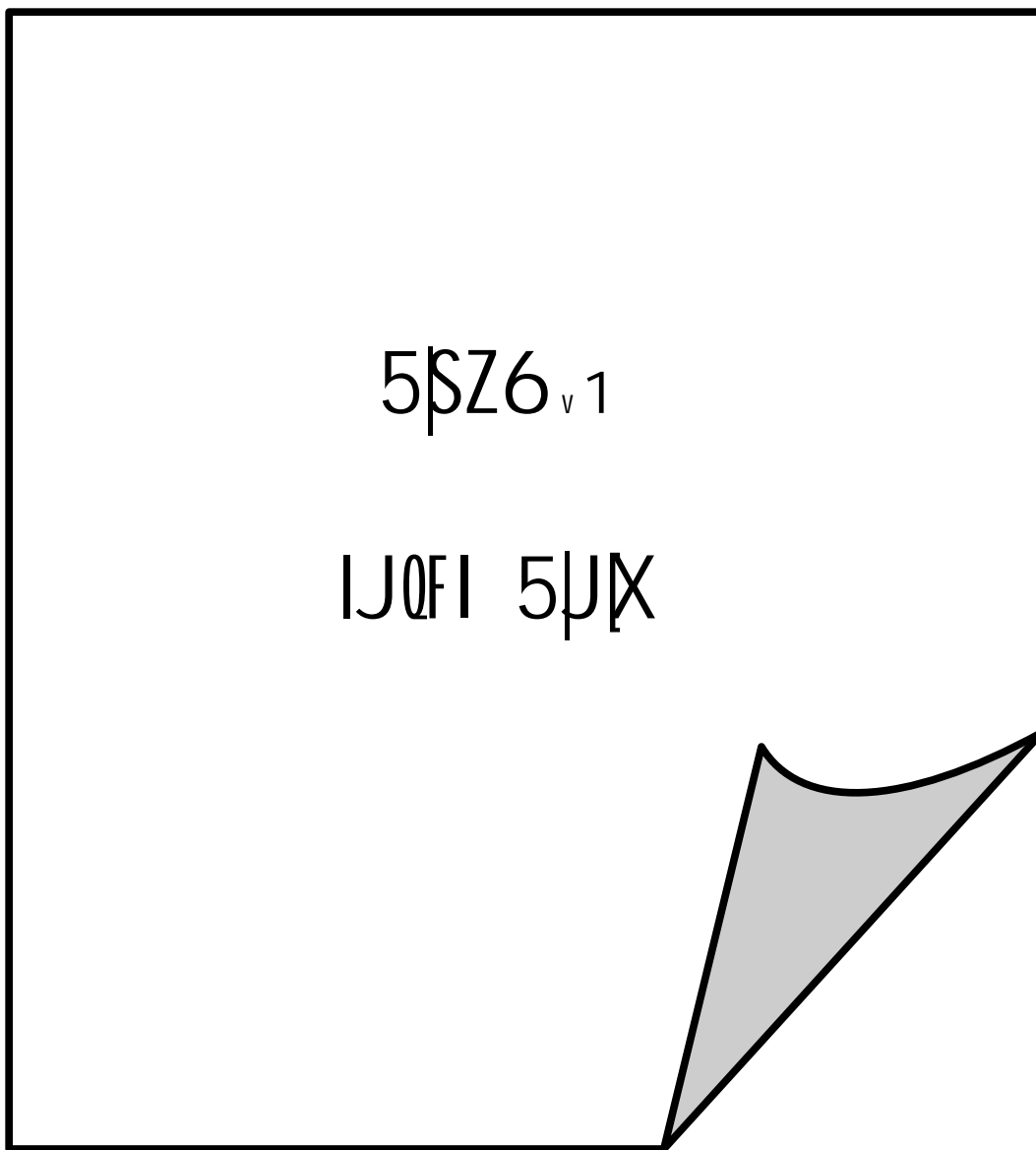
68	IJEST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF ÒJG ; ∇MDFGF 5F%TFSMGF VFWFZΛ't' S; MBL	222
69	IJEST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRVTFGF 5F%TFSMGF VFWFZΛ't' S; MBL	223
70	IJEST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF DFGI; S :JF:yI GF 5F%TFSMGF VFWFZΛ't' S; MBL	224
71	IJEST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF ÒJG ; ∇MDFGF 5F%TFSMGF VFWFZΛ't' S; MBL	225
72	35 JQFYL p5ZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF IJST IRVTFGF 5F%TFSMGF VFWFZΛ't' S; MBL	226
73	35 JQFYL p5ZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF DFGI; S :JF:yI GF 5F%TFSMGF VFWFZΛ't' S; MBL	227
74	35 JQFYL p5ZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL ÒJG ; ∇MDFGF 5F%TFSMGF VFWFZΛ't' S; MBL	228
75	35 JQFYL p5ZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRVTFGF 5F%TFSMGF VFWFZΛ't' S; MBL	229
76	35 JQFYL p5ZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL DFGI; S :JF:yI GF 5F%TFSMGF VFWFZΛ't' S; MBL	230
77	35 JQFYL p5ZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF ÒJG ; ∇MDFGF 5F%TFSMGF VFWFZΛ't' S; MBL	231
78	35 JQFYL ; JMLGF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF IJST IRVTFGF 5F%TFSMGF VFWFZΛ't' S; MBL	232
79	35 JQF"; JMLGF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF DFGI; S :JF:yI GF 5F%TFSMGF VFWFZΛ't' S; MBL	233
80	35 JQF"; JMLGF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF ÒJG ; ∇MDFGF 5F%TFSMGF VFWFZΛ't' S; MBL	234

81	35 JQF" ; WJLGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S ; MBL	235
82	35 JQF" ; WJLGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF DFGI ; S :JF:yI GF 5F%TFSMGF VFWFZ['t' S ; MBL	236
83	35 JQF" ; WJLGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL ÒJG ; VTMDFGF 5F%TFSMGF VFWFZ['t' S ; MBL	237
84	; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGL IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S ; MBL	238
85	; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGL DFGI ; S :JF:yI GF 5F%TFSMGF VFWFZ['t' S ; MBL	239
86	; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGL ÒJG ; VTMDFGF 5F%TFSMGF VFWFZ['t' S ; MBL	240
87	; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S ; MBL	241
88	; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF DFGI ; S :JF:yI GF 5F%TFSMGF VFWFZ['t' S ; MBL	242
89	; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL ÒJG ; VTMDFGF 5F%TFSMGF VFWFZ['t' S ; MBL	243
90	DFGI ; S XMB WZEFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGL IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S ; MBL	244
91	DFGI ; S XMB WZEFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL DFGI ; S :JF:yI GF 5F%TFSMGF VFWFZ['t' S ; MBL	245
92	DFGI ; S XMB WZEFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGL ÒJG ; VTMDFGF 5F%TFSMGF VFWFZ['t' S ; MBL	246
93	DFGI ; S XMB WZEFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S ; MBL	247
94	DFGI ; S XMB WZEFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF DFGI ; S :JF:yI GF 5F%TFSMGF VFWFZ['t' S ; MBL	248

95	DFGI; S XMB WZEJTF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF ÒJG ; √MDFGF 5F%TFSSMGF VFWFZ[‘t’ S; MBL	249
96	XFZLIZS XMB WZEJTF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL IJST IRITFGF 5F%TFSSMGF VFWFZ[‘t’ S; MBL	250
97	XFZLIZS XMB WZEJTF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF DFGI; S :JF:yI GF 5F%TFSSMGF VFWFZ[‘t’ S; MBL	251
98	XFZLIZS XMB WZEJTF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF ÒJG ; √MDFGF 5F%TFSSMGF VFWFZ[‘t’ S; MBL	252
99	XFZLIZS XMB WZEJTF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRITFGF 5F%TFSSMGF VFWFZ[‘t’ S; MBL	253
100	XFZLIZS XMB WZEJTF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL DFGI; S :JF:yI GF 5F%TFSSMGF VFWFZ[‘t’ S; MBL	254
101	XFZLIZS XMB WZEJTF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL ÒJG ; √MDFGF 5F%TFSSMGF VFWFZ[‘t’ S; MBL	255

5§Z6_{v.1}

IJQFI 5μX



5ŞZ6 - 1

1.1 5]:TFJGF 0

. `JZ[RFZ 5ŞFZ GL ; 108 AGFJL K[A H0; 108 B JG:5IT; 108 C 5X\51FL; 108 D DFGJ; 108P VF RFZ[I ; 108DF\DFGJLG\ :YFG ; JM; D KP DFGJL AWL ; 108YL V, U 50[K[T[GF A[SFZ6M K[. `JZ[DF6; G[IJRFZXIST VG[A]â VF A[5IZA/MIJIX08 ZLT[VF5[, KP

VF AG[5IZA/M J3] CMJF KTF\DFGJL ; TT NMDWFD SZTM ZC[KP DFGJLDF\ÒJvHUT VG[. `JZGF ; AW G[; DHJFDF\AC] VMKM Z; 50[KP DG[XF DF8[DG]I AGFjIM m T[; DHJFG[AN, [DFGJL EF[TS J:T]MGL 5F]t DF8[WG ; 5I; DF8[; JFZYL ; FH ;]ML NMDWFD SZTM ZC[KP

; XM3SFV[VF AFATG[CH] JWFZ[:508 SZLG[5KL DFGJ ; 108DF\ AF/pKZ[GL 5âIT G[wl FGDF\ZFBIG[5]:TJT VeIF; CFY WZ[, KP H[GL IJXQF ; DH]TL ; XMWGGF ; LDFSGDF\NXF]I] KP DFGJLGL VF NMDWFDG[; DHEJTF SCL XSFI S[VFHGF8ŞGLS, :5WFtDS I]JDF]I IST H[; DFH VG[SB]ADFZC[K[TPF\VGŞ ; AWM ; FY[; FŞ/L VFTZIS]I F4 ; DFI MHG4 ; FI]HI VG[TFNFtdI S[/JJ]50[KP 5MTFGL H~ZLI FTM; VMEJF DF8[; TT ; 30F4 :5WF" SZJL 50[K[VG[TPF\ ; 0/TF VG[IG00/TF 56 Vß, F H VUtI GF EFU EHJ[KP Vß, [S[jI ISTGF\ÒJG 5Z T[GL ; 5b"V; Z Ô]F D/[KP ; 0/TF SZTF IG00/TF jI ISTGF\ÒJG 5Z B]A H UELZ V; Z SZ[KP

DFGJL Vß ; FDFIHS 5f6L K[TÿL H ; DFH DFGJLYL VG[DFGJL
 ; DFHYL VM/BFI KP jI IST 5Z SÁ8)AS JFTEJZ6 DCÀJGM EFU EHJ[
 KP VFD DFGJL H[; DFHDF\ZC[KP TDF\jI ISTG[VGS 5ßFZ[; DFI MHG
 ; FwLG[JTDfG 5ÿTTL 5IZI:YTL GL :5WFDF\HMFJ) 50[KP DFTFvI5TF
 TZLS[AF/pKZ VG[AF/ IJSF; DF 56 :+L VG[5}QFG[VGS
 ; D:IFVMGM ; FDGM SZJM 50[KP DFTF ; UEF"AG[ti FZYL AF/SGM HgD
 YFI VG[DMb) YFI ti F ; Wl TGL IJIX08 ; FZ; EF/ DGMJ(7FIGS ZLT[
 ZFBJL 50[KP HM AF/S ; FWZ6 CMI TM VMKL ; D:IF GO[K# KTF\
 VFHGF VF 8ßGLS, CZ6OF/ IJDF\ ; FDFgI AF/SGM SD pKZ SZJM#
 TGL H~IZIFTM SD ; VMFJL TGL ; TT IR\TF ; FDFgI AF/SMGF DFTF
 vI5TFG[SFI D ZC[KP VFD4 ; FWFZ6 AF/SMGF DFTFvI5TFGF DFGI; S
 :JF:yI ÒJG ; VMF 5Z AF/pKZGL V; Z HMJF D/[KP SI FZß RCZF 5Z
 TF6 VG[TUIN, L HMJF D/[KP TM 5KL H[WZDF\IJIX08 AF/S sDNA]âf
 GM CMI K# TGF HgD ; DI AFN HM VFJ) IJIX08 AF/S K# VJM bIF,
 DfAF5 G[VFJ[K[ti FZ[AF/SGF DFTFvI5TFG[SÿL IR\TF YFI KP SÿF
 5} GM D)hJ[K# VFJF VGS 5} GMD\ IJSITGL V; Z DFTFvI5TFGF TGF
 DFGI; S :JF:yI VG[ÒJG ; VMF VF ZLT[AF/SGL I:YIT V; Z SZ[KP
 ti FZ[5} G YFI K[S[IJIX08 AF/S Vß, [X)m :5xi, RF. <0 Vß, [X)m
 T[; DHJ) 56 Vß,) H H~ZL KP ; XMWSFV[VF DF8[5}:TSM TÐH
 IG06FT jI ISTVM äZF GLR[5Ðf6[IJIX08 AF/SGL ; DH VF5JFGM
 5} TG SIMKP

1.2 IJIX08 AF/SGM ; FDFgI . ITCF; GM5IZRI o

; DFH VG[ZF08GF EFIJ GFUIZSMGM DCtJGM IJSF; ; DFHDA VG[XIFI6S ; \YFVMDA\YFI KP 5ZVT] TGL AWL jI J:YF SBJA äFZF H YFI KP SBJADFA\56 DFTFvI5TFGM DpI OF/M KP AF/SGFA\~VFTGF JQFMDA TGM IJSF; DFA VUtI GM 5FI F~5 KP VF ; FY[AF/SGF HgD 5Cj FGM ; DI UF/M 56 Vß, M H IJSF; DFA DCtJGM EFU EHJ[KP ; UEF" VJ:YF NZIDI FG AF/SGFA\C, G R, G VG[JIâ TPH VJI JMGF IJSF; DFA 56 IJIX08 AF/SGL ; DHJTL JTDFG J7FIGS ; FWGM äFZF Ô6L XSFI KP VFD ; UEF" VJ:YF NZIDI FG AF/SGL XFZLIZS VG[DFGI; S 1FITVM DNA]âGF AF/SG[HgD VF5[K# VF 5|S| F SNZTL KP

; FYL 5Cj F GHZ[R0[TU] 38S DFGJ G[D/[,] 38S TG[D/[, L A]â . `JZLI AI1F; KP "A]â ; J" 5f6LVMDA CMI TGF SZTF DFGJLDA ; FYL JW] CMI KP A]âXISTG[VFWFZ[AF/SDF\YTF OZOFZM :508 HMF D/[KP . xJZLI AI1F; NZß DFGJG[Vß; ZBL D/[, GYL Vß DFGJ ALHF DFGJ SZTFA W6M H HNM NßFI KP NZß JTG jI JCFZG[SFZ6[DC; VX[NZß jI IST ; DFHDA UMØJFI G[VFZFDYL ÒJG ÒJL XS[KP DNA]â WZFJT] AF/S ; FDFgI jI JCFZDFA UMØJF. XST] GYL4 ; FDFgI ÒJG ÒJL XST] GYLP VFJF AF/SDF\ 5MTEGF IJREFZM DGGL XISTVM JUZ[IS| FVMDA A]â DCÀJGM EFU EHJ[KP Vß IF ALÒ ZLT[NZß AF/SDF\ VFJ] AGT] GYLP TGFDFA 56 IJIW 1FIT HMF D/[KP VFJL DUHGL IJIX08 1FIT WZFJTF AF/SG[VF56[DNA]â VYJF :5XI , RF. <0 SCLV[KLVP

VEJF AF/SDF\μDF6YL OMSLI\ SZLV[TM VU\ 5IZA/ HMJF D/[K[S[HG[SFZ6[; DFHDF\ UMØJF. XSJFDF\, FRFZ KP VG[SBJADF EFZ ~5 KP TG] JT'G V; FDFgI CMI KP VEJF AF/SG[UF0#DFGI; S 5KFT4 DFGI; S V1FDTF4 HODTL4 V<5A]â JF/# Dg8, L IZOFXG4 Dg8, L 0I0XI g; L4 Dg8, V\AGMDF", l8L4 Dg8, Cg0LS54 Dg8, L R[gÏU4 VGA<0 RF><04 :5kI , RF. <0 HUF GFDIML VM/BJFDF\VFJ[KP

; Á 5YD OMP V[P V[P DFYZGF DT 5DF6[VY" SZTF TD H6FJ[K[S[-IJIX08 AF/S Vß, [HGMA]â VFS 70 YL GLR[K[T]JAF/S-

In a publication by UNIESCO the estimated proportion of mentally subnormal children in a school population is as given a head.²

Estimated Proportion of various Grades of Mentally
Sub normal children in the School Population

Degree of Sub-normality	Terms in current use	Approx IQ Level	Approx Percentage in Population of School Age
Sever Sub Normality	Idiot	0-19	0.06
Moderate sub-normality	Imbecile	20 – 49	0 – 24 2.56
Mild Sub-normality	Feeble Minded	50 – 69	2.26
Dull normality	Dull Backward	70 – 85/90	10

Educational Psychology Dr. S. S. Mathur, Vinod Pustak Mandir, Agra-2. Page No.583.

From the above table it is clear that in a school nearly 2.56 percent of children will have an IQ Lower than IQ 70.³

; XMWSFV[; FWFZ6 AF/SM VG[IJIX08 AF/SM GL ; DH JWfZ[:508 YFI T[DF8[AF/SGL DFGI; S JI VG[XFZLIZS JI GM ; AW Ô6JF

p5ZFT TGL pDZ VG[Vgl AF/SMGL ; ZBFD6LDA TGL :YFG SJ\ KP TI
 Ô6JF DF8\ AIâGM GLRGM SM9M 56 wI FGDA, LMM KP

JU"	E}	J:TLDA8SFJFZL
5 TEFXF/L s Genius f	140 YL p5Z	1.5
ptS08 A]â s Superior f	129 YL 139	11.0
; FDFgl YL ; FZM s Above average f	110 YL 119	18.0
; FDFgl s Normal or average f	90 YL 109	47.0
; FDFgl YL GLR§ Below average f	80 YL 89	14.0
; LDFJTL"s Dull borderline f	70 YL 79	6.0
DNA]â s Freeble minded f	70 YL GLR[
V<5DIT s Moron f	50 YL 69	
D}DIT s Imbecile f	20 YL 49	
H0 s Idiot f	20 YL GLR[2.5

; Á 5YD ; FWFZ6 AF/SM G[IJX[GLR[5DF6[D];, M VG[DL8], DG[
 ; FWFZ6 jI ISTDAZC[, FjI ISTtJGFA\SB, FS , 1F6M GLR[5DF6[VF%I F KP

- 1 ; , FDTLGL 5I F%T , FU6LP
- 2 :J D}I FSGGL JF:TIJSTFP
- 3 ÔJGGF JF:TIJSTF wI I MP
- 4 JF:TIJSTF ; FY[V; ZSFZS ; 5SP
- 5 jI ISTtJGL ; VFINTTF VG[; FTtI P
- 6 VG]EJDFYL XLBJFGL XISTP
- 7 5I F%T :JT0 :0)TP
- 8 VFJUDA5DF6; ZTFP

- 9 5MTFGF HYGL DFU6L VG; FZ ; VMF VF5JFGL SFI "XISTP
 10 5MTFGF HYGL DFU6L CMI TUL 5ZTL KTFDI FINT XFZLIZS
 H~IZiFTMP

8SDA SCL XSFI S[; FDFgI AF/SDA DFGI; S :J:YTFGL ; FY[; FY[
 jI ISTUT TDH ; FDFIHS HJFANFZL 5MTFGL ÔT p5Z SFA# , MSXFCL
 ; DFH ZRGFDVZ; ~IR4 JF:TIJSTFGM :JLSFZ4 VXSI bIF, MGM tIFU4
 ; BQDFYL D]ST4 5MTFGF VG]EJM S[ALHFGF VG]EJM S[VgIGF
 ; RGMDFYL ÔJGG[p5IMUL bIF, M TFZJJFGL XIST4 CDXF VFGNDI 4
 ; BQFDI HUTDA 5MTFGF HMBDMDF8[; TT HFUIT JUZ[, 1F6M CMI KP

VF , 1F6M jI ISTDA AF/56YL H HMJF D/[KP IJIX08 AF/SMDA
 VFJF , 1F6MGL p65 HMJF D/[KP SB]ADFA DfVAF5 VFJF , 1F6MWZJTF
 AF/SMG[VM/BJF4 TGL VFJ]US V; DT], F JF:TIJS ; FYGF VMKM
 ; 5S4 AF/vjI ISTtJ GL IJ; VFINTF4 VMKL :0]T" JUZ[, 1F6MYL 5MTFGF
 AF/SG[IJIX08 AF/S TZLS[:JLSFZ[K[TG[VG]-5 TGM pKZ VG[
 IJSF; DFDK]S[L VG]EJ[KP VFYL ; Á 5YD DNA]â AF/SGL jI FbIF GLR[
 5DF6[; DÔJL XSFI P

Ø DNA]â AF/S GL jI FbIFov

DNA]â IJS, FUTFG[V\$ jI FbIF äZF 5IZEFIQFS SZJ\ BJA H
 SI9G SFI "KP DNA]â DF8[Dj8, IZ8F0D4 Dj8, 0PLIXI g; L4 Dj8, L
 V]AGMDF1, 8L VG[Dj8, L Cj0LS5 HJF XaNM CF, 5I MJDA , [JDA
 VFJ[KP HIFZ[VUFp . 0LIM; L4 UFOF HJF XaNM J5ZFTFP VFH[CJ]
 VFJF XaNM 56 p5I MJDA , [JDA VFJTF GYLP

à DNA]â IJS, FUGL VGß jI FbIFVM KP 5ZT] TDF\ ; ÁYL :JLST4
 IJ` , ð6ftDS VG[; FZFXftDS jI FbIF **A.A.M.R.** (American
 Association for Mental Retardation)âFZF 1983DF\ VF5[, KP T]
 GMWGLI KP

-GMW5F+ ZLT[c; ZFEX SZTF VMKFc AÁIäs SFI 1FDTF WZEFJT
 CMI TÐH 5IZI:YIT G[VG]-5 JTG SZJFDF\A[S[T]YL JW] DKS[, L
 VG]EJ[VG[VF 1FIT IJSF; ftDS TAÐF NZIDIFG pÛEJ[, CMI
 TG[DNA]ä SC]FDF\VFJ[K]³

à IJS, FU WFZM 1995 D]HA DNA]äGL jI FbIF 0
 -DFGI; S IJSF; GM ~WFJM S[DNA]äTF Vß, [jI ISTGF DGGF\
 IJSF; GL YEL UI[, L VYJF ; 5]b" I:YIT IJX]F ZLT[A]äGF
 ; FDFgI SZTF VMKL CMJFG[, 1F6 WZEFJTL CMI P⁴

à DNA]ä Vß, [; FDFgI AÁIäs IS]I ftDS 5]S]I FDF\ ; ZFEX SZTF VMKL
 A]ä VYJF IJSF; ftDS ; DI UF/FDF\ VGß] jI JCFZDF\ BFDLI]ST
 A]äP⁵

à ; FDFgI ZLT[-DNA]ä Vß, [A]äGM IJSF; DN VYJF WLDM CMJM
 VYFT_ VMKL A]ä WZEFJT]AF/S S[jI ISTP-

OF] DG]EF. SM]FZL SC[K[S]accH[DFGI; S ZLT[A]äYL DN K[V]
 5]I] AF/S q jI IST WZTLGF cN]N]T]M KPVFJL jI IST AN] TMX]V]S RFS]
 30L GYL XSTL ; VFJL jI ISTG[; RIGL 56 ; DH GYL CMTLP
 S<5GFXIST 56 G CMJFG[, LW[UMFD4 VFE]F6MS[S50FYL EZ], SAF84
 IJIJW BFTFVM JUZ]GL H~Z H éEL G YFI OST T]GL 5M]FGL XFZLIZS
 H~IZI FT 5]ZL SZJF 5]ZTL WZTL ; FY[VF5v, [SZ[KP TG] DG SM. G]

KLGJL GYL , [T]1F]WF VG[5L5F; FGL 5)T"YTFV; VMF VGEJL I:DT JZTL
jI IST HMJF D/[KP^{6cc}

DN A]â CMJL V[SM. G[JFS S[U]GM GYLP JFZ; FUT 56 GYLP VG[
DF8[DFvAF5 S[AF/S SM. H HJFANFZ GYLP DFGJ; D]C EFZF H A]âGL
T]H:JLTFGF 5]DF6G] IGI DG YFI KP H[VFINSF/YL DFGJ VI:TtJDF\
VFJIM tIFZYL H VF 5]SFZ[JCR6L YTL VFJL K[VG[T[DFGJ; D]CG\
VFTU" VU CMJFYL SM. INJ; 5, 8FJL XSFX[GICP

; DFH[VF CSLSTGL GMW ,]L 38[VG[VEJF AF/SM DF8[H[SV SZL
XSFI T]JL G]TS HJFANFZL KP VEJF cN]N]c AF/SM EFZF EUJFG ; N]XM
DMS, [KP

cDFGJcP TFZL 5]BZ A]â 5Z UJ" G SZ 56 VF êR[:YFG[R-JF
DF8[GLR]YL 8]SM VF5GFZGL SNZ SZL VFEFZ DFG VG[T]G] 5MF6 SZ
T]PH ZIF6 SZ ; V]GL N]GIFDFZ; , . OMSI]SZL G[HM TM BZM T]G[TFZM
AGFJ ; TMH T]GF 5]I]G]TFZ] k6 VNF YXP

✓ :5kI , VHI]XG GF XF:+GM. ITCF;

:5kI , VHI]XG GM. ITCF; RFZ ; M5FGM DFYL 5; FZ YFI KP

1P 5C] F VEJF AF/SM 5Z wIFG VF5JFDF\ VFJT] GCLP V, U
ZFBJFDF\VFJT] G CTRP

2P WLD[WLD[T]GF 5Z NIFEFJ ZFBJFDF\VFJL CTLP

3P WLD[WLD[VEJF AF/SM 5Z wIFG VF5JFDF\ VFJ] T]GF DF8[

:5kI , sIJIX08f XF/F BM, JFDF\ VFJL IJIX08 IX1FS 56

ZFBJFDF\ VFJ]FP

4P VFHSF, CH]56 TPDG[; FDFgl XF/FDA\56 ZFBJFDF\VFJ[KP
E, [TPDGF JU V, U CMI 4 5Z\] VFFJF AF/SM; FDFgl AF/S
; FY[ZD[KP VDS] IJQFI; FY[A]; LG[Ô6[KP

18 DL; NLGF\pTZFWDF\VF\VF VG[ACZF AF/SM DF8[V, U IX1F6
5]6F, L T[FZ SZJFDF\VFJL CTLP

19 DL; NLGF\VFZE DF\HODTL VG[A]V]VF AF/SM S[HG[VF56[
DFGI; S~5YL VIJSI; T VYJF EFJGFtDS~5YL V; \], T SZLV[KLVP

>8F0[VG[;]>G DM]8[; ZL H]VF I]ZM5LI G IRIST; SM V[IJS, FU
AF/SMGF >, FH DF8[jI JI:YT 5] tG SIMKP

>8F0[1875 YL 1938 NZdIFG DFGI; S ~5YL VIJSI; T AF/SMG[
E6TF4 JFRTE IXBJFGF ZL U6X SI FP

VFGL X~VFT TG[HU, DFYL 5SOL, FJ, GS[, VG[JF. <0 VG[
IJS8Z GFDGF\KMSZFMG[5S0IF 5KL TPDGF 5Z VeIF; X~ SI FP VF
AF/SM GuG VG[HU, L VJ:YFDF\ OZTF CTFP TPDG[W] 5]JS VG[
jI JI:YT TF, LD VF5JFYL VF AF/SMDFA\VN]E]T;]WFZMN]BF I MP

>8F0[GF IJnFYL"V]DJO";]J]LG 1812 YL 1880 DF\HODTL A]âCLG
AF/SMG[E6FJJF DF8[Ô6LTF YI FP TPDG\ V] 5]:TSG\ GFD -HODTL
jI IST VG[N]GS IS] F VM äZF TPDGF p5RFZ~ . P; P 1866 DF\5]U8 YI P
VF 5]:TSDFA >8F0[GL 5]6F, LVMGF IJ:TFZYL IJJ]RG VG[jI fbIF SZJFDF\
VFJL KP D]D DFZLI F DM]8[; ZLGF SFDGM VFWFZ VF 5]:TS KP

1939DF\ DZLI D DMj8[ZLV[DNA]â AF/S DF8[IX1F6GF ; FWGM
 AGFjIF HGF äZF MR AF/SMG[; Z/TFYL XLBJF0L XSFI KP TPDGF\
 ; FWGG[DMj8[ZL SCJFI KP

VD[ZSF 19DL ; NLGL X~VFTDF\DNA]â AF/SMGF 1F+DF\SFD ACH
 WLDL UITYL RF, T]CTP ALÔ IJ`JIâ 5KL 1939 YL 1945 5KL VF 1F+DF\
 TH UIT ÔJF D/LP

VD[ZSFGF\ :5kI , VBIßßZ SIX1F6XF:+LVMMF ALÔ VGß
 J{NSXF:+4 ; DFHXF:+4 DGMJ7FG4 HJF IJIJW XF:+MGM p5I MU SZL
 TDFYL DNA]â AF/SMG[p5I MUL VJL ; CFI S ; FDUJ IJIJW 8ßGLS4
 8ßÄU GM p5I MU SZL VF AF/SMGL IJXDF VFXI STFVMGL 5)T"Y. VG[
 50-60 NXS 5KL DNA]â IJOF[VD[ZSF >8f0"sI ZM5fGF N\XDF\DNA]â IJOF[
 H[5IZJTGM VEFJ, HGFYL ALÔ N\XMDFA56 VEFJ 5IZJTGM ÔJF D/[P

HDF\EFZTGM . ITCF; ÔJF VF 1F+[56 SFDULZL YI, KP

✓ EFZT DF\ :5kI , VHIßXGGM . ITCF; 0

EFZT DF\DNA]âGF AF/SMDF8[56 VeIF; SP VG[jI J:YF CTLP
 VF IJ7FGXF:+GL X~VFT 5ZFTG SF/YL ÔJF D/[KP HGL XMW 5]M]; Z
 HIRN[SZL VG[YMDS JFTM EFZTDF\TPDG[VF 5PF6[ÔJF D/L CTLP

1f ZDFI 6 IJDF\SS[GL NF; L DYZF DNA]â CTL TP SCJFI P H[
 H, NLYL ALÔ p5Z IJ`JF; SZTL CTL4 VG[5MTFGM IJRFZ
 SZL XSTL GICP

- 2f 1000 B.C. UE"p5IGXNDFA 56 VF AF/SMGL IJS, FUTF IJQF
 , BJFDA VFjI} K[S[VEJF AF/SMGF DFTFvI5TFGA DGDA
 IRvFvNpB jI YF4 5LOF4 5ZXFGL ; NQ ÔUF D/[KP
- 3f 5TH, L IMU ; }+MFA VUF AF/SGL IMU IRIST; F SZL XSFI
 TUM p<, B SZ, KP TYL SCL XSFI S[T[IJDA 56 DN
 AF/SGL ; UF YTL CMJL Ô. V[VG[TDGF DF8[56 IMU
 IRIST; F 5âIT CTLP
- 4f 4 ; NL s; }rI Zlf sBCf SÁI8<I sRF6SI f VUF IJS, FU [M.R.]
 AF/SGM , MSM[VGFNFZ4 V:JLSFZ G SZJF DF8[SFIT R, FJL
 VG[:5kI , AF/SG[W6F SFDMDFA; FD, SIM
- 5f 5RT+GL JFTFDA ; DZXIST ZFÔGA RFZ AF/SM DNA]âGA
 CTFP TYL IJQ6] XDFV[VEJF AF/SMG[; FNL ; Z/ EFQFFDA
 5].TS , BJFG]SCI} VG[TGf 5].TSG}GFD CT}-5RT+- VG[
 TGf äZF DNA]â AF/SG[IX1F6 VF%I P
- 6f DG] DCFZFH[SCI] K[S[DNA]â AF/S UT HgDGA 5F5GF
 SFZ6[DNAIâJF/]CMI K[VG[ALÒ VgI IJS, FUTFYL 5LOFI
 KP
- 7f ZFÔ VXMS[56 V1FDTFJF/F AF/SM DF8[5F8, L5]+
 s586fFDA VFzDXF/F BM, L VG[TMMGL IRIST; F SZJFDA
 VEJTL CTLP

- 8f 1826DF\ ZFÔ SF, LXSZ 3M, [VW AF/SM DF8[AGFZ; DF\ VFzDXF/F BM, L VG[ACZF DJUF AF/SM DF8[AGFZ; DF\ IRIS; F YJF , FULP
- 9f 1918 DF\AUF/DF\SZxI MUDF\ VJL :S], BM, JDF\ VFJL HDF\ IJS, FU , MSM DF8[5|X1F6G| VFI MHG SZJDF\ VFjI]
- 10f 1939 DF\ Dâf; UJDj8[Dj8, CM:5L8, BM, L VG[; FYM; FY DNA]â AF/SM DF8[:S], X~ SZLP
- 11f 1944DF\ HI JIS, [AMIA[DF\ HI JIS, GFDGL :S], X~ SZL SFZ6 S[TGf 5IZJFZDF\ V§ KMSZL DNA]âGL CTL VG[TGf WZDF\H VF :S], BM, L VG[CF, VF XF/F BJA H 5pI FT KP
- 12f ALÒ :S], 1965DF\ C&FAFNDF\ 9FSZ CIZ5; FN . g:8L8I ß X~ Y. HG[8§] GFD ST.H.P.I.fKP HDF\DNA]â AF/SM DF8[B]A H ; FZL ;]JWF KP
- 13f tIFZAFN UHZFTDF\ VDNEJFN DF\ ALP VDP . g:8L8I ß ONZ Dj8, L ZL8F0ß AF/S GL :S], X~ Y. P
- 14f 1984DF\ NI MH sG\XG, . g:8L8I ß ONZ Dj8, CkY ; j8ZF GFDGL ; \YF X~ Y. VG[VF AF/S DF8[TDFD ;]JWFVM K[HDFA CF, VFXZ[31 8]GU ; j8Z RF, [KP
- 15f 1980DF\SGCERTf sUHZFT SFp; , ÄU VHI §XG ZL; R"8&Äuf GF IGI D D]HA Sjä ; ZSFZ[H[AF/SM DNA]âGF CMI TI AF/SMG[V, U XF/FDF\NFB, SZL VeIF; SZFJJP

VFD 1965 DF\ EFZTDF\DNA]âGF , MSM DF8[V§ OPZ\XG AGL VG[TGM pNkI DNA]âGF AF/SMG[wI FGDF\ZFBL VG[5| tG SZJFP VF 5| tG

äFZF 1984 DF EFZT ; ZSFZ[NIMH GL I; SNZFAFNDF :YFI5T SZL VG[IJIJW SġāmGL DFgI TF VF5L ; ZSFZ[VEJF AF/SM G[IX1F6DFAT(FZ SZJF4 ÒJG DF :JFJ, AL AGFJJF DF8[IJIX08 IX1FSM VG[VHI ŠXG TF, LD VF5JF 36YL JW] Sġām BM, JFDF VFjIF VG[VF AWF Sġām SRCif ZLCĥ, l8XG Sfpg; , ÄU VMD . Ig0IFGL N[BZ[B VG[IGI 6 GLR[K[VG[VF RCI GL :YF5GF . P; P 1985 DF\Y. 1995 DF\P.D.A. 5; G IO; A, l8L VŠ8 Vß, [S[c]I ISTUT 1FIT SFI Nġ GL ZRGF SZJFDF\VEJL HġDF\AWF H IJS, FU AF/SMG[; DFG VIWSFZ VF5JFDF\VEJ[KP

✓ :5kI , AF/S DF8[:5kI , VHI ŠXG 0

; FDFgI ZLT[O], GMNFB, M , . Vĥ 5C, F KMDG[JFJJM 50ĥ BFTZ GFBJ] 50ĥ 5F6L 5FJ\ 50ĥ DFJHT SZJL 50ĥ TM H TGMPKZ ; FZL ZLT[YFI KP 5KL BAZ 50[S{O}, I MuI ZLT[BL<I \K[S[GIC4 tIFZAFN BAZ 50[S{VF O}, U], FA S[DMUZFG\K[S{SI \}O}, K[TD AF/SF{O}, G[:J~5 K[VG[TġYL H DNA]â AF/SG[IJIJW GFDMYL VM/BJFDF\VEJ[KP HG[UF0ĥ H0DTL4 A]â JUZGĥ Dġ8, lIZ8F0XG4 Dġ0, L Cġ0LSġ4 DFGI; S V1FDTF4DFGI; S BFDL4Dġ8, L 0ġLXLl g; L4Dġ8, L V\AGMDF", l8L VG[:5kI , RF><0 VG[tIFZAFN CF, Dġ8, L Rġ, ġH0 VG[VGV\A<0 RF. <0 TZLS[56 VM/BJFDF\VEJ[KP

VEJF AF/SM G[; DHJF DF8[DFTF I5TF4 SġġAGF ; eI M IX1FSM JUZ[DF8[IJIXI08 5ŠFZGL ; DH VF5T\IX1F6 H~ZL KP VEJF IX1F6G[c:5kI , VHI ŠXGc SCġFDF\VEJ[KP H[:5kI , AF/S Vß, [S[IJIX08 AF/S DF8G\J{7FIGS IX1F6 KP VFYL 5C, F IJIX08 AF/S Vß, [X]m T[; DHJ]H~ZL KP zLDTL IG, DA[G SFGFAFZ cN[UN]c 5]:TSFDF\SC[K[Sĥ

36LJFZ VU] AG[K[S[DFTFvI5TF S[IX1FS S[3ZGF Vgl ; eIM
 DNA]âGF AF/S DF8[cUFOM4 cOMAM4 cA]â JUZGM: VUF XaNm AM, [K[
 VG[5]I 1F 56 TG[:5Q8 SC[K] H]L AF/S CTFX Y. HFI K[VG[
 SM. 56 5]1; XLBJFD\Z; GYL ATEJT] DF8[VUtI GL AFAT V[K[S[
 TG[; TT GSFZftDS XaNMYL CTFX G SZM VF DF8[TG[CP4 , FU6L4 5D4
 5M; FCG VF5MTGF J0[TG[5]1; DF\Z; , [TMSZL XSXMP VFJL TF, LDDF\
 DFTFvI5TFV[AF/SG[AX SZTF XLBJJ] SNZTL CFHT s; DF; vAFY~DF
 GL ; DH4 gCFJFG] HDJFG] 5MTFGL D/[S50F\ 5CZTF4 ;]FGL TF, LD4
 ;]FGM; DI JUZ[IXBJJP

✓ IJIXQ8 AF/S Vß, [X]m 0

IJIXQ8 AF/S G[; DHJF DF8[GLR]GF ; M5FGMp5I MUL AG[KP

i) A]â :TZ 0

IJIXQ8 AF/S Vß, [VU]AF/S S[H]GM IQ 70 YL GLR[CM] VG[; FDFgl
 AF/SYL T]GL 1FDTF4 XIST4 SÁX<I 4 V, U Ô]F D/[WLDFA Ô]F D/[
 KP T]L T]G[ALÔ AF/SYL V, U U6JFDFA VFJ[KP

ii) SÁ8]AS :TZ0

IJIXQ8 AF/SM DF8[SB]ADF T]GL H~IZI FT V, U CM]FYL T]GL
 ; FZv; EF/4 N]BvZ]B4 CP4 ; , FDTL4 5Z6F JUZ[V, U ZLT[VF5JF
 50[KP Vß, [S[SÁ8]AS :TZ DF\56 BF; JFTFJZ6 ZFBJFDFA VFJ[KP

iii) IX1F6 VF5JFGL ZLT 0

VFD4 :5]I , AF/S ; FDFgl AF/SYL V, U CM] K] T]L :5]I ,
 AF/S ; FDFgl AF/SGL HD4 ; FDFgl 5âITYL4 ; FDFgl IX1FSYL

IX1F6 5F%T SZL XSTM GYLP SFZ6S[VF AF/S XLBJFDF\ BJA H WLD]
 CMI K[VG[TGF p5Z jI ISTUT N\BZ\B ZFB JL 50[KP T\YL :5kI ,
 IX1F6 5âITGL H~Z 50[K[VG[IJIX08 IX1FSGL H~Z 50[KP T[DF8]
 TGF :5kI , IX1F6GL H~Z 50[KP

iv) IJIX08 IX1FSM äFZF IX1F6 0

IJIX08 5âIT VG[IJIX08 IX1FS V[V\\$ALÔ ; FY[; UI9T KP Ô[
 IJIX08 IX1FS G CMI TM IJIX08 5âITG\ SM. D\I GYL4 SFZ6S[VF
 INXFGL Ô6SFZL H DF+ p5I MUL GYL AGTL 56 IJIX08 5âIT S\JL
 ZLT[VD, DF\ D\SL XSFI T[56 V\B, \ DCTJG\ KP IJIX08 IX1FS 5F; [
 ; \ DâI08IAN] CMJFYL AF/SG[; DHJFDF\ JW] D\kS[, L 50TL GYL4 IX1F6
 5âITVM 56 J{7FIGS-A[5; N SZJFDF\ VFJ[KP VFYL IJIX08 IX1FS
 VG[; FY[IJIX08 5âIT V[56 VeIF; S\DDF\ DCTJG\ :YFG WZFJ[KP

v) DFTFvI5TFG\ SFI "0

:5kI , V\HI \XGDF\ :5kI , DFTFvI5TFG\ 56 V\B, \ H DCTJ KP
 :5kI , DFTFvI5TF V[K[H[SNL IGZFX GIC YFI 4 N\B L YTF GYL VG[
 T[AF/SGM IJSF; SZJF DF8[:5kI , IX1F6 GL jI J:YF SZ[KP BF;
 IGQ6FTM 5F; [H. G[VFJF AF/SGL I MuI ; FZJFZ SZFJX[VG[TGF
 AF/SG\ WLZH VG[5\PYL 5F, G SZX[VG[:5kI , V\HI \XGGM ; 5\B"
 ; 0/TFGM VFWFZ AF/SGF DFTFvI5TF VG[IX1FS p5Z ZC[, KP

vi) IJIX08 AF/SMDF\ jI ISTUT IEgGTF 0

VF AF/SMGL jI ISTUT IE\pFTFG[VG]-5 IJIX08 VeIF; S\DDF\ V\JL
 IX1F6 ; FDU\ CMJL Ô[V[S[DNA]â AF/S DF+ DFGI; S U6TZLYL

GIC 5ZT] 5| MJM SZFJJFYL h05YL XLBL XS[KP T]YL AF/SGL 1FDTF
 VG[XIST VG[H~IZIFT D]HA ; FICTI AGEJL IXBJL XSFI KP
 VFYL jI ISTUT IEpFTFG[AF/SGF\ ; JFYUL IJSF; VG[IX1F6 DF8]
 T]GM VeIF; SP BA H DCtJGM EFU EHJ[KP :5kI , AF/S DF8]
 ; FDFgl VeIF; SP GIC , FU] 50TF T]GF DF8[X]FI6S VeIF; SP
 :5kI , CMJM Ô]. V[BF; SZLG[:5kI , AF/SG[JTDFG :TZ 56 EFZ
 D]SL ; FY[T]GL 1FDTF VG[1FITG[, 1FDF\ ZFBL VeIF; SP AGEJJM
 Ô]. V[

vii) IJIX08 AF/SMG]SÁX<I 0

IJIX08 AF/S CMJFG[SFZ6[T]GL H~IZIFT 56 IJIX08 CMJFGLP
 H]YL T]GL H~IZIFT ; DHJL4 T]G\ :TZ VM/BJ\ T[DCÀJG\ KP T]GL
 1FDTFv1FDTF Ô6JL V[VUtIGL AFAT KP T]YL NZS AF/SGL
 H~IZIFT V, U V, U CMJFG[SFZ6[T]G[V, UvV, U ZLT[; DHJ\ 50P
 NZS DF8[V]S ; ZBL 5âIT V5GFJL G XSFI E, [T]GL H~IZIFT ; ZBL
 Ô]F D/TL CMI T]GL IJIX08 H~IZIFTG[wI FGDF\ ZFBMP IJIX08 AF/SGF\
 IJIX08 SÁX<I DF\N]BLTL 1FIT Ô]F G 56 D/TL CMI KTF\ T]GL 1FDTDF\
 JWFZM G YTM CMI tIFZ[SFZ6 Ô6J\ H~ZL K[V[SFZ6 Ô6JF IJIX08
 IX1FS[V]S IG06FT 0MS8ZGM 5F9 EHJJM 50[KP T]YL IJIX08 SÁX<I
 IJQFGL ; 5]b"Ô6SFZL4 T]GL 1FITG[N] SZJFGF\5| tGMGL ; DH45âIT; ZG\
 XLBJJFG\ VFI MHG JUZ[IJIX08 AF/S DF8[IJIX08 VeIF; SP
 AGEJJFDF\ V]S ALÔGL ; FY[SOLYL Ô]F. ; FS/ ~5[SFD SZ[KP zLDTL
 IG, DA]G SFGFAFZ SC[K[S[ccSF8F/L 5UN0LccDF\ZC[K[S]F

ccDFGJ DF+ . ` JZG[D/JJF RMTZO OFOF DFZ[K# VG\$ 5UNOLVM
 5Z RF, TF RF, TF YFSLvCFZLG[5FKM OZL HFI K#SFZ6 S[; FRM ZFC
 ATFJGFZ UZ] 5F%T GYL YIMP 5ZT] DLZF4; ZNF; 4 GZI; C DC[TF JUZM[
 EIST EFZF UZ]GF RLW[, F ZFC 5Z SF8F/L SPL 5Z RF, LG[ccN]ccG[D/] I F
 VG[DMF 5FdI FP SFZ6 OST Vβ,) H T]DGL 5F; [VDLEZL 108 VG[
 DMCDFI F ; ICT IGD"/ V#Z CT] ; FY[UZ]G] DFUNXG CTR T]YL vvN]UG]
 ~5 HM. XSIF CTFP

HM VF56[ccN]ccG[5FDJF CMI TM T]6[DMS, [ccN]N]TccG[VM/BJF
 50XP ccN]N]Tcc G[VM/BJF ccUZ]cV[RLW[, ccSF8F/L ZFCcc 5Z RF, J]
 HM. XP , MCL,]F6 Y. V# 5KOF. V# 3FI , Y. V[TM 56 ; FRM ZFC
 D/]JJF VYFU 5]IF; SZJF HM. VP SNFR ccN]cc G 56 D/[VYJF VF56[
 S<5GF SZ[, :J~5DF\G 56 VFJP KTF\ 56 H[:J~5 K[T[:JLSFZJ] H
 HM. VPcc

1.3 VwI I GGL V{TCFI; S E}DSF 0

VFHGF VFM]GS EÁITS I]JDA]I IST Vβ, L CZ6OF/ EZ[K[T]GL
 V; Z T]GF ÒJG 5Z V\$ I F ALÒ ZLT[Ô]JF D/[KP VFJF ; FDFgI IJRFZ
 G[wI FG[, . ; XMWSFV[; DFHG[S\ S p5I MUL YJ] VFJF prR VFUJF
 IJRFZG[VG]-5 VgI jI ISTVMYL H]NM GIC 5ZT] ; C]H V, U V]JM
 jI J; FI 5; N SIMP Vβ, [S[; XMWSFV[; FDFgI AF/SG[G E6FJTF4
 IJIX08 AF/S sDNA]âfGF AF/SMG[E6FJJFGF 5]I tG ; FY[:5]I , 8LRZ
 GL E}DSF :JLSFZIP VFJF AF/SMGF ; 5SGL ; FY[AF/SMGF S]A4 ; DFH4
 XF/F4 JFTEJZ6GF ; 5SDA\ 56 VFJTF ZC I F KP AF/SGF IJSF; DFA
 DCÀJGF EFU EHJGFZ T]GF DFTFvI5TFGM 56 ; 5S" ZC[KP T]GL

D], FSFT4IGZL1F64 5kGMTZL4 äZF T[GL ; FY[TFNFtdI S[JL ; FWFZ6 AF/SGF DFTFvI5TFGL DkS[, L ; FY[VFJF IJIX08 AF/SGF DFTFv I5TFG[56 S[UL DkS[, LVMGM ; FDGM SZJM 50[K[T[VMG[S[UL IRVF ; TFJ[K[T[GM bIF, wIFGDFA ZFBLG[VF IJRFZ6F ; FY[5MTFGF DFUNXS ; FY[RRF" IJRFZ6FG[VFSEZ VF5JFGM 5|tG SZ[, KP VF ; FY[VeIF; DA ; FWFZ6 VG[IJIX08 AF/S sDNA]âfGF\ DFTFvI5TFGL IJST IRVF4 DFGI; S :JF:yI 4 ÒJG ; VMF JrR[TOFJT ÔpF D/[K[S[SDm T[GM VeIF; SZJFG[GSSSL SIMP

; XMWSFV[; FDFIHS4 XqFI6S4 DGMU{7FIGS VeIF; 4 SZJFGF GD| 5|IF; ~5[ccH]GFU- IH<, FGF UfdI VG[XCZL IJ:TFZGF ; FWFZ6 AF/SMGA DFTFvI5TF VG[IJIX08 AF/SMGA DFTFvI5TFG[5; N SZL T], GftDS DGMU{7FIGS Veiff; SZJFGM C[T] ZFB[, MKçp

VFHGF VF ; TT ; BQFDI ÒJGX{ LG[Ô[TF Ô[; FDFgI AF/SGF DFTFvI5TFG[DkS[, L4 ; D:IF4 IRVF4 TF64 CTFXF ; TFJ[K[TM 5KL IJIX08 AF/SGF DFTFvI5TFG[VF DkS[, LVMGM JWFZ[; FDGM SZJM H 50[K[VG[T[YL AG[AF/SGF DFTFvI5TF p5Z IJST IRVF4 DFGI; S :JF:yI 4 VG[ÒJG ; VMF p5Z X] V; Z SZ[Kfm T[GM ; XMWSF VG[DFUNXSGF IJRFZ IJDXGF VT[VF VeIF; GL ; D:IF XaNAâ SZJFDF\ VFJL K[H[GLR[5pF6[KP

“A PSYCHOLOGICAL STUDY OF ANXIETY MENTAL HYGIENE AND LIFE SATISFACTION OF NORMAL & SPECIAL CHILDREN'S PARENTS OF JUNAGADH DISTRICT”

-HJGFU- IH<, FGF ; FWFZ6 VG[IJIXQ8sDNA]âf AF/SMGF DFTFv
I5TFGL IJST IRTF4 DFGI; S :JF:yI VG[ÒJG ; TMFGM DGMJ{7FIGS
VeIF; P-

1.4 ; XMWGGI ; D:IFo

; XMWG ÝIS|FG\ SM. DCÀJG\ ; M5FG CM TM T[; XM3G ; D:IF
GSSL SZJL T[KP ; FDFIHS ; D:IFGF pS\ SZJFGF C|TYL ; XMWG
SZJFDF VFJ[KP ; XMWGDF IJQFI 5; NUL ; XMWS TGL ~IR VIE~IR
VG[p5I MUTFGL ãIQ8 V[SZL XS[KP DGMJ7FGGF\IJIJ3 IJQFI MGM SM.
TM8M H GYLP ; D:IFGL ZRGF SZJFYL H ; XMWGG\1F+ IGixRT YFI K#
; XMWGG[VFU/ INXF D/[K# TYL VF ; D:IFGL ZRGF SZTF 5C\ F TGL
jIFbIF GLR[5DF6]; DHJL HM. VP

; D:IFGL jIFbIF o

8fpG ; b0 VF VYDF\; D:IFGL jIFbIF VF5TF H6FJ[K[S#

-; FDFgIT o ; D:IF V# ÝxG KP HJGF SM. p5, aW ptZ GYL
CMTIP-6

D#uI. GF XaNMD\ SCLV[TM

cc; D:IFYL Tft5I "VF56F 7FGDF\ZC\, MU6 SGAPf ; FY[KPcc7

-SZI, UZ VG}; FZ A[S[TYL JW] 5IZJtI MGL JrR[X\ ; AW K[VJF
ÝxGG[; D:IF SC[KP TGF 5MTFGF XaNMD\ SCLV[TM ; D:IF VJ\
ÝÆJFRS JFSI VYJF SYG K# S[H[VJ\]5K[K[S[A[S[A\YL JW] 5IZJtI M
JrR[SI F ÝSEZGM ; AW KP- 8

; |<8h GFDGF DGMJ{7FIGS[; XMWGGF\IJQFI GL 5; NULGF Dpif +6
VFWFZMH6FjIF KP

1 f IJIX08 ÝSFZGL ; FDFIHS ; D:IFVMDFAZ; HFUT YJFYLP

2) JTDFG VDS IJQFI DFAZ; ÔUT YJFYLP

3) DGMJ7FGGFI; âFTGL RSF; 6L SZJF DF8P

VFD IJIJW VIEUDYL ; XMMGGFI IJQFI GL 5; NUL SZJFDF VEFJ
 KP ; XMWSGFI 1I08SZ6DFA ; D:IF 5; N SZTL JBT[; XMWS TDFD
 5F; FVMG[5MTFGL ; DIF ZFB[KP ; XM3SF XQFI6S 1F[-IJIX08 IX1FLSF-
 TZLS[; UF VEF5[K[VF 1F[-DFA ÝJX D/JJF DF8[VF IJIX08 AF/SMG[
 IX1F6 VF5TF 5C[F TGF VeIF; SZJJF DF8[:5KI , 8LRZGL TF, LD
 , LW[KP HG\ GFD (D.S.E. M.R.) Diploma Special Education with Mental
 Retardation) VFD ; FT JQFYI IJIX08 AF/SMG[IX1F6 VF5JFDF\SF I ZT KP
 T[YL VF ; FDFGI 5IZRI GL ; FY[IJIX08 AF/SGF DFTFvI5TF ; FY[; TT
 ; 5S" VG[JFTRLT äZF IJIX08 VG[; FWFZ6 AF/SMGF DFTF I5TFGL
 IJST IRTTF4 DFGI; S :JF:yI 4 VG[ÒJG ; VMF p5Z TGF DFTFv I5TFGF
 :JT+ 5IZJtIMG L XL V; Z YFI K\ T[VeIF; SZJFGM C[T] KP 5MTFGL
 IJ:TFZG[wI FGDAZFBLG[; D:IFG[p5Z 5DF6[XaNAâ SZL KP

1.5 Ý:TJT VeIF; GFAC[T]MM0

Ý:TJT ; XMWGDA TGF RMSS; C[T]MM; S/FI[F CMI KP T[C[T]VMG[
 I; â SZJF DF8[; XMWG IMHGF 30JFDF VEFJ[KP C[T]:508 SZJFYI ; XMWS
 5MT[VF VwI GDF\X\ SZJF DFU[KP T[:508 Y. XS[KP VF ; XMWGDA
 ; FWFZ6 VG[IJIX08 AF/SMGF DFTF I5TFGL IJSTIRTF4 DFGI; S :JF:yI
 VG[ÒJG; VMF VU[VeIF; SZJFGM KP Ý:TJT VwI I GDF DpI C[T]MM
 VF ÝDF6[KP

1 ; F3FZ6 VG[IJIX08 AF/SMGF DFTF I5TFGL IJST IRTF DFGI; S

- :JF:yI VG[ÒJG; ¶M¶ VU[VeIF; SZJMP
- 2 IJSTIR¶F4 DFGI; S :JF:yI VG[ÒJG; ¶M¶ V¶ALHF ; FY[; YAW
WZFJ[K[S[SP m T¶GL DFICTL D¶/JJLP
- 3 ; FWFZ6 AF/SMGF DFTF I5TFGL IJSTIR¶FGL HF6SFZL D¶/JJL
- 4 ; FWFZ6 AF/SMGF DFTFvI5TFGL DFGI; S :JF:yI GL HF6SFZL D¶/JJL
- 5 ; FWFZ6 AF/SMGF DFTF I5TFGL ÒJG; ¶M¶ HF6SFZL D¶/JJL
- 6 IJIXQ8 AF/SMGF DFTF I5TFGL IJSTIR¶FGL HF6SFZL D¶/JJL
- 7 IJIXQ8 AF/SMGF DFTF I5TFGL DFGI; S :JF:yI GL HF6SFZL D¶/JJL
- 8 IJIXQ8 AF/SMGF DFTF I5TFGF ÒJG; ¶M¶GL HF6SFZL D¶/JJL
- 9 ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTF I5TFGL IJSTIR¶F4 DFGI; S
:JF:yIF VG[ÒJG; ¶M¶FGM ; C; YAW T5F; JMP
- 10 ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFvI5TF 5Z jI ISTUT 5IZJtI MGL
IJSTIR¶F4 DFGI; S :JF:yI VG[ÒJG ; ¶M¶ p5Z V; Z T5F; JLP

1.6 5j:TJT VeIF; GL ptS<5GFVMo

1.6.1 ‘t’ S; NBLGL ptS<5GFVMo

- Ho₁ A[AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL IJST IR¶FGL
Dwl SMJrR[SM. ; FY¶ TOFJT GYLP
- Ho₂ A[AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL DFGI; S
:JF:yI GF Dwl SMJrR[SM. TOFJT GYLP
- Ho₃ A[AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL ÒJG ; ¶M¶GF
Dwl SMJrR[SM. ; FY¶ TOFJT GYLP
- Ho₄ A[AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL IJST IR¶FGL
Dwl SMJrR[SM. ; FY¶ TOFJT GYLP

- Ho₅ A[AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF DFGI; S
:JF:yI GF DwI SM JrR[SM. TOFJT GYLP
- Ho₆ A[AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ÒJG; √TMFGF
DwI SM JrR[SM. ; FY'S TOFJT GYLP
- Ho₇ A[YL JW] AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL IJST
IR√TFGF DwI SM JrR[SM. ; FY'S TOFJT GYLP
- Ho₈ A[YL JW] AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF
DFGI; S :JF:yI GF DwI SM JrR[SM. ; FY'S TOFJT GYLP
- Ho₉ A[YL JW] AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF
ÒJG; √TMFGF DwI SM JrR[SM. ; FY'S TOFJT GYLP
- Ho₁₀ A[YL JW] AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL IJST
IR√TFGF DwI SM JrR[SM. ; FY'S TOFJT GYLP
- Ho₁₁ A[YL JW] AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF
DFGI; S :JF:yI GF DwI SM JrR[SM. ; FY'S TOFJT GYLP
- Ho₁₂ A[YL JW] AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF
ÒJG; √TMFGF DwI SM JrR[SM. ; FY'S TOFJT GYLP
- Ho₁₃ UfdI IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL IJST
IR√TFGF DwI SM JrR[SM. ; FY'S TOFJT GYLP
- Ho₁₄ UfdI IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGL DFGI; S
:JF:yI GF DwI SM JrR[SM. ; FY'S TOFJT GYLP
- Ho₁₅ UfdI IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL ÒJG
; √TMFGF DwI SM JrR[SM. ; FY'S TOFJT GYLP

- Ho₁₆ UfdI IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF IJST
IRVTFGF Dwl SM JrR[SM. ; FYS TOFJT GYLP
- Ho₁₇ UfdI IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF DFGI; S
:JF:yI GF Dwl SM JrR[SM. ; FYS TOFJT GYLP
- Ho₁₈ UfdI IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF ÒJG
; VMFEGF Dwl SM JrR[SM. ; FYS TOFJT GYLP
- Ho₁₉ XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF IJST
IRVTFGF Dwl SM JrR[SM. ; FYS TOFJT GYLP
- Ho₂₀ XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF DFGI; S
:JF:yI GF Dwl SM JrR[SM. ; FYS TOFJT GYLP
- Ho₂₁ XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF ÒJG
; VMFEGF Dwl SM JrR[SM. ; FYS TOFJT GYLP
- Ho₂₂ XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF IJST
IRVTFGF Dwl SM JrR[SM. ; FYS TOFJT GYLP
- Ho₂₃ XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF DFGI; S
:JF:yI GF Dwl SM JrR[SM. ; FYS TOFJT GYLP
- Ho₂₄ XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF ÒJG
; VMFEGF Dwl SM JrR[SM. ; FYS TOFJT GYLP
- Ho₂₅ WMP 12 p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF
IJST IRVTFGF Dwl SM JrR[SM. ; FYS TOFJT GYLP
- Ho₂₆ WMP12YL p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF
DFTFGF DFGI; S :JF:yI GF Dwl SM JrR[SM. ; FYS TOFJT GYLP

- Ho₂₇ WMP₁₂YL p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF
DFTFGF ÒJG; ∇MDFGF DwI SMJrR[SM. ; FYS TOFJT GYLP
- Ho₂₈ WMP₁₂ p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF
IJST IR∇TFGF DwI SMJrR[SM. ; FYS TOFJT GYLP
- Ho₂₉ WMP₁₂ YL p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF
I5TFGF DFGI; S :JF:yI GF DwI SMJrR[SM. ; FYS TOFJT GYLP
- Ho₃₀ WMP₁₂ p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF
ÒJG ; ∇MDFGF DwI SMJrR[SM. ; FYS TOFJT GYLP
- Ho₃₁ WMP₁₂ ; ∇LGF VeIF; JF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF
IJST IR∇TFGF DwI SMJrR[SM. ; FYS TOFJT GYLP
- Ho₃₂ WMP₁₂ ; ∇LGF VeIF; JF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF
DFGI; S :JF:yI GF DwI SMJrR[SM. ; FYS TOFJT GYLP
- Ho₃₃ WMP₁₂ ; ∇LGF VeIF; JF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF
ÒJG ; ∇MDFGF DwI SMJrR[SM. ; FYS TOFJT GYLP
- Ho₃₄ WMP₁₂ ; ∇LGF VeIF; JF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF
IJST IR∇TFGF DwI SMJrR[SM. ; FYS TOFJT GYLP
- Ho₃₅ WMP₁₂ ; ∇LGF VeIF; JF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF
DFGI; S :JF:yI GF DwI SMJrR[SM. ; FYS TOFJT GYLP
- Ho₃₆ WMP₁₂ ; ∇LGF VeIF; JF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF
ÒJG ; ∇MDFGF DwI SMJrR[SM. ; FYS TOFJT GYLP
- Ho₃₇ ; ∇JST SBJAGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL IJST IR∇TFGF
DwI SMJrR[SM. ; FYS TOFJT GYLP

Ho₃₈ ; V]ST SBJAGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF DFGI; S
; JF:yI GF Dwl SM JrR[SM. ; FYS TOFJT GYLP

Ho₃₉ ; V]ST SBJAGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF ÒJG
; VTMFGF Dwl SM JrR[SM. ; FYS TOFJT GYLP

Ho₄₀ ; V]ST SBJAGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL IJST IRVTFG
Dwl SM JrR[SM. ; FYS TOFJT GYLP

Ho₄₁ ; V]ST SBJAGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF DFGI; S
; JF:yI GF Dwl SM JrR[SM. ; FYS TOFJT GYLP

Ho₄₂ ; V]ST SBJAGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ÒJG ; VTMF
GF Dwl SM JrR[SM. ; FYS TOFJT GYLP

Ho₄₃ IJEST SBJAGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL IJSTIRVTF
GF Dwl SM JrR[SM. ; FYS TOFJT GYLP

Ho₄₄ IJEST SBJAGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF DFGI; S
; JF:yI GF Dwl SM JrR[SM. ; FYS TOFJT GYLP

Ho₄₅ IJEST SBJAGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF ÒJG
; VTMFGF Dwl SM JrR[SM. ; FYS TOFJT GYLP

Ho₄₆ IJEST SBJAGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL IJST IRVTF
GF Dwl SM JrR[SM. ; FYS TOFJT GYLP

Ho₄₇ IJEST SBJAGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF DFGI; S
; JF:yI GF Dwl SM JrR[SM. ; FYS TOFJT GYLP

- Ho₄₈ IJEST SBJAGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ÒJG ; VTMF
GF Dwl SM JrR[SM. ; FYS TOFJT GYLP
- Ho₄₉ 35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL IJST
IRVTFGF Dwl SM JrR[SM. ; FYS TOFJT GYLP
- Ho₅₀ 35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF DFGI ; S
:JF:yI GF Dwl SM JrR[SM. ; FYS TOFJT GYLP
- Ho₅₁ 35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF ÒJG
; VTMF GF Dwl SM JrR[SM. ; FYS TOFJT GYLP
- Ho₅₂ 35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL IJST
IRVTFGF Dwl SM JrR[SM. ; FYS TOFJT GYLP
- Ho₅₃ 35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF DFGI ; S
:JF:yI GF Dwl SM JrR[SM. ; FYS TOFJT GYLP
- Ho₅₄ 35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ÒJG
; VTMF GF Dwl SM JrR[SM. ; FYS TOFJT GYLP
- Ho₅₅ 35 JQFYL ; WJLGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL IJST
IRVTFGF Dwl SM JrR[SM. ; FYS TOFJT GYLP
- Ho₅₆ 35 JQFYL ; WJLGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF DFGI ; S
:JF:yI GF Dwl SM JrR[SM. ; FYS TOFJT GYLP
- Ho₅₇ 35 JQFYL ; WJLGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF ÒJG
; VTMF GF Dwl SM JrR[SM. ; FYS TOFJT GYLP
- Ho₅₈ 35 JQFYL ; WJLGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL IJST
IRVTFGF Dwl SM JrR[SM. ; FYS TOFJT GYLP

- Ho₅₉ 35 JQFYL ; WLGf ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF DFGI; S
:JF:yI GF DwI SM JrR[SM. ; FY'S TOFJT GYLP
- Ho₆₀ 35 JQFYL ; WLGf ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ÒJG
; TMEFGF DwI SM JrR[SM. ; FY'S TOFJT GYLP
- Ho₆₁ ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL IJST IRTFGF DwI SM JrR[
SM. ; FY'S TOFJT GYLP
- Ho₆₂ ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF DFGI; S :JF:yI GF DwI SM
JrR[SM. ; FY'S TOFJT GYLP
- Ho₆₃ ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF ÒJG ; TMEFGF DwI SM JrR[
SM. ; FY'S TOFJT GYLP
- Ho₆₄ ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL IJST IRTFGF DwI SM JrR[
SM. ; FY'S TOFJT GYLP
- Ho₆₅ ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF DFGI; S :JF:yI GF DwI SM
JrR[SM. ; FY'S TOFJT GYLP
- Ho₆₆ ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ÒJG ; TMEFGF DwI SM JrR[
SM. ; FY'S TOFJT GYLP
- Ho₆₇ DFGI; S XMB WZEFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL IJST
IRTFGF DwI SM JrR[; FY'S TOFJT GYLP
- Ho₆₈ DFGI; S XMB WZEFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF
DFGI; S :JF:yI GF DwI SM JrR[; FY'S TOFJT GYLP
- Ho₆₉ DFGI; S XMB WZEFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL ÒJG
; TMEFGF DwI SM JrR[; FY'S TOFJT GYLP

Ho70 DFGI; S XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL IJST
IRTFGF DwI SM JrR[; FY'S TOFJT GYLP

Ho71 DFGI; S XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL
DFGI; S :JF:yI GF DwI SM JrR[; FY'S TOFJT GYLP

Ho72 DFGI; S XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL
ÒJG ; TMMFGF DwI SM JrR[; FY'S TOFJT GYLP

Ho73 XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL
IJST IRTFGF DwI SM JrR[; FY'S TOFJT GYLP

Ho74 XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL
DFGI; S :JF:yI GF DwI SM JrR[; FY'S TOFJT GYLP

Ho75 XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL
ÒJG ; TMMFGF DwI SM JrR[; FY'S TOFJT GYLP

Ho76 XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL
IJST IRTFGF DwI SM JrR[; FY'S TOFJT GYLP

Ho77 XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL
DFGI; S :JF:yI GF DwI SM JrR[; FY'S TOFJT GYLP

Ho78 XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL
ÒJG ; TMMFGF DwI SM JrR[; FY'S TOFJT GYLP

1.6.2 'r' S; MBL GL ptS<5GFVMo

Ho79 DFGI; S XMB WZFJTF ; FWFZ6 AF/SMJF/F I5TFGL IJST IRTF VG[
DFGI; S :JF:yI GF DwI SM JrR[SM ; ULG ; C; XAW GYLP

- Ho₈₀ AYL JW] ; FWFZ6 AF/SMJF/F I5TFGL IJST IRVF VG[ÒJG
; VTMFGF DwI SM JrR[SM. ; ULG ; C; XAW GYLP
- Ho₈₁ ; V]ST SBJADF\ ZC[TF ; FWFZ6 AF/SMGF I5TFGL IJST IRVF VG[
ÒJG ; VTMFGF DwI SM JrR[SM. ; ULG ; C; XAW GYLP
- Ho₈₂ AYL JW] ; FWFZ6 AF/SMJF/F I5TFGL DFGI; S :JF:yI VG[ÒJG
; VTMFGF DwI SM JrR[SM. ; ULG ; C; XAW GYLP
- Ho₈₃ AYL JW] ; FWFZ6 AF/SMJF/F I5TFGL IJST IRVF VG[DFGI; S
:JF:yI GF DwI SM JrR[SM. ; ULG ; C; XAW GYLP
- Ho₈₄ ; FWFZ6 A[AF/SMJF/F I5TFGL IJST IRVF VG[ÒJG ; VTMFGF
DwI SM JrR[SM. ; ULG ; C; XAW GYLP
- Ho₈₅ ; FWFZ6 A[AF/SMJF/F WMP 12 ; JWL VeIF; SZ[F I5TFGL IJST
IRVF VG[ÒJG ; VTMFGF DwI SM JrR[SM. ; ULG ; C; XAW GYLP
- Ho₈₆ 35 JQFYL p5ZGF ; FWFZ6 AF/SMGF I5TFGL IJST IRVF VG[ÒJG
; VTMFGF DwI SM JrR[SM. ; ULG ; C; XAW GYLP
- Ho₈₇ ; FWFZ6 A[AF/SMJF/F I5TFGL IJST IRVF VG[ÒJG ; VTMFGF
DwI SM JrR[SM. ; ULG ; C; XAW GYLP
- Ho₈₈ ; FWFZ6 AF/SMGF 35 JQFYL GLR[GL pDZGF I5TFGL IJST IRVF VG[
ÒJG ; VTMFGF DwI SM JrR[SM. ; ULG ; C; XAW GYLP

1.6.3 'F' S; NBL V]SDFUL'I IJRZ6 5YÞZ6 5DF6[X]I ptS<5GFVMb

- Ho₈₉ IEpF VFJSJF/F ; FWFZ6 AF/SGF I5TFGL DI; S VFJS s~FP 3000
YL VMKL4 ~FP 3,000 YL ~FP5,000 JrR[~FP 5,000YL JW] f
WZEFTE IJST IRVFGE 5F%TFSM JrR[SM. ; \ uGTF HMJF D/TL
GYLP

- Ho₉₀ IEþf VFJSJF/F ; FWFZ6 AF/SGF I5TFGL DFI; S VFJS s~FP3000
YL VMKL4 ~FP 3,000 YL ~FP5,000 JrRf ~FP 5,000YL JW]f WZFJTF
DFGI; S :Jf:yI GF 5f%TFSM JrR[SM. ; \ uGTF HMUF D/TL GYLP
- Ho₉₁ IEþf VFJSJF/F ; FWFZ6 AF/SGF I5TFGL DFI; S VFJS s~FP 3000
YL VMKL4 ~FP 3,000 YL ~FP5,000 JrRf ~FP 5,000YL JW]f WZFJTF
ÒJG ; VMDFGF 5f%TFSM JrR[SM. ; \ uGTF HMUF D/TL GYLP
- Ho₉₂ IEþf jIFJ; FI JF/F ; FWFZ6 AF/SGF I5TFGL IJST IRVTFGF 5f%TFSM
JrR[SM. ; \ uGTF HMUF D/TL GYLP
- Ho₉₃ IEþf jIFJ; FI JF/F ; FWFZ6 AF/SGF I5TFGF DFGI; S :Jf:yI GF
5f%TFSM JrR[SM. ; \ uGTF HMUF D/TL GYLP
- Ho₉₄ IEþf jIFJ; FI JF/F ; FWFZ6 AF/SGF I5TFGF ÒJG ; VMDFGF
5f%TFSM JrR[SM. ; \ uGTF HMUF D/TL GYLP
- Ho₉₅ IEþf 7FITGFs General, BC. SC.f ; FWFZ6 AF/SMGF I5TFGL IJST
IRVTFGF 5f%TFSM JrR[SM. ; \ uGTF HMUF D/TL GYLP
- Ho₉₆ IEþf 7FITGF ; FWFZ6 AF/SMGF I5TFGF DFGI; S :Jf:yI GF 5f%TFSM
JrR[SM. ; \ uGTF HMUF D/TL GYLP
- Ho₉₇ IEþf 7FITGFs General, BC. SC.f; FWFZ6 AF/SMGF I5TFGF ÒJG
; VMDFGF 5f%TFSM JrR[SM. ; \ uGTF HMUF D/TL GYLP
- Ho₉₈ IEþf 7FITGFs General, BC. SC.f IJIX08 AF/SMGF I5TFGL IJST
IRVTFGF 5f%TFSM JrR[SM. ; \ uGTF HMUF D/TL GYLP

Ho₉₉ IEþF 7FITGF IJIX08 AF/SMGF I5TFGF DFGI; S :JF:yI GF 5F%TFFSM
JrR[SM. ; \ uGTF HMUF D/TL GYLP

Ho₁₀₀ IEþF 7FITGFs General, BC. SC.fIJIX08 AF/SMGF I5TFGF ÒJG
; ∇MMFGF 5F%TFFSM JrR[SM. ; \ uGTF HMUF D/TL GYLP

1.7 VUtI GF 5NMGL jI FbI F 0

Ý:TJT ; XMBGDA Sß, FS 5NMGM JFZJFZ p5I MU SZJFDA VFJIM KP
HGL VCL “Operational definition” Vß, [IS| FtDS 5NM TZLS[jI FbI F
VF5JFDA VFJL KP

5:TJT VeIF; DA p5I MU , LW[; FDFgI XaNm VG[5FIZEFIQFS
XaNmGL jI FbI F SZJFYL IH7F; MM TGm RMP; VY" ; DÒ XS[KP Ý:TJT
VeIF; DA VUtI GA 5NMGL jI FbI F GLR[ÝDF6[SZJFDA VFJL KP

1) IJ:TFZ sUfdI VG[XCZLf 0

H[IJ:TFZ GL J:TL B)AH J3FZ[CMI TÐH IJSF; GL ;]J3F JWfZ[
CMI TG[XCZL IJ:TFZ U6[K[VG[TDFD ; UJOTFVM CMI KP H[
IJ:TFZDA J:TLG) ÝDF6 B)AH VMK[CMI VG[;]J3FGM VEFJ CMI TG[
UfdI IJ:TFZ U6[KP

2) DFI; S VFJS 0

Sß)ADFA SDFTL AWL jI ISTVMGL S], VFJSG[DFI; S VFJS U6JFDA
VFJ[KP H[DFTFvI5TFGL DFI; S VFJS TZLS[VCL ; XMMGDA VY'38G
SZ[KP

3) VeIF; 0

VeIF; DF8[NFB, YFI tIFZYL 3M 1 YL 7 G[ÝFYIDS S1FFGM
 VeIF; U6[, KP 8YL 10 ; WLGf VeIF; G[DFwI IDS VeIF; TZLS[11YL
 12 ; WLGm VeIF; G[prRTZ DFwI IDS VeIF; TZLS[VG[SM, HGF +6
 J0FGF VeIF; G[:GFTS VG[tIFZ 5KLGf VeIF; GL IOU[G[VG[GFTS
 IOU[TZLS[DFTF S[I5TFGF jI ISTUT VeIF; G[wI FGDF, LW[, KP

4) SÞjAGM ÝSFZ s; V ÞT q IJESTf 0

DFTF I5TF VG[TGf ; VFGM CMI TG[IJEST SÞjAGM ÝSFZ U6[, K[
 VG[DFTFvI5TF4 ; VFG p5ZFV[NFNf NFNl JUZ[PPP 'VFIZT ; eIM ; FY[
 ZC[TF CMI TG[; V ÞT SÞjA U6[, KP

5) HFIT v AF/SGL HFIT 0

AF/SGL HFIT VÞ, [TG[:+L VG[5]-0F CMJFGL 5IZI:YIT sVDÞ
 XFZLIZS , 1F6MGf VF3FZ[FP

6) XMB sDFGI:FS q XFZLIZS f0

XMB VÞ, [jI ISTGL S. AFATDF Z; 4 ~IR4 VIE~IR KÞ HDFA
 jI IST SM. GF DFUNX'G S[NAF6 JUZ IN, YL EFU , [KP TG[XMB SCÞFI
 NFPTP JFRG4 , ÞG4 ZDTUDT4 DGMZHG4 5ÞF; JUZ[PP NZÞ jI IST DFA
 Z; v~IR V, U V, U CMI KP SM. G[XFZLIZS XMB CMI TM TÞFA ZDT
 UDT VFJL XS[DFGI; S XMB CMI TM TÞFA JFRJÞ ; ULT ; FE/JÞ JUZ[
 VFJL XSP

7) IJIX08 AF/SGF VG[T]GL HFIT 0

VgI AF/SGL NI08V[IJIX08 AF/SGL SFI 1FDTF AF[âS 1FDTF
VMKL CMJL VG[VFD\ 56 AF/SGL HFIT T]GF XFZLIZS , 1F6MGF VF3FZ[
GSSL YFI KP

8) AF/SGL ; bIF 0

SBJADF KMSZL4 KMSZF D/LG[H[; bIF CMI T]G[DFTFvI5TFGF
AF/SMGL ; bIF TZLS[wI FGDF\, LW[, KP

9) jI J; FI 0

DFTF S[I5TF 5MFFGF VFIYS pt5FNGDF\ GMSZL4 WWWW B[TLDF\
ÔDF. G[VFJS D/J[KP VF NZ\$ 1F+G[jI J; FI TZLS[5]:T]T ; XMBGDF\
wiFFGDF\, LW[, KP

10) pDZ 0

DFTF S[I5TFG\ HgD TFZLB 5]F6[YTL pDZ G[VCL\ pDZ TZLS[
wI FGDF\, LW[, KP

11) 7FIT 0

; FDFgI S[IJIX08 AF/SGF DFTFvI5TF S\ 7FIT DF :YFG WZFJ[K[
T]G[VCL\ 7FIT TZLS[wI FGDF\, LW[, KP

1.8 Ý:T]T VeIF; GF 5IZJtI M0

SM. 56 ; XMBGDF\ 5IZJtI MGM BF; p5IMJ SZJDF\ VFJ[KP VF
5IZJtI M Vß, [S[; DI[H[SM. 56 AFATDF\AN, FJ VFJJFGL 5]S[FG[

Vf56[J:T] S[38GFg[Uj VG[HyYFGL 1I08V[V\$ ALHFYL JzF VMKF
 5DF6DFAHNL 50FTL CMI KP VFD4 5IZJtIM Vj, [JWFZ[VYJF VMKF
 5DF6DFA VI:TtJ 3ZFJTL J:TjMP 5IZJtIM A[:J~5GF CMI KP (1)
 ; bI ftDS (2) UjftDS VFD ; XMBG TOFJT NXFJ[KP VFJF DF+ TOFJT
 NXFJTF bI F, MG[5IZJtIM SCjFI VG[V[; XMBGG] DCÀJG] TÀJ KP VF
 5IZJtI "GL jI FbI F JUZjGL RRF" GLR[DjHA KP

5IZJtI MGL jI FbI Fo

-5|I MJ STF" 5|I MJGL 5IZI:YTLDAOZOFZ SZL XS[KP 5|I MJDA H[
 5IZI:YTL AN, JFDFAVFJ[K[TG[5IZJtIM SCjFDFAVFJ] KP-9

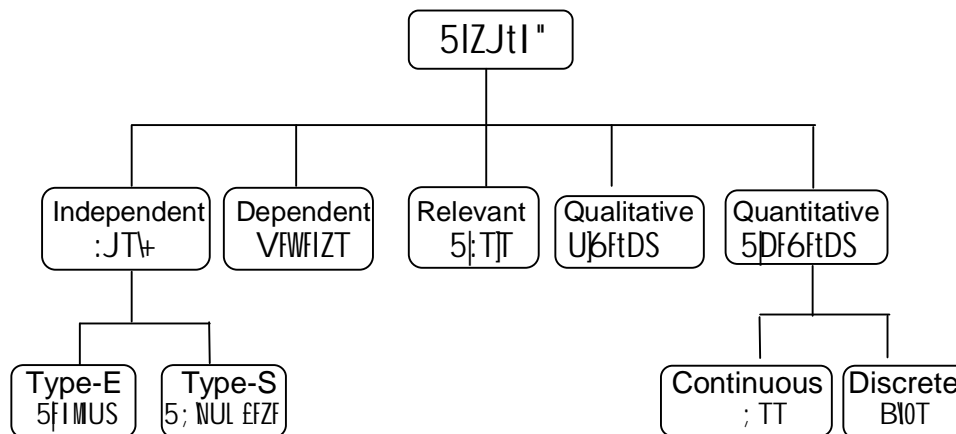
-5IZJtI "Vj], 1f6 S[Uj3D"K[HGF VG\$ 5\$FZGF DkI CM. XS[
 KP-10

-J:TjM# 38GFVM VYJF jI ISTVMGF DF5L XSFI TjF SM. 56
 Uj3D"VYJF , 1f6G[5IZJtIM SC[KP-11

5M:8DjG TYF. UG

; XMMG ; D:IFDA ; DFj, F IJjW 5IZJtIMG[VM/BJF VG[TjDG[
 jI JCFIZS jI FbI FIIT SZJF V[; NEDA ZFBL :JT+ 5IZJtIM 5ZT+
 5IZJtIM VG[IGII+T 5IZJtIM TYF TjGL IJjW S1FFVM GpL SZJFDA
 VFJ[KP VF DF8[GLRG]JULSZ6 wI FGDA, j] DCtjG]KP

OLP VDPBM 5DF6 5IZJtI MG\JULSZ6



; XMWGDA; D:IFDA; DIJ08 5IZJtI MG[VM/BJF VG[jI fbl FIIT
 SZJF V[VwI IGG\; M5FG KP 5:TJT ; XMWGDA GLR[5DF6[:JT+4
 5ZT+4 IGI1+T TPH VFTZJTL"5IZJtI MG[wI FGDA, LWF KP

"A" :JT+ 5IZJtI "

"B" 5ZT+ 5IZJtI "q VFWFIZT 5IZJtI "

"C" IGI1+T 5IZJtI "

"D" VFTZJTL"5IZJtI "

"E" H{JS 5IZJtI "

"A" :JT+ 5IZJtI "

¬; FDFgl ZLT[Vp]SM. 56 5IZJtI ":JT+ 5IZJtI " KP HDA5I MU
 STFq; XMWS äFZF 5tI1F ZLT[VYJF 5;NUL äFZF C:Tv5I MHG
 sJWFZJFDFv W8F0JFDFf SZJFDF VFJ[KP T[VFJ\ :JT+ 5IZJtI GL
 VFWFIZT 5IZJtI "5Z 50TL V; ZGM Veiff; SZJF DF8[SZ[KP

"In general an Independent Variable by any variable
 manipulated By 'E' either directly or through selection in order to

determine its effects on a behavioral measure (dependent variable)”¹²

∑:JT∕+ 5IZJtI " V[DF5G SZTF JTG 5F; F 5Z V; ZSTF" V[∫
5IZJtI "KP HDA5I MJSTF"äFZF C:T5I MHG SZJFDA\VFJ[KP-¹³

Sg8MJh TYF ZMOUZ s1964f

∑:JT∕+ 5IZJtI " Vβ, [5I MJDA VYJF ; XMWGDA H[5IZJtI 'GL
V; Z T5F; JFGL K[V∫}5IZJtI "14

5;TJT VwI I GDA GLRGF 5IZJtI M:JT∕+ 5IZJtI MKP

1. DFTFvI5TFGMjI J; FI
2. SβJAGL DFI; S VFJS
3. IJ:TFZ
4. IJIX08 AF/SGL ÔIT
5. I5TFGMVeIF;
6. DFTFGMVeIF;
7. SβJAGM5βFZ
8. DFTFGL pDZ
9. I5TFGL pDZ
10. 7FIT
11. XMB

“B” 5ZT∕+ 5IZJtI "q VFWFIZT 5IZJtI "o

∑VFWFIZT 5IZJtI "Vβ, [V∫}5IZJtI "HGF IJQF[5I MJSTF"5I MJGF
VFWFZ[EIJ0I JF6L SZ[Kf¹⁵

“A dependent variable is any behavioral variable measured by ‘E’ to assess the effect of a manipulated (independent) variable”

-VFWFIZT 5IZJtI " Vß, [:JT+ 5IZJtI " Df\ YTF OZOFZM 5Z H[VFWFIZT K[Tf¹⁶

VFWFIZT 5IZJtI "VYJF 5ZT+ 5IZJtI " V[VpM W8S K[H[:JT+ 5IZJtI GL V; Z T5F; JF DF8[IGZL1F6 SZJFDF\ VFJ[KP VG[DF5JFDF\ VFJ[K[VF Vp] 5IZJtI " K[H[:JT+ 5IZJtI Df\ OZOFZ YJFGF SFZ6[OZOFZ 5FD[K[T[:JT+ 5IZJtI Gf DkI 5Z VFWFIZT KP Vf VeIF; Df\ +6 5IZJtI MG[VFWFIZT 5IZJtI M TZLS[, LW[, KP

1f IJST IRVF 5F%TFS

2f DFGI; S :jff:yI 5F%TFS

3f ÖJG ; VMF 5F%TFS

5ZT+ 5IZJtI "V[Vp] W8S K[H[:JT+ 5IZJtI GL V; Z T5F; JF DF8[IGZL1F6 SZJFDF\ VFJ[K[VG[DF5JFDF\ VFJ[KP -5ZT+ 5IZJtI "V[K[S[HG] 5| MUSTF" äZF IGZL1F6 SZJFDF\ VFJ[KP HG] 5| MUSTF" q ; XMS äZF IGZL1F6 SZJFDF\ VFJ[K[TYF GMW SZJFDF\ VFJ[Kf¹⁷ sSg8MJhYLIF ZMOUZ 1984f

“c” IGI \+T 5IZJtI "q VS]XT 5IZJtI M

-; XMGDF\ :JT+ 5IZJtI "p5ZFT 5IZ6FD p5Z H[GL V; Z YJFGL ; EFJGF CMI TG[IGI \+T SZJF 50[KP TG[IGI \+T 5IZJtI "SC[Kf¹⁸ ; XMS[; XMG NZdIFG TG] IGI \+6 SZJFG] CMI KP HYL TG] V; Z IGI \+T Y. XS[K[VYJF TG] T8:Y V; Z YFI T[DF8[; XMS[; XMGDF\

wl FG ZFBJFG\ CMI KP 5: T]T ; XWGDFA VFJF IGII+T 5IZJtI M GLR[
5DF6[NXFJL XSFI P

1f ÔIT 0v male / female

2f AF/SGL ÔIT 0v Boy / Girl

3f SBJA GM 5SFZ 0v ; V]ST q IJFEST

:JT\+ 5IZJtI G[A[+6 IJEFU SZLG[IGII+T SZLG[VeIF;
SZJFDF\VFJ[KP

-VS]XT S[IGII+T 5IZJtI " V\$ 5SFZG\ ; EIJT :JT\+ 5IZJtI "
CMI KP HG[5| MJ NZdI FG I:YZ ZFBJFDF\VFJ[KP VF V\$ V\] 5IZJtI "
CMI K[H[5IZJtI " GYL YT] SFZ6S[5| MUSTF" äZF T[G[IGII+T SZL
N\JFDF\VFJ[KP¹⁹

v Sg8MJh TYF ZMOUZ 1984

“D” VFTZJTL"5IZJtI "0

-S\$, FS 5IZJtI GL V; Z WFZJL 50[KP VFJF 5IZJtI GL V; Z
5tI 1f Ô[XSFTL GYL S[DF5L XSFTL GYLP 5ZT] T[G\ VI: TtJ 5ZMFGL
~5[; FIAT Y. XS[KP VFJF 5IZJtI M 5ZT\+ p5Z V; Z YTL Ô\JF D/[
KP VFJL V; Z IJQF[VDS\$ WFZ6F S[V8S/ Y. XS[KP⁻²⁰ VFJF 5IZJtI G[
VFTZJTL" S[HG[5ZT\+ 5IZJtI " 5Z , FU] 5F0JFDF\ VFJTF GYL S[T[G
V; Z 56 VS]XT SZL XSFTL GYLP 5ZT] :JT\+ 5IZJtI GL 5ZT\+
5IZJtI " 5Z YTL V; ZDFYL VFJF 5IZJtI GL V; ZG\ DF+ VGDFFG SZL
XSFI KP

5: T]T VeIF; D\GLR[5Df6[VFTZJTL"5IZJtIMÔJF D/[KP

1f DFGI; S :Jf:yI DF8GF VFTZS 38SMP

2f DFTFvI5TFG}; FDFIHS4 JTDfG JFTFJZ6

3f DFTFvI5TFG\XMB4 ~IR4 Z; JUZPPP

4f ; FDFIHS VFIYS I:YIT

5f AF/SGL I:YIT

VF JFTGMDD"; DHJF NUNJTGf bIF, G[zLDTL IG, DA\G SFGFAFZ
 cALOFI[, L SOLcDA; DHFJTF SC[K[S[cVF56}; HG VYF\ cAF/Sc . `JZGM
 NJT KP T[SM, G[SM. 5SFZGM ; NXM , . G[VFJ[KP TDF\ 56 IJIX08
 cFITU]:Tc V\B, [cNUNJTGf ~5Df\cAW S/lc VF56[3Z VJTFZ , [K[tiFZ[
 VF56[; f{ ; BGF\ ; FUZDF\ IC, M/F , . GFRJF , FULV[KLVp 5ZT]
 DpI tJ[E}, L H. V[KLV[S[cAWS/lcG[c5b" IJSI; T O}, c AGFJJFG} K#
 H\YL TGM TGL ZLT[IJSF; YJF N. V[KLVp VWIJ` JF; Df\ V\B, F AWF\
 UZSEJ Y. V[KLV[S[BI FZ[BAZ 50[K[S[TGFDf\ SM. S V\JF 5SFZGLFIT
 ZCL U. K[S[; b" ZLT[IJSI; T Y. XSI\GYLP tiFZ[S\JF 3F JFU[; V[TM
 HG[JFuIF CMI T[H HF6[G[; 5ZT] tiFZ[36}H DMD\Y. UI\ CMI K[; T[
 JBT[SA TM JLTU UI[, F ; DI G[IFN SZLG[VF\] ; FZTF CFY HMDL Af L
 ZCLV[VYJF 3F3F Y. NMDFNMDL SZL 5f; FGM jI I SZLV# 5IZ6FD X}I H
 VFJ[;

VF GFGSOL DFUNIXSFDF\ 3Z VFJ[, cAW S/lcGF ~5Df\ cNUNJTGf
 VM/BLV[VG[VJTZ6 SZ[T[5C[, FYL H HFUIT ZFBL 5U, \p9fJLV#
 TDH cAW S/lcG[IJSI; T 5D5~5[BL, JJFGf 5|F; M SZJF SI8Aâ
 Y. V# H\YL 5D5 AGL 3ZDF\ DC\SL ; JW 5; ZFJ[VG[; DFHDF\ T[

cV6Bl<I} 5U T/[G SR0FI T[IJX}GL ; FJWFGLGL IJUT[JFT SZLXP

“E” H{JS 5IZA/ 0

ÔITI TFGL V; Z T5F; JFGL CMJFYL KMSZM S[KMSZL G[XFZLIZS
ãl08V[wI FGDF\, LW, ÔITI 5IZA/ KP ÔITI TF G[VC\H{JS 5IZA/
TZLS[, JFDF\VFJ[KP

VFD GLR[5DF6[TFZ6MSZL XSFI PPP

v VFTZJTI"5IZJti "V[VGDFIGT 5IZJti "KP HGL 5ZT+ 5IZJti "5Z
; ÆITS V; Z DF5L XSFTL GYLP T}YL V; ZGL DF+ WFZ6F H SZL
XSFI KP

v :JT+ 5IZJti 4 VS}XT 5IZJti "5Z ALÔ , FUJ 5F0L XSFI KP VG[
VF 5IZJti "5Z 5ZT+ 5IZJti "5Z XL V; Z SZ[KP T[DF5L XSFI KP

v VF AWF 5IZJti MG[SFZ6[V; ZGF VeIF; DF\JLSFZ[, KP

v SFZ6; Z ; AWDFA5ZT+ 5IZJti "V; Z SZ[KP

v :JT+ 5IZJti GL V; Z 5ZT+ 5IZJti "p5Z X} YFI K[TGM VeIF;
SZJFDF\ VFJ[KP HIFZ[VS}XT 5IZJti "äFZF H[V; Z YTL CMI T[
V; ZG[T8:Y S[NZ SZJFDF\VFJ[KP

v :JT+ 5IZJti GL ; LWL V; Z 5ZT+ 5IZJti "5Z T5F; FI KP HIFZ[
:JT+ VG[5ZT+ 5IZJti "JrR}GF ; AW GM VeIF; SZJFDF\VFJ[KP

VF DF8[IJIX08 AF/S S[; FDFgI AF/SGF XFZLIZS VG[DFGI; S
AFAT IJX[VeIF; SZJM HM VP zL DTL IG, DA[G SFGFAFZ 5MTFG\
5]:TS ccN[UN}ccGF GFD[; JF, GMHJFADF\, B[K[S}H

XFZLIZS 1FIT Vß, [XZLZGF NßFTF VUMDA éEL YI[, L BFDLP
 5IZ6FD[ZMHNF jI JCFZDA DKS[, L éEL YFI NFPTP VFBA SFG4 ÒE4
 CFY4 5U JUZPDA BFDL CMI TMAM, J# ; FE/J# HMU# RF, J# SFD SZJ#
 JUZPDA ; FDFgI AF/S SZTF TG[JW] DKS[, L 50[K[H[:JFEFIJS K[VG[
 :JTB+ ZLT[G ZC[TF ALHF 5Z DC; VX[VFWFIZT ZCJ] 50P 5|I F; M EFZF
 ; D:IF cDI FINT56] C, YFI 56 BZL VG[G 56 YFI P

XFZLIZS VG[DFGI; S 1FIT VßALHF ; FY[; S/FI[, L KP T#L
 ; FD]CS 1F+[, ; D:IF éEL YJFGL HP HDA jI JCFZ VG[JTGDA OZS
 50JFGMP ; FDFgI AF/SGI ; ZBFD6LDA DFGI; S 1FIT NßFI K[56 BZL
 VG[GYL 56 NßFTLP HDA DpI tJ[jI ST SZJFGL 1FDTFGM VEFJ KP
 5IZ6FD[JW] 50TL VI:YZTF4 DFZL , J# A8SF EZJF4 5MTFGL HFTG[. HF
 SZJL4 :JSI]gã jI JCFZ4 wI F BRJF DF8[VIMuI jI JCFZ4 TMDOM4 U]; ; M
 SZJM JUZ[; D:IF éEL YFI K[VG[NZß AF/SDA V, U V, U
 ; D:IFVMHMUF D/[KP

5ZT]AG[; D:IFVMAG[; D:IFVM VßALHF ; FY[HMDFI[, L CMJFYL
 AGG[; FY[; DÒ N# SZJF 5|I F; M SZJF 50XP 5IZ6FD SIFZ[VFJX#
 Sß,]VFJX[VG[WFI F"5DF6[VFJX[S[GCL\T[RM] ; 56[SCL XSFI GCLP

1.9 ; XMWGGF\; FWGM0

Ý:TJT ; XMWGDA C[T]MG[wI FGDA ZFBLG[GLR[NXF"J, ; FWGMGL
 DNNYL DFICTLG]Vß+LSZ6 SZJFDA VEFJ, KP

1) jI ISTUT DFICTL5+S 0

; XMWG GD)GFDA; DIJ08DFYL , [F1] , F pTZNFMM VUJL Sß, LS
 jI ISTUT DFICTL ; XMWG DF8[p5I MJL GLJ0[KP jI ISTUT DFICTL
 D/JJF DF8[VG[; AW 5YÐZ6 wIFGDA ZFBLG[; XWWS[DFUNXS ; FY[
 IJRFZ6F SZLG[jI ISTUT DFICTL 5+S ZR[, HGF ; F3FZ6 VG[IJIX08
 AF/SMGF DFTF I5TFGL HFIT4 pDZ4 IX1F64DFI; S VFJS47FIT IJIX08
 AF/SGL HFIT4 AF/SGL ; bIF4 Sß)AGFA ÝSFZ4 XMB JUZPP AFATMGL
 DFICTL D/JJFDF)VFJL CTLP

2) IJST IRVF ; XMWIGSF S; MBL 0

; FWFZ6 AF/SMGF DFTFvI5TF DF8[IJST IRVF SANXIETYF
 ; XMWIGSF OMP SP5L I; CF VG[V, P VGP S[ZIRT ; XMWIGSFGM p5I MU
 SZJFDF)VFjI M KP VF ; XMWIGSFDA90 IJ3FGM KP TDF)pTZNFTE 5MTFGL
 ÝTIS|I F 5| GGF HJFADFA VF5JFGL CMI KP VG[HGF cCfc DF8[1 U)6FS
 VG[cGfc DF8[0 U)6FS DgI)M, ÝDF6[VF5JFDF)VFJ, KP HGL
 IJxJ; GLI TF 0.92 K[VG[IYFYTF 0.62 KP VF S; MBLDA)HD 5F%TFSM
 GLRF TD IRVF)ÝDF6 VMK)VG[HD 5F%TFSM JW] TD IRVF)ÝDF6 J3P

BI FZ[IJIX08 AF/SMGF DFTFvI5TFGL IJST IRVF DF5JF DF8[
 p5I MJL TDPH VgI Ý`GFJ, LGF VFWFZ[VG[JF, LGL D], FSFT äZF JF, LG[
 pN)EJTL ; D:IFG[, 1FDF)ZFBLG[S], 78 Ý`GMGL 5; NUL SZLP DGMJ7FG
 1F+)ACF/M VG)EJ 3ZEJTF 14 TH)7FG[; XMBGGFACT)G[; 0/ AGEJFGF
 T5F; JF DF8[VF5JFDF)VFJL CTL tIFZ AFN TDFYL S], 60 Ý`GM 5; N
 SZL IJEFIHT VG[VWIJEFIHT 5âIT D)HA IJ`J; GLI TF XMWJFDF)

VFJ, CTLP HGL IJ`J; GLI TF 0.88 K[IYFYTF 0.57 KP

3) DFGI; S :JF:yI ; XMWIGSF / S; MBL 0

Ý:TJT ; XMWIGSF OMPOL H[EÎ VG[OMPÖPVFZ ULOF ZIRT DFGI; S :JF:yI ; XMWIGSF p5IMJ SZJFDF\ VFJIM KP VF ‘; XMWIGSFDF\ S], 40 IJWFGM KP HÐF\ pTZNFTE ÝxG ; FD[VF5], ; CDT q V; CDTDF\ “√” IGXFGL SZJFGL CTL VG[TGf DgI]V, ÝDF6[VY’38G SZJFDF\ VFJ, CT]TGL IJxJ; GLI TF 0.87 K[VG[IYFYTF 0.63 KP

4) ÒJG; VMF ; XMBIGSF S; MBL 0

Ý:TJT S; MBL OMPVF, D VG[zL JF:TJ ZIRT ÒJG; VMF (Life satisfaction)GM p5IMJ SZJFDF\ VFJ, KP HÐF\ S], 60 IJ3FGM KP VG[pTZNFTEV[CF VG[GF ÝxG ; FD[, B], CMI KP TÐF\ pTZNFTE V[JTY GL IGXFGL SZJFGL CTL VG[pTZ CF CMI TM₁ U}fS VG[GF CMI TM₀ U}fS VF5JFGM CTMP HÐ J3]:SMZ TD ÒJG; VMF JW] VG[VMKM :SMZ TD ÒJG ; VMF VMKM VÐ VY’38G SZJFDF\ VFJ[KPVF T], FDF\ S; MBL 5GoS; MBL EFZF IJ`J; GLI TF XMWJFDF\ VFJL CTLP H[0.84 HMUF D/L CTL VG[IYFYTF 0.74 VG[0.82 HMUF D/L CTLP

1.10 Ý:TJT ; XMWG IMHGf0

JTDFG IJJ{FIGS ; XMBGGM IJ KP VFH[ZMH AZMHGL W8GFVMG[T5F; JF DF8[VG\$ GJF GJF ; XMBGM YTF ZC[KP HGF äZF I; äFTM IJS; [K[VG[IJ7FGGM IJSF; YFI KP SM. 56 38GFG] ; XMBG SZJFG\ CMI K[tIFZ] ; F{ ÝYD ; XMBGGL a,] I5g8 Tq FZ SZJL 50[KP IJQFI G[5; N SZL ; XMBG IMHGF AGFJJL H~ZL KP SFZ6 S[; XMBG

IMHGF IJGF VEGEFIJS ; XMBG SZL XSFT] GYL HYL ; XMS[; XMWG
 IMHGF AGFJJL Vß VIGJF! AFAT AGL HFI KP
 ; XMBG IMHGF GM VY"jIFbIF 0

5LPJLP!U TG[J{7FIGS ; XMBGGL ÝFYIDS H~IZIFT TZLS[
 VM/BFI KP VFYL H J{7FIGS ZLT[; XMBG SZJF DF8[; XMS[IMHGF
 AGFJJL H~ZL AG[KP ALÒ ZLT[SCLV[TM ; XMBG IMHGF ; XMBG SFI "
 INXF; RG VF5JF DF8[G] TFISS VG[;]I MHT ; F3G KP²¹

HCMDFGF DT[cc; XMBGGL IMHGF Vß, [; XMBG ; D:IF VG[TG[
 VFXIG[VG]-5 DFICTL VßI+T SZJL VG[DFICTLGF IJ` , [F6 VG[
 VY"38GGL SZS; ZIßT VG[VFI MHG5}J'SGL UM9J6L SZJLP²²

; XMS 5MTEGF ; XMBG DF8[X~VF TYL , . G[VT ;]ML H[SFI
 SFI"JFCL SZ[K! T[IJQF[T! FZ SZ, L ~5ZBF Vß, [; XMBG IMHGF VD
 SCL XSFI P VFD ; XMBG IMHGF Vß, [SM. 56 ; XMBGFtDS VeIF; GL
 X~VF TYL , . G[5ß"YTF ; ßLGL ; DU| ÝIS| FGL IMHGF

-; XMBG DF8[5C[, LYL H ; FDU| T! FZ SZL ZFBJL TG[; XMBG
 IMHGF SC[KP-²³

v :8LJg; G v

“; XMBG IMHGF Vß VJL ÝIS| F K[S[HGF ; XMBGGL SFI"JFCL X~
 YFI T[5C[, F , [JFDF\VFJTF IG6!MGM; DFJX YFI KP”²⁴

v 5M, G IU v

“; VMFSFZS DFICTL ÝF%T SZJFGL Vß jI]CZRGF Vß, [; XMBG IMHGF”²⁴

v 5MP UM5F, v

; XMBG I MHGFGF ; M5GM0

- 1) ; XMBG ; D: IFGL 5; NUL
- 2) ; XMBG ; D: IFG[30TZ VG[T]GL :508TF
- 3) ; XMBG ; D: IFG\ Sgã VG[T]GL :508TF
- 4) ; XMBGGF C[T]VMGL :508TF
- 5) ; XMBGDFA\pt5S<5GFGL ZRGF VG[T]GL :508TF
- 6) ; XMBG DF8[H~ZL ; FDU\ VG[T]GL :508TF
- 7) ; XMBG VeIF; jIF5IJxJ VG[T]GL :508TF
- 8) VeIF; GL 5ãITVM YI]STVMGL :508TF
- 9) V]I+T DFICTLG\JULSZ6 VG[IJ` , QF6
- 10) IJ` , QF6 5ZYL VY*38G
- 11) ; XMBG VC]F,
- 12) ; XMBGGF TFZ6M²⁶

; XMBG I MHGFGF ÝSFZM⁷ 0

C[T]MG[wI FGDA ZFBLG[; XMBG I MHGFGF ÝSFZM 5FOJFDA VFJ,
Kp HDAK ÝSFZM Kp H[VF D]HA Kp

- 1) VgJQ6ftDS ; XMBG I MHGF
- 2) J6GftDS ; XMBG I MHGF
- 3) IGNFGftDS ; XMBG I MHGF
- 4) ÝI MJftDS ; XMBG I MHGF
- 5) V{TCFI; S ; XMBG I MHGF
- 6) T], GftDS ; XMBG I MHGF

; XMBG I MHGFGI IJIX08TF²⁸ 0

- 1) ; XMBG I MHGF ; XMBG TQ FZ SZI KP HDA X~VFYI VITD
IJ , QF6GL ; WGL ~5ZBF ; DFI , L CMI KP
- 2) ; XMBG V[I MHGF DF+ GSXM GYL 56 V\$ ZRGF KP HDA
; FD[, SZ[AFATM IJQ[5IZJT'GMGA ; XMMG\ VWI I G V\$
IJXQF GDGM KP
- 3) ; XMBG I MHGF ; XMBG STFG[; XMBGGF JF:TIJS , II ; BL
5CMRJFDA DNN SZI KP

; XMMGGL I MHGF VFJxI STF²⁹ 0

- 1) ; XMWG DF8[RMS; VFI MHG CMJ]HM. VP
- 2) ; XMWG DF8[VFI MHGGM VD, YJM HM. VP
- 3) RMS; :508 DFICTL V\$9L SZJF ; XMBG I MHGFGI VFJxI STF
- 4) VFI MHG JUZ ; XMBGDA ; DI 4 XIST4 GF6FGM jI I YFI DF8[
; XMBG I MHGFGI VFJxI STF KP
- 5) ; XMBG I MHGF äFZF VY'38G :508 RMS; :J~5 DfASZL XSFI P

; XMBGGF I; äFT DF8GF SFI M³⁰ 0

- 1) ; XMBG I; äFTMG M ÝFZE SZJFG\ SFI "SZI KP
- 2) ; XMBG ÝJTDFG I; äFTG[VWZM 5ZJFZ SZJFDA VG[GJF I; äFT
:YF5JFDA OF/M KP
- 3) ; XMBG I; äFTGL 5]Go jI FbI F SZJFG\ VG[:508 SZJFG\ SFI "SZI KP
- 4) ; XMBG I; äFTGA ; FDFgI ÝJFCMG[GJL INXF VF5[KP
- 5) ; XMBG 5JFGDFG S[EFIJ SYG SZJF DF8GL XSI TF éEL SZI KP

6) ; XMMG GJF 1F+ IJQFG\ 7FG VF5[KP

7) ; XMBG SIF 1F+ DF\SZJFG\AFSL K\T[TZO ; XMBSG\wIFG NMZ[KP

1.11 VFSOF XF:+LI 5âITGMp5IMU³¹ 0

; XMMG SFI D\ V\SI+T SZ[, L DFICTLG\ 5yYSZ6 VG[VYW8G
SZJF DF8[VFSOFXF:+LI ÝI]STVMGM pI 5MU SZJDF\ VFJ[KP Ý:TJT
; XMMGDF\ C[T]MG[wIFGDF\ ZFBLG[D/J[, DFICTLG\ IJ` , DF6 SZJF DF8[
GLR[D]HAGL VFSOFXF:+LI ÝI]STVMGM p5IMU SZJDF\ VFJIM KP

1 D\I S

2 't' S; MBL

3 'r' ; C; AW

4 'F' S; MBL

VFSOFXF:+FGM VY"0

“ ; DFHDF\AGTL W8GFG[VFSOFDF\ D\ SJDF\ VFJ[T[VFSOFXF:+cc

“ÝtI 1F DFICTL S[UÁ6 DFICTLG\ 5YÞZ6 SZL DFICTLG\ VYW8G
SZL VFSOFDF\ S[; bI D\ , BJDF\ VFJ[T[VFSOFXF:+ KPcc

“VFSOFXF:+ ; FD)CS ~5YL TYF ; DU| 1108SM6YL ; FDFIHS
jI J:YFG[DF5JFG\IJ 7FG KPcc

v Afp, v

ccSM. 56 IJQFI ; DHJF T[GM T], GDF\ VeIF; SZJF T[IJQF[GL
VFSOFSLI DFICTL E[JL SZJL T[G] JULSZ6 VG[SM8S ZRGF ; FY[; AW
WZJIT\IJ 7FG V\B, [VFSOFXF:+Pcc

v , IJ8 VG[CMk8 h[F

cc; DÇDFA VFJ[, L ; FDFIHS S[G{ luFS ÝIS|I FVM S[; XMMGDFA
 U6TZL S[VGDFGM äZF V§9L SZMG[DFICTLGF 5YÞZ6 J0[D\J[, F
 5IZ6FDMGF I MuI VYW8GGL 5âITVMGM VeIF; SZT\ IJ7FG VÞ, [
 VFSOFXF: +Pcc

v ISU

1.12 Ý:TJT ; XMBGGL VUtI TF 0

SM. 56 1f+DFA ; XMS HIFZ[; XMBG SFI" SZJFGM IJRFZ SZ[K[
 tIFZ[V[IJ0FI GL p5I MULTF S[VUtI TF IJX[IJRFZL ,]\H~ZL KP

; XM3SF IX1F6 SFI" SZ[K# VÞ, [5MTFGF 7FGGM p5I MU SZLG[
 ; FDFgI AF/SMGF DFTFvI5TF VG[; DFHG[p5I MUL GLJ0# ; FY[; FY[H[
 3ZDA IJIX08 AF/S CMI TGF DFTFvI5TFG[56 VF ; XMBG p5I MUL
 IGJ0X[T[AFAT ; XMMGGL VUtI TF NXFJ[KP

EFIJ ; XMSM DF8[56 VF 1f+DFA 5:TJT ; XMMG p5I MUL ; FIAT
 YXP VF ; XMBGYL ; DFHGF\ TDFD 1f+DFA SFD SZT\ SDRFZL U64
 JF, LU64 IX1FSU64 IJnFYLU6 JUZG[56 VF ; XMBG p5I MUL YX[
 EIJOI DFA AF/SMGF pKZ VG[IJSF; DFA 56 VF ; XMBG ; F3FZ6 VG[
 IJIX08 AF/SMGF DFTF I5TF G[p5I MUL YXP

8§DFA VFU/ HTF Ý:TJT ; XMBG DFTFvI5TF p5ZFV IX1F6 ; \YF4
 ; \YFSLI ÒJGG[H GIC4 ; FDFIHS ÒJGG[56 TÞ,]H OFI NFSFZS AGX[
 TPDH IJIX08 AF/SMGF IJSF; IX1F6DFA VG[TGF ; JFUL IJSF; GF S<I F6
 DF8[p5I MUL AGXP DFGJ JTGGFA IJWFI S 5F; FVMG[J3G[J3] S\JJF
 DF8[Ý:TJT VeIF; INXF; RS AGX[T[AFAT IGI`RT KP

1.13 ; XMBG ÝSZ6MG\VFIMHG 0

Ý:TJT ; XMBG 5FR ÝSZ6DFAJCRJFDFAVFJ[KP H[VF ÝDF6[KP

ÝSZ6 -1 - IJQFI ÝJX

ÝYD ÝSZ6DFA5:TFJGF4 IJIXQ8 AF/SMGM ; FDFgl >ITCF; GM5IZRI4
VwIIGGL V[TCFI; S E]DSF4 ; XMWGGL ; D:IF4 5:TJT VeIF; GF
C[TVM VeIF; GL ptS<5GFVM VUtIGF 5NMGL jIFbIF4 VeIF; GF
5IZJtIM ; XMWGGF ; FWGM ; XMVG IMHG4 VFSOFXF:+LI 5âITGM
p5IMU4VeIF; GL VUtITF4 5SZ6MG\VFIMHG JUZGM ; DFJX SZJFDA
VFJ[KP

ÝSZ6 2 - ; XMBG ; FICTI GL ; DL1FF

Ý:TJT ÝSZ6 5:TFJGF4 ; XMWG ; FICTI GL T5F; G\DCÀJ4 IJST
IRTFG\ VYW8G4 IJST IRTFGF VeIF; M DFGI; S :JF:yI G\ VYW8G4
DFGI; S :JF:yI GF Veiff; M ÒJG; VMF VYW8G4 ÒJG; VMFGF
VeIF; M 5JL' VeIF; M ; FY[5:TJT ; XMWGGF TFZ6MGL T], GF JUZGM
; DFJX SZJFDA VFJ[KP

ÝSZ6 3 - ; XMWG IMHGFGI 5|S| F VG[5YÞZ6GL 5âIT

VF ÝSZ6DFA Ý:TFJGF AFwIF 5KL4 ; FDFIHS ; XMWGGL jIFbIF4
; XMWG UY6L4 ; XMWG IMHG4 ; XMWG IMHGFGF ; M5FGM ; XMWG
IMHGFGI DpI IJXQFTFVM ; XMWG IMHGFGF 5SFZM ; XMWGGL ; DIQ84
IGNX4 5:TJT ; XMWGGM IGNX4 ; XMWGGF p5SZ6M 5:TJT VeIF; G\
VFIMHG4 :JT+ 5IZJtIMG\IJ` , DF64 VFSOFXF:+LI 5|I]STVM 5:TJT
VeIF; GL DFICTIG\VS+LSZ6 JUZGM ; DFJX SZJFDA VFJ[KP

ÝSZ6 4- ; XMBG 5'PZ64 VY'38G VG[5IZ6FD RRF"

VF ÝSZ6DFA 5:TFJGF4 ; XMMG VUJL ; FDFgl DFICTLG
 5yYSZ6 VG[8SFJZL4 jI ISTUT 5IZJtIM VG[IJST IRVF4 DFGI; S
 :JF:yI VG[ÒJG ; VMF GL 't' S; MBL JO[5ZL1F6 VG[RRF4 ; C; AW 'r'
 S; MBL 5DF6[5ZL1F6 VG[RRF4 'F' S; MBL JO[5ZL1F6 VG[RRF4
 ptS<5GFVMG]; DU|TFZ6 JUZGL RRF"SZJFDF\VFJL KP

ÝSZ6 5- ; XMBGGF\TFZ6M VG[; RGM

VF ÝSZ6DFA 5:TFJGF4 ; XMMGGM ; FZ4 ; XMMGGF VWFZ[D/ J, F
 TFZ6M ; bI FtDS DFICTLG\ Uf0 äZF ; DHJTL4 UjFtDS DFICTLGF
 TFZ6M ; DU| ptS<5GFVMGM ; FZFX4 JWFZ[IJST IRVFGL SFZ6M IJST
 IRVF W8F0JFGF ; RGM GA/F DFGI; S :JF:yI GF SFZ6M DFGI; S :JF:yI
 ; JFZJFGF ; RGM GA/F ÒJG ; VMFGF SFZ6M ÒJG ; VMF JWFZJFGF
 ; RGM 5:TJT VeIF; GL VUtI TF4 5:TJT VeIF; GL DIFNFVM EFIJ
 ; XMMG DF8GF ; RGM ; XMWSFG\jI ISTUT D\jI JUZGL RRF"SZJFDF\VFJL KP

VTFDFA; NE"; JR VG[5IZIX08 ZH}SZJFDF\VFJL KP

5SZ6 VFI MHGDF\ NXFJIF 5DF6[; XMMG ; FICTI GL ; DL1FFGL
 IJUTYL RRF"SZJFDF\VFJL KP 5SZ6v2DFA CJ[5KL H~ZL ZH\VF T SZL
 KP

; NE"; JR

1. Educational Psychology Dr. S. S. Mathur Vinod Pustak Mandir, Agra-2, Page no. 583.
2. VFWJGS DFGJXF:+ 5IZRI , POFALP VP 5IZB4 5|PV|; PVDPP
VAF6L 5\$FXG 5M], Z 5\$FXG4 ; ZT4 5[. HGP 271P
3. A.A.M.R. American Association for Mental Retardation. 1983.
4. IJS, FU WFZM 1995 s5\$Z6v1 S, Dv2 VFZPF
5. NUNJGL IG; Z6L , |BSF 0 zLDTL IG, DAG VGP SFGFAFZ
5\$Z6vA DNA]âAJGF, 1F6M VG[VFJxI STff Page No.-1.
6. Neelm N. Nakum (DCFIGAW) ccSM%l ßZ prRIX1F6 GMGvSM%l ßZ
prRIX1F6 D/JTF IJnFYLVNGL jIFJ; FII S J, 6 5IZ5SJTF
VfDIJ` , QF6 VG[DFGI; S :Jf:yIGM T], GftDS VeIF; Pcc
5\$Z6v1, Page No.5 s; FZFQ8=I]GJI; 8L4 ZFHSM8P
7. VhGv6
8. VHGV6
9. VHGV6
10. OFR GNF6LIF ; FCJA sDCFIGAWF 5\$Z6v1, P. NO. 43-44.
; FZFQ8=I]GJI; 8L4 ZFHSM8P
11. cc; XMWG 5âITXF:+cc s; DFHXF:+ 55Z GPv2f P.no. 85-87,
; FZFQ8=I]GJI; 8L4 ZFHSM8P
12. VHGV11
13. VHGV10

14. ccDGMJ(7FIGS ; XMWGDFA VFSOFXF:+LI 5ZL1F6cc 5MP ; ZX VGP 5FZB VG[5MP VRP SP INI1FTP 5SFXS 0 R5F 5SFXG4HGFU-P P.No.3.
15. cc; XMWG 5âIT VG[VFSOFXF:+cc , P OFF I MUX VP HMUX6P 5SFXS 0 ; FZFQ8=I JGI; 8L4 ZFHSMBP P.No.30.
16. The Society for The Mentally Retarded. OFF DGJEF. V[P SM9FZL VGBNDL 0L5F8Dh84 XP ÒP V[P DPLS, SFH H4 5Z[4 DJA. P
17. ccNUNJcc , P zLDTL IG, DAG SFGFAFZ cW ; M; FI 8L Dh8, L ZL8F0Dc4 ZFHSMBP 5YD VFJ1; 0 8DL 0L; HAZ4 1996P 5[. H GP17
18. ccSF8F/L 5UNDLcc , P zLDTL IG, DAG SFGFAFZ cW ; M; FI 8L Dh8, L ZL8F0Dc4 ZFHSMBP 5YD VFJ1; 0 3Ò 0L; HAZ4 1997P
19. ccALOFI [L S/Lcc , P zLDTL IG, DAG SFGFAFZ cW ; M; FI 8L Dh8, L ZL8F0Dc4 ZFHSMBP 5YD VFJ1; 0 1997P 5[. H GP8.
20. ccNUNJcc GFD[; JF, v ; JF, GM HJFAP, P zLDTL IG, DAG SFGFAFZ cW ; M; FI 8L Dh8, L ZL8F0Dc4 ZFHSMBP ALÒ VFJ1; 0 20004 5[. H GP9.

5SZ6_v2

; XWVG ; FICTI GL ; DL1FF

5§Z6 v 2

; XMMG ; FICTI GL ; DL1FF

2.1 5]:TFJGf0

SM. 56 SFI "SZJF DF8[VFWFZE]T DFICTL D/JJL 50[KP VB, [S[SFI "SZJF DF8[GL 5Z6F VF56G[TGF D/DYFYL S\ S GJ\ SZJFGL . rKF VJM VY" YFI KP VF >rKF pt5gG YJF 5FK/ VUFp YI[, 5]UFDL ; FICTI 5ZL 5F0[K[VG[jI ISTDFA GJF ; XMMG SZJF DF8[GL 07F; F 5A/ AG[KP VF AFATG[DGMU(7FIGS 5IZA/DA -F/JF DF8[jI IST V[5]UFDL VeIF; NG\ VwI I G SZJ] 50[KP 5MTFGF IJQFI G[VG]-5 SB, \ SFI "YI \ K# SB, \ AFSL K[VG[5MTFG[; XMMGSFI "S. INXFDA VFU/ SZJ\ TGM bIF, 5]UFDL ; FICTI YL D/[KP

VUJF, H6FJ[K[S[-; NE"; FICTI VeIF; GL ; D:IFG[jI FbI FII T SZJF DF8[VG[TGL DI FNF AFWJF DF8[B]A H H~ZL KP-

N[F. VG[N[F. GF DT[56 -SM. 56 ; XMMG X]I FJSFXDA YT] GYL4ALÔGL ; S<5GFVM VG[I; âFTM VF56F DF8[DFUNXG~5 AG[KP-

GJF ; XMMGG[VG]-5 VUFp YI[, F ; XMMGYL TGM bIF, :508 VG[RMP; F. I]ST AGL ZC[KP VFD4 SM. 56 ; XMMGGL X~VFT TGF ; NE"; FICTI GA 5IZ5[FDA T5F; JFYL VF56G[H[T[IJQFI DA YI[, F ; XMMG VU[DFICTLDFYL D/[KP H[G[; XMMGGL 5IZEFOFF -Review of Reasearch- SCJFDA VFJ[KP

; |<8h VG[ZF. 8; DG VG[SŞ[5JUFDL ; FICTI GJF ; XWVG
SFI DAF S. ZLT[p5I MJL AG[K[T[IJQF[SŞ, FS D] FVM H6Ej I F K[H[VF
5DF6[KP

- 5J"; XWVG[50SFZ SZL XSFI 4
- SFI "SZTL 5|S| FDFJW] :508TF , FJL XSFI 4
- 5GZFEJTG SZL TG]; DYG D/ JJ#
- VŞ 1F+ DAF H[5IZJIT" ; XMM ÔJF D? I F CMI T[VgI 1F+ DAF, FU]
50[K[S[GIC TGL RSF; 6L SZJFYLA
- V5|1FT 5IZ6FDMGF SFZ6M ; DHJFYLA
- VŞ H 5ŞFZGF ; XWVG] 5GZFEJTG V8SFJL XSJFYLA
- ; XWVG DF8[VŞ ; D: I FGF ; NE DAF 5| MÔ I , L 5|]STGM ALÒ
; D: I DAF S] M p5I MU Y. XS[K[TGL T5F; SZJFYLP

VFD4 ; XWVS E]TSF/DAF Y. UI F CMI T[; XWVGGA TFZ6MT5F; L
5MTFGF IJQFI G[JWFZ[VFWFEJF ZLT# JW] :508TF ; FY# RMP; F. 5b"
ZLT[IRTFZ D/L ZC[K[VG[; FY[; FY# IAGH~ZL SFI # ; DI 4 XIST4
GF6FGM] I I YTM V8SFJL XSFI KP

5]:TJT ; XWVGGL ; D: I F -H]GFU- XCZGF ; FWFZ6 VG[IJIX08
AF/SMGA DFTFv I5TFGL IJST IRTF4DFGI; S :JF:yI VG[ÔJG; VMFGM
DGMJ{7FIGS VeIF; - KPVeIF; DAF jI ISTUT 5IZA/M HJF S[DFTFv
I5TFGL pDZ4X]FI6S , FLSFT4 SŞ]AGM 5ŞFZ4IJIX08 AF/SGL ÔIT4
DFTFv I5TFGF XMB JUZG[:JT+ 5IZJtI M TZLS[,]DFAFVFj I F KP

2.2 ; XMWG ; FICTI T5F; G\DCtJ VG[DkI 0

; D:IFG[, UT\ ; âFITS TÐH ; XMWGfDS DF/B\ 8\$DFA NXF"JJ\ Ô\ VP T\YL 5\TJT ; D:IF S\JL ZLT[VFSFZ 5FDL T[; DÔJL XSFI P VF DF8[; âFITS TÐH ; XMWG VÐ AG[5\$FZGF\ ; FICTI GL ; DL1FF ZH}SZJL Ô\ VP VF IJEFUDFA Kk, \ ; XMWGV5\JFC äFZF ; XMWS[:50856[NXF"JJ\ Ô\ V[SIT\GL ; D:IFGF\ ; NEDFA VgI ; FICTI 5\J[; XMWGM 50[, F K[VG[CÒ 56 JW] T, :5XL" :5084RMP ; F. I\ST VeIF ; H~ZL K[VG[T\YL ; XMWS[VgI ; FICTI GL ; FY[T\GL ; D:IFG[VG]-5 ; NE" ; FICTI p5I MU SZL ; DFH G[p5I MUL YFI T[5\$FZG]SFI "SZJFG\K\ TGM bIF, ZFBJFGM K[VG[SM. 56 5\GGM pçZ TGM ; NE" VeIF ; M TYF ; FICTI äFZF H D/L XS[KP

IJ7FGGM IGID K[S\H[IJQFI VU[VUFp BÐF6 YI\ CMI TÐFYL H GJ\GJ\7FG 5F%T SZL XSFI P VFD 5F%T I ; âFTMYL VYJF T[H I ; âFTMGL OZ RSF ; 6L DF8[YI\]CMI 4 p5ZFT IJIJW ; XMWSIM[V5GFJ[, L I MHGFVMA VU[DFICTL D\JLP ; XMWS 5MTFGL ; XMWG I MHGF VU[; F~ V\J\DFUNXG D\JL XS[KP

5\MO\ Z IS, OND" DÐL SC[K[S\ -VFBZ[; XMWG :JT+ ; tI GL XMW DF8\GL V\ 5âIT H[JF:TJDA ; DL1FFtDS IJRFZ6FGL 5âIT KP-1

5\J", FICTI GL T5F ; GJF ; XMWSG[; XMWGGI IJWVMA 5\SI FVM VG[5F ; FVM VU[5\I 1F IX1F6 VF5[KP ; XMWG XF:+GL S\J/ AÁIâS DFICTL ; XMWG p5F0JF DF8[5ZTL DFUNXS AGTL GYL 5ZT] ; XMWS[SIF 5U, F EZJFGF K\ S\B, F TAÐF , \JF 50[K\ S. ; EIJT 1FITVM

VG[E} MYL ; FJW ZCJ\ 50[KP VB, F DF8[56 ; XMS[VUFpYL H
; AIWT ; FICTI GM VYW8G IJQF[IJRFZJFG\ZC[KP

-; XMG VB, [5J"7FGDF\B8TL SOL 5ZJL TF VB, [H VF ; AIWT
; FICTI GL ; DL1FF SZLG[; XMS[SIF 5IZJti "VU[SB, \UCG VG[; 3G
VeIF; SZJFGMK[T[DF8GL 5Z6F 5ZL 5F0[KP²

5:TJT ; XMGGF +6 VFWFIZT 5IZJti M IJST IRVF4 DFGI; S
:JF:yI VG[ÖJG; VMF IJX[VY"38G VG[5JL" VeIF; MG[GLR[5DF6[
; DHFJL XSFIP

2.3 IJST IRVF VB, [X]m 0

-IRVF V[IRTF ; DFG KP-

p5ZMST SCJTGf VFWFZ[IRTF V[XZLZG[AF/[K[VG[IRTF V[DG
VG[XZLZ AGG[AF/[KP VF56[SCLV[KLV[S[DG AC]V:J:Y Y. UI\
K# RR/TF AC]JWL U. K# IRTF ; TFJ[K# 5; gGTF ZC[TL GYL4 CD6\
CD6\8j; G ZCI F SZ[K# VNZ SX\$ B}I F SZ[KP ; FDFgI ZLT[VF56[
SCLV[ÖJ A?I F SZ[K# V[56 IRTF H KP 5ZT]DG]I DF+ IRTF ; TT
SZTM H ZC[KP IJF VJF:YDF\Veiff; GL4 IXGL4 SDFJJFGL4 ISTLGL
IRTF JUZ[ZC[KP J'äFJ:YDF\IADFZL YJFGL IRTF4 SM6 ; FRJX[TGL
IRTF4 V\$, TFGL IRTF4 VFD DG]I BIFZYL ; DH6 5F%T SZ[KP tIFZYL
IRTF 56 ; TFJIF SZ[KP VG[T]YL TMIRTFG[-VluG- SCJFI KP IRTF V[
cX# VCDc KP ÖGJZMSM. IRTF SZTF GYL4 DG]I H DF+ IRTFG[, . G[
VFBMNCfOM X\$FIF SZ[KP VFD IRTF SM. OZ S[; \$8GL V:508 VFtD, 1FL
; EFGTF KP HGF SFZ6[jI IST S\ RMSS; TFYL SZL XSTL GYLP IRTF V[

V[UL V:508 VFJ[US I:YTL K[H[FA jI IST V:5084 VRMP; EFJ
 VG[EJ[KP IRVTFGL wI [I UFDL J:T] JW] V:508 VG[; INuW CMI KP V[, [
 S[S\ S BMB\YJFG\K[S[TGF VG[EJ 5FK/ 9M; SFZ6 G CMI KTF\ S\ S
 BZFA YJFG\KP T[UL , FU6L VG[EJFI tI FZ[IRTF K[TD SCJFI P

OM. OGL 1108V[IRVTFG]DY CTFXF VG[; WOFMDF 50[,]KP V, A; 4
 IRVTF VgI SFZ6M; Z 56 p[UEJL XS[KP H[DS[SFI D[FA VG[EJFT\ NAF64
 IG00/TF4 EIJOI D[FA AGGFZ W8GFVMGL IJRFZ6F45MTFGL I MuI TFG\GLR]
 D;I FSG4 VftDU[AZJ C6FJJFGL VFXSF JUZ[VUJGL IRVTF R[TJ6LGF
 VFJ[US ; S[T TZLS[SFI "SZ[K[VG[T]jI ISTG[VFJTF ; \$8YL R[TJ[K[
 IRVTFGL ; DH]TL VF5TF HNFvHNF I; âFV IJNM H6FJ[K[S[IRVTFGM p[UEJ
 EIJOI GL VIEDBTDFYL YFI KP H[FA jI IST EIJOI VU[EI
 VG[EJTL CMI KP

U[VG[D[SGMBG SGray Mc Naughton 1996f H[JS ; NED[IRVTF G[
 ; D[OJ[KP IRVTFGF A[5[SFZM KP s! f IJX[UFU] IRVTF sTrait anxietyf
 VG[sZf I:YTL IRVTF sState anxietyf H[DFYL IJX[UFU] IRVTF S[, [VX[
 VG[UXS CMI KP IJX[UFU] IRVTF 5IZI:YITYL :J[+56[VG[EJFI KP

:5L, AUZ sSpielberg 1983fGF DT[-IJX[UF U] IRVTF V[V[
 jI ISTtJ IJX[UF U] K[H[DGMEFZI]ST 5IZI:YTLVMD[jI IST äZF IRVTF
 VG[EJJFGL XSI TF S[, L T[GSSL SZ[KP-HI FZ[I:YTL IRVTF JFTEJZ6
 ; FYGL jI ISTGL VFVZIS[I FDFYL p[UEJ[KP :5L, AUZ H6FJ[K[S[
 -I:YTL IRVTF V[V[UL 1FI6S VFJ[US 5[ITIS[I F K[H[FA TGFJ VG[E I GL
 , FU6LVM ; \$/FI[, KP-VF 5[SFZGL IRVTF RMSS; 5[SFZGL 5IZI:YTLDF
 p[UEJ[KP IRVTFYL jI ISTG[5IZI:YTLG\ J:T], 1FL VYW8G SZTF V8SFJ[

KP jI ISTG[DI FINT TPDH ; D:IFG\IGZFSZ6 SZJFDA\ VXST AGEJ[KP
 ; TTIRTF DGMXFZLIZS IADFZLVM pÛEJL XS[KP IRTF jI ISTG[IHNULDA\
 IJWFIS SZTF IGQFWS 5F; F\5Z JW\IJRFZT\ SZL DŞ[K[VG[VFJF BMBF
 IJRFZM jI ISTG[V7FT BTZFG[, LW[VG[EJFTL CMI KP VF IRTFG\
 5DF6 ; TT Ô[JWT]ZC[TM]jI IST SI FZŞ VF5WFTJ1¿ TZO 5ZFI KP

VFHGF VF ; WQFDI IJUDA\jI IST ; TT SM. G[SM. 5ŞFZGL IRTF
 VG[EJ[H KP jI IST ZMHNF ÒJGDF\ SÁ8\AS jI JCFZMDF\ ; FDFIHS
 jI JCFZMDF\ VFIYS jI JCFZMDF\ JUZDA\ 7FT AFAT CMI TM T[IRTF KP
 5ZT]jI ISTG[TGF SFZ6GL4 TGF p;EJGL ; DH G CMI TM T[UL IRTFG\
 IJST IRTF SC[KP VF 5C[F IJSTLGF 5ŞFZ4 IRTF VG[tIFZ AFN IJST
 IRTF V, U V, U ; DHJF H~ZL KP

IJSIT GF 5ŞFZ 0

!P IRTF IJSIT sAnxiety Disorders)

ZP IJIMHT IJSIT

#P ACÛ IJSIT

\$P jI DMN IJSIT

5P DGMXF IJSIT

&P DGM\CS IJSIT

*P jI IST IJSIT

(P ãjI IJSIT

)P ÔITI VM/B ÔITI IJSIT

! _P VftDCtI F

!! P êWJFGL VG[BFJFGL IJSIT

! ZP VFJÛ IGI 6 IJSIT

! #P XFZLIZS IJ, 1F6TF VYJF DI:TQS IJSITVVM

IRTFGL jI FbI F 0

1P HP ; LP SM, DGo

-T[VtI V:5Ú VG[D]ST ZLT[TIF"SZTL CMI TÛL CMI KP T[HD
5SOLG[NZ 56 SZL XSFTL GYL TGF HgD VG[C]TYL jI IST 5MT[ALG
JFSD CMI KP⁻³

2P ZM; 0

-T[VÛF , 1F6MGL zÛL K[S[H[ÒJG NAF6[TPDH ; FYGF
S]; DFI MHGG\SFZ6[pÛEJ[KP VF DKS], LVNG[NZ SZJFG\5] tG TZLS[T
JFZJFZ 5]TIS]I F äFZF jI ST YFI KP⁻⁴

3P DMJG 1990 0

-Anxiety is avagve fear experienced without our khawin I Just what is
the matter⁵

4P OM VG[OM 1967 0

-Anxiety is a feeling of unesai nessins tigated by circumstances that the
individual is unable to define obactivity something is threatening a person but
he is not quite certain what it is⁶

5P ; I, uG DG VG[ZMH]GCFG 1998 0

-IRTF V[; TT OZGL 5]TIS]I F K[G[BTZM 8/TF H JF:TIJSTFDF\
VFJL HGFZ 5]TIS]I FP⁻⁷

IJST IRVF 0

IJST IRVFGF :J~5 IJX| :508TF SZTF SM, D|G SColemanf NXFJ|
 KP T| VtI V :508 VG| D|ST ZLT| TIF" SZTL CMI T|JL SFee floatingf
 CMI KP T|HD ; Z/TFYL Ô6L XSFTL GYL TD T|G|5S0L G|N| SZL XSFTL
 GYLP T|Gf pÛUD VG| C|T| VU| jI IST 56 ALGJFS| CMI KP NFPTP
 IJN|DF\ZC|TF 5|+ VU| ÔTvÔTGL IJST IRVF T|GL DFTF S|S|ALHGMG|
 YFI KP VS:DFTGM EMU AG|, jI IST VU| GÛSGF ; UFMGL IRVF H|
 DMBF EFU|IJST IRVF TZ0 , . ÔI KP

IJST IRVFG|GLR|GF DNFM äZF IJUTYL ; DÔJL XSFI P7

1. IJST IRVFGF , 1F6M
2. IJST IRVFGF SFZ6M
3. IJST IRVFG|DF5G
4. IJST IRVFGMp5RFZ

1. IJST IRVF GF , 1F6M⁸ 0

1P XFZLIZS , 1F6M

2P DFGI; S , 1F6M

1P IJST IRVDF\; FDFgI ZLT|jI IST VFJL IRVLT DGMXF VG|EJ|KP
 TM SIFZS VtI V μ0L4 NNGFS IRVFGF CD, FGM EMU 56 AG|KP

2P VF 5|SFZGL IRVFGM ; DI UF/M S|CD, MYDL IDGL8MYL DFOLG|V|SFN
 S, FS ; |L ZC|KP

3P IJST IRVFGM CD, MV|FV|S VFJ|K| 5KL T|GL 5ZFSF08FV|5CMR|K|
 VG|tI FZAFN WLD|WLD|XFT YFI KP

- 4P CD, F NZdI FG ìNI GF WASEZF JW[K# CFY VG[CM# W#HJF , FU[KP
 `JF; , [JF TS, LO 50[K# 5]S/ 5; LGM YFI K# DFGI; S AFATMDF
 pxSZF8 T#H SM. S TG[DFZL GFBX[T#L IETL YFI KP
- 5P IRTFGM CD, M 5ZFSF08F V[5CM I F AFN jI IST I:YZ éEMZCL XSTM
 GYL4 TM S#B, LSJFZ4 SM, Z B#R# NF#T I F SZ# DM-FDA ; I/VM SZTM#
 GFS S[SFG B#RTM Ô#JF D/[KP
- 6P TALAL ; CFI IJGF YMF ; DI D#H XFT 50L ÔI KP
- 7P IJST IRTFGM CD, M VFJJFGM ; DI IGI`RT GYL4 S#B, LSJFZ TM
 INJ; D# JFZJFZ CD, M VFJ[K# TM S#B, LSJFZ4 V9JFI0I# 5NZ
 INJ; [S[V#FN DICGFDA V#FNJFZ VFJ[KP
- 8P HI FZ[IJST IRTFGF CD, FDF TLJ|TF CM# ti FZ[jI IST VRFGS A#M
 Y. W#HJF , FU[K[T#H OMS8ZG[AM, FJJF VFÒÒ SZ[KP VF CD, M
 INJ; NZdI FG VFJ[KP VG[UF- IG#FDF 56 OZLG[êOL IRTFDF; ZL
 50[KP
- 9P CD, FGF JRUF/FGF ; DI D# ; 5#B" ZLT[XFT , FU# 5ZT[TALAL
 T5F; D# Ô#JF D?I] K[S[jI IST TUIN, L4 IRTFU]:TTF VMKL
 VG#EJTM CM# KP
- 10P S#B, FS IS:; FVMDF TLJ| IRTFGF CD, F YTF GYL4 5ZT[jI ISTG#IR;
 CD#F IRTFU]:T ZC[KP VFJF jI IST VM V:5084 VFXSFVM JF/F4
 AR#G4 VH#FJF/F VG[IG~t; FCL , FU[K[T#H E]TSF/D# YI|, L
 1FITVMG[; TT I FN SZLG[JTDFG ; DI D#SFI D#IJ1F# 5F0[KP

11P IJST IRVFG[SFZ6[; TT XSFGE NFI ZFDFAZCJFYL jI ISTG[UD[Tß,]
5M; FCG4 ; FJGF VF5LV[TM 56 V; Z BJ<, [H YFI KP TM
Sß, LS JBT ; UFVMGL 56 S; MBL YTL ÔJF D/[KP

12P VF jI ISTVM 5ZLIF6 S[DkIFSG STF" OZ[KP VG[E]TSF/GL
8LSFvI8%56 SZ[TM EIJQI Df 50TL DkS[, LGM S]L ZLT[; FDGM
SZJFDf\VFJX[TGL IRTFDf\BMJF. ÔI KP

13P IGäFGL I:YTLDF JWTL IJST IRVFG[SFZ6[jI ISTG] U/] ~WF.
HJFGL4 êR]L SM. S[OßL NLWM K[S]SM. S TGF 5Z BGL CD, M SZ[K[
VG[5MTFGFYL RF, L XSFT]GYL VG[5MT[B]GLGF CFYDf\5SOF. UI M
K[T]F EI HGS :J%G sAnxiety dreams) H]M[KP

14P IJST IRVFGf]I ISTGL TUIN, L4 S08I ßT VFUS IS]I FVM G WFZ[, L
5IZI:YTLDF VIT 5]TIS]I F Vß IF ALÔ 5ßFZGL :GFI IJS C, R, M
5FRGTf\GL UZAOM äFZF 5]U8 YFI KP

15P VFJF jI ISTVM JFZJFZ VUM HSOE. IF Ih, f. HJFGL OIZI FNMA
DZOM YJFGL4 5ßDf\ N]BJFGL4 DFYF SßJFGL4 5XFA , FUJFGL4
DUH ACZDFZL HJFGL4 5ßDf\ V5RM YJFGL S[VIGäFGL S[IGäFEU
YJFGF ZMJGL ; TT OIZI FN SIF"SZ[KP

2P IJST IRVFGF SFZ6M0

IJST IRVFGF DFGI; S jI FIW DF8[VGß SFZ6M CM. XSP HDf\
jI ISTUT VFSf\FFVM I; IävM ; FDFIHS DMEM S[UÁZJ 8SEJL XSJFDf\
IG00/TFG[SFZ6[jI FIW 5F%T Y. XS[KP IJST IRVFGF SFZ6GL ; DH
VF5TF SM, DG NXF]J[K[S[VnTG I]JDF jI ISTG[1f]W AGEJ[T]L

W8GFVM AG[K# HG[SFZ6[jI IST 5; UM5FT YMLW6L4 IRTFGL I:YTLDF\
 VFJL 50[KP EI SZ VFIYS BMB4 GÖSGF ; UFGM IJIMU4 AŞFZL4
 SÁ8]AS ; WQFM A[5[-L JrR[G] VTZ4 JTDFG ÒJGX{ LVMM 5]+v5]+LGF
 IJRFZMjI ISTG[IRTFFTZ AGFJ[V[; CH JFT KP 5ZT] ; FDFgI VG[; F#I
 DGMJSIT JrR[GM DctJGM TOFJT V[K[S[GFGL DMBL D#S[LVMMGM
 ; FDFgI DFGJL VF; FGLYL ; FDGM SZL XS[K# BIFZ[DGMJSIT jI IST
 EFUL 50LG[IJST IRTFGF ; FUZDF\0]AL ÔI KP

jI ISTDF\IJST IRTF pt5gG SZ[T]L Sß, LS ; FDFgI XSI TFVM VF
 5DF6[KP

- 1P 5MTFGF wI [I I; IâDF\IG00/ HJFGM EI 4
- 2P 5F%T 5N S[NZHÔ[8SFJJDF\IG00/ HJFGM EI 4
- 3P NI, T . rKFVMGF 5]G0 5FU8I GM EI 4
- 4P DFGI; S ; WQFMGL I:YTL4
- 5P ÔITI CTFXF4
- 6P V5ZF3 VG[; ÔGL ELIT4
- 7P ÔITI :B, G4
- 8P 5]JF3FTGL 5]G0S[I FVMP

Sß, FS DGMU{7FIGS DT 5DF6[VF 5ŞFZGL jI ISTVMDF\IJST IRTF
 ; IJXDF 5DF6DF\Ô]F D/[K[

- 1P VIT DctJSF\FL jI ISTVM
- 2P , F0DF\pKZ[, L jI ISTVM
- 3P 5M- :+LVM

3P IJST IRVFGLDF5G 0

IJSTIRVFGL DF5G DF8[NXIJN\XDA VGS 5SFZGL ; XMMIGSFVM VG[T], FVMÔUF D/[KP NFPTP UHZFTDFANF; F. 5U8 IRVF ; XMMIGSF4 I; CF IJST IRVF DF5GT], F TÐH 8[, Z 5U8 IRVF T], F JUZ[ÔUF D/[KP VF ; XMMIGSF ; FY[DgI]V, VF5[, CMI K[T[D]HA IRVFGLJULSZ6 SZLG[VYW8G Y. XS[KP

4P IJST IRVFGMp5RFZ 0

- IJST IRVFGM p5RFZ ; FwI K[TGM p5RFZ SZJFYL TÐF 38FOM YFI KP
- jI ISTG[IJST IRVFDFYL IRVFDF\OZJL XSFI 56 ; NTZ GFANL SZL XSFTL GYLP
- IJST IRVFGF p5RFZYL TGL TLJ[TF VG[JFZJFIZTFDF\ 38FOM SZL XSFI KP

✓ OM. 0 IRVFGLDFGI; S 5LOF TZLS[TGF +6 5SFZ NXFJ[K]

1. Reality Anxiety

H[AFIF HUTGF E I HGS 5IZA/MYL pNEJ[KP

2. Neuroticic

VÇD TÐF IGdG VÇDGL IG00/TDFYL pNEJ[KP

3. Moral Anxiety

H[VIWS VÇDGF D]I MYL S\ S IJZ] SZJFYL pNEJ[KP

✓ IRVF sAnxietyf A[5SFZGL CMI KP

1P D]STFRFZL IRVF

2P IGIXRT IRVF

1P D\$TFRFZL IRVF₀

D\$TFRFZL IRVF SM 56 NBLTF SFZ6 IJGF JI ISTG[; TT ; TFJTL
ZC[KP JI IST UD[ti AÔI 56 VF IRVF TGL ; FY[H VFJ[KP TGF DGDA
VF IRVF D\$T ZLT[; TT TZTL ZC[KP

2P IGIXRT IRVF ₀

IGIXRT IRVF 5FK/ IGIXRT SFZ6M HJFANFZ CMI KP DMB[EFU[
VF IRVF IGIXRT VUF EÁITS S[DIT⁴ :YY J:T[; FY[; AW WZFJ[KP VF
:YY J:TGF ; NEDFA VFJL IRVF VRFGS pNEJ[KP VF ; DI[IRVFGF
EIFGS CD, FVMYFI KP HDS⁴

pNFCZ6 ₀

DFZ]AF/S 3Z KMDLG[ACFZ HX[VG[VS:DFTGM EMU AGX⁴ VFJL
IRVFG[5IZ6FD[DFTF 3ZGF\AFZL AFZ6F AW ZFB⁴ AF/SG[ACFZ G
ÔI TGL[; TT wIFG ZFBP

DSM – IVDAIRVF IJSITGM VY"VJM YFI K[S[HDAZMUL VJF:TIJS OZ
VG[VJF:TIJS IRVF ; FDFgl DFGJLGF 5DF6DAJWFZ[; J[K[VG[TGF
SFZ6[TGL[; DFIMHG AUOT] CMI KP VCL\ ZMUL 5MTFGL IRVFGI
VIEJIST B⁴ ; C, F. YL JI ST SZ[KP⁹

VFJL IRVF IJSIT (Anxiety Disordersf GA 6 5\$FZ ATEJJFDF\
VFJ[KP H[GLR[5DF6[KP

1. 5IZI:YTLHgI IRVF VYJF EI sPhobiasf

2P ; FDFgl IJIX08 IRVF IJSIT sGeneralized anxiety disorderf

3P NpBvNN? IRVF IJSIT sPanic Anxiety disorder)

4P DGMUJ; T HI8, IJSIT sCompulsive disorderf

5P pTZ VFWFIZT TGFJ IJSIT sPsttravmatic stress disorderf

6P TLJ|TGFJ IJSIT sActive Stress disorder)

1P 5IZI:YTLHgI IRVFGF 5SFZM , 1F6M SFZ6M p5RFZM

✓ 5IZI:YTLHgI IRVF sE I f (Phobias) :

OMALIF sSF<5IGS E I f V[V\$; FDFgI IRVF IJSIT KP HDAjI IST
SM. IJIX08 J:T]S[5IZI:YTLYL ; TT VG[V; V], LT DF+FDAOZTL CMI
KP H[JF:TJDAjI IST DF8[SM. G\$XFGSFZS S[G\$XFG pt5gG SZJFJF/F
5IZA/M CMTF GYLP HDS\$ H[jI ISTG[JNFYL ALS , FUTL CMI K\$ T[
jI IST JNFGL CFHZLDA\SM. 56 HuI FV[H. XSTL GYLP ; FDFgI ZLT[JNM
V[VU]ÖJO)K[H[DFGJLG[SM. 56 5SFZGL . HF S[G\$XFG 5CMRFOL XS[
GCLR 5ZV]VFGFYL OZJFJF/F jI ISTG[T[; DI[; FDFgI bIF, ZC[TMGYLP

OMALIFGL jI FbIF VF5TF xM, LUDG[VG[ZMHG CFG 1998
sSeligman and rosenham 1998) H6FJ[K[S[-OMALIF V[V\$; TT
OZGL 5|TIS|I F KP BTZM 8/TF H JF:TJSTFDA VFEJL HJFGL 5|TIS|I F
YFI KP-

0JLXG VG[GL, 1996 (Devison & Neale 1996f jI FbIF VF5TF
H6FJ[K[S[-DGMU{FIGS äZF OMALIF V[V\$ IJNFISFZL OZ pt5gG
SZGFZ KP H[SM. BF; J:T]S[5IZI:YTL pt5gG YFI K\$ VG[H[T[
5|EHIJT jI IST äZF VFWFIZT K[TD ; DHJFDA VFEJ[KP-

8\$DFA OMAI FDF\ JI ISTG[JF:TJDF\ BTZM CMTM GYLP TDF\ EI G\ 5DF6 VB,] JWFZ[CMI K[S[TG\ ; FDFgI ÒJG ; DFIMHT ZC[T] GYLP OMAI FDF\ ; FDFgI OZ OST V[J:T]VFYL YFI K[H[JF:TIJS ZLT[BTZGFS CMTL GYL4 VF OZYL TG\JTG S]; DFIMHT YFI KP

cOMALI fc VB, [S[SF<5IGS EI GF 5\$FZM GLR[5DF6[; DÔJL XSFIP

✓ 5IZI:YTLHgI 5\$FZMo

1P IJIX08 5\$FZGM EI

v 5X\MMYL EI

v VÒJLT J:T]VMYL EI

v IADFZL S[9MSZ , FUJFYL JUZ[AFATMYL pt5gG YI], F EI

v , MCL ; \AWL EI

2P EI0 S[ÔCZ :Y/GM EI

3P ; FDFIHS EI

1P IJIX08 5\$FZGM EI 0

VF V\$ 5\$FZGM V; UT CMI K[H[IJIX08 J:T] S[5IZI:YTLYL p\JEJ[KP VF 5\$FZGM EI ; 5b" IJST EI GF 3% , MSMDFA CMI KP VF 5\$FZGL IJIX08 ELITG[4 5\$FZDFAJCRJFDFAVFJ[KP

1f 5X\MMYL EI 0

5X\MMYL EI V[V\$; FDFgI EI K[TD KTF\IJIX08 EI GL VNZ TG\ ; DEJ\X SZJFDA VFJ[KP SFZ6S[S\$, FS , MSM 5X\MMYL OZJFGF

; FDFgI SFZ6G[AN, [V; UT ZLT[OZ[KP 5XMM 5tI [EI DIC, F VG[AF/SMDA JWfZ[CMI K[VG[TGL X~VFT AF<I FJ:YfYL H YTL CMI KP

2f VÒIJT J:TVMYL EI 0

VF 5ŞFZGF EI DfAZMUL ŞB, LS VÒIJT J:TVMYL V; UT ZLT[OZ[KP HD S[VWFZFGM EI 4UNSLGM EI JUZPVCL\ALÔ 1108SM6YL jI IST ; FDFgI CMI KP VF 5ŞFZGM EI :+L VG[5]-QF AGDFA; DFG 5ŞFZGM CMI KP VF 5ŞFZGM EI SM. 56 pDZ[Y. XS[KP

3f ALDFZL S[9MSZ , FUJfYL pt5gG YI[, F EI 0

VF 5ŞFZGF EI DfA jI ISTG[XMS4 HbD S[ALÔ 5ŞFZGL ŞB, LS ALDFZLGF SFZ6[V; UT EI pt5gG YFI K[HDS[VF 5ŞFZGL IADFZL S[5IZI:YTL BZBZ4 JF:TJDF\ VŞ, \OZJFGL H~Z GYLP VF 5ŞFZGF OZYL ŞB, LS JBT ZMULDF\ KFTLGM NŞBfJMŞBDF\ NN" S[5L9DFA NN" JUZ[, 1f6M pt5gG YFI KP VF 5ŞFZGL ELITGL X~VFT Dwl pDZ[YFI KP

4f , MCL ; AWL EI 0

VF 5ŞFZGL IJSTLDF\ V[5IZI:YTL V; UT OZ IJSI; T YFI K[S[HG[5IZI:YTLDF\ jI ISTG[, MCL ÔUF D?I \CMI P VF 5ŞFZGL IADFZLJF/L jI IST ; FDFgI , MCLYL 56 UEZFTL CMI KP T[DPLS, T5F; YL 56 5MTFGL ÔTG[NZ ZFB[KP N]GI FDF\8% , MSMG[, MCLGF[EI ZC, M CMI TGL X~VFT AF<I FJ:YFDfAY. CMI KP

2P ELO S[ÔCZ :Y/GM EI 0

ELO S[ÔCZ :Y/MGf\OZG[VUÏÖDF\cVUMZF OMALI Fc (Agoraphobia) SCUFDF\ VFJ[KP VF EI DfA 36F 5ŞFZGF EI MGM ; DFJX YFI KP HG\

SjāIAN] ; FJHIGS S[ELO CMI KP HIFYL jI ISTG[VJL XSF CMI K[S[SM. 5SFZGL W8GF S[NW8GF YJF 5Z tIFSM. AREJ V; EJ K[VG[tIF SM. AREJ DF8[56 VFJL XST\ GYLP J:T] BZLNJFGM OZ4 HIF , MSMGL VJZvHJZ CMI TPJF ÔCZ :Y/[HJFGM OZ VG[IF+F 5PJF; [HJFGM OZ JUZ[; FDFgI VX KP H[, MSMIJST EIGF ZMUL AG[KP TDF\60% , MSM VF ZMUYL 5LOFI KP HDF\:+LVING\ 5DF6 IJXDF CMI KP HGL X~VFT ISXNZ TPDH 5FZIES TZJFJ:YF NZIDIFG YTL CMI KP VF ZMUGF ALÔ SB, FS , 1F6M 56 :508 ~5YL ÔPJF D/[K[HDS[BJA DGMEFZ4 WDSL4 C/JL HI8, TF VG[EJL VG[JFZJFZ V[ÔPJ]S\ NZJFÔ[AZFAZ AW K[S[SDm 5MTFGL 5YFZLGL GLR[JFZJFZ ÔPJ]S[GLR[SM. K[GICG[m 93% ZMULVMDA\µRF. VG[AW HuI FVMGM OZ ÔI MP DFS" (Marks) äZF VJ] ÔPJF D?I\ S[VF 5SFZGM ZMUL BIFZ[VFZFD SZTM CMI K[tIFZ[56 T] pçIHT VJ:YDF\ CMI KP

3. ; FDFIHS EI 0

; FDFIHS EI VPJF EI G[SCPJFDF\ VFJ[K[HDF\ jI ISTG[VgI jI ISTGL p5I:YTLGM OZ S[EI , FUTM CMI KP jI ISTG[VFJL 5IZI:YTL DF\ VJ]M OZ , FuIF SZ[K[S\ T[G\ SM. DçIFSG SZXP 5IZ6FD :J~5[T] VFJL 5IZI:YTLYL NÇ ZCJFG\ IJRFZX[T] ; FDFgI ZLT[IRVLT N\BFTF CMI K\ VG[; FY[UEZFI , F 56 VFG[; FDFIHS IJSTLGM EI SCL XSFI P VFJF , MSM ALÔ , MSMGL CFHZLYL BJA H OZ[KP VFJF , MSM ALÔ , MSMGL GL ; FY[VÔ6L HuI FV\ ; FJHIGS HuI FV[HJFDF\ OZ VG[EJ] KP VF EI GL X~VFT ISXNZ VJ:YDF\YFI KP SFZ6S[jI IST 5YD JBT ; FRF VYDF\ ; FDFIHS R[TF VG[ALÔ , MSMGL ; FY[VFTZIS\I FVMYL JFSD YTF

CMH KP VF IJSIT :+Lq5]-0F DF\; DFG ÔJF D/[KP 8GZ 1990 VG[TJGF
; FYLVMGF VGJ; FZ ; FDFHS EI GM VgI IJSTL ; FY[IDz6 YJFGL
; EFJGF JWFZ[CMH KP

✓ 5IZI:YTLHgI EI GF , 1F6M0

APA VB, [American Psychiatric Association 1994 Gf VGJ; FZ

5IZI:YTLHgI EI GF DpI , 1F6MGLR[DHAGF CMH KP

1P SM. IJIX08 5IZI:YTL S[J:TJGL Sß, M JWFZ[; TT OZ H[JF:TIJS
BTZFYL JWFZ[VIWS CMH KP

2P jI ISTG[VF IJIX08 J:T]S[5IZI:YTLYL ; FDGM YJF 5Z BJA JWFZ[
IRVF S[XFZLIZS NpBFJMpt5gG YFI KP

3P jI ISTvZMUL ; DH[K[S[VF 5ßFZGM EI BJA H JWFZ[VJF:TIJS K[

4P jI IST EI pt5gG SZJFJF/L 5IZI:YTL S[J:T]YL Nÿ ZCJFG\5; N
SZ[KP

5P VF 5ßFZGL jI ISTG[H[T[5IZI:YTLGL VNZ DFYFGM NpBFJM5L9DF\
NN"VG[V5RF HJF XFZLIZS , 1F6M ÔJF D/[KP

BJA H EI GL 5IZI:YTLDF\VF jI ISTVMDA jI ISTtJ , M5GM 56

VGJEJ pt5gG YFI K[VG[; FYÿ; FY[VJF:TIJSTF4 IJIR+TF JUZJGM

EFJ 56 pt5gG YFI K[VG[Sß, FS ZMULVMDA TM UVELZ 5ßFZGL

VFTZJqI ISTS DKS[, LVM 56 µEL YFI KP Sß, FS ZMULVMG[TM IG6"1

, JFDF\56 BJA JWFZ[DKS[, L pt5gG YFI KP HJG[SMODJG sKaufmann,

1973) jI lI FtDS ~5YL IG6"1 GM EI SC[KP

✓ 5IZI:YTLHgI EI GF\SFZ6M0

VF SFZ6MGLR[5DF6[; DÔJL XSFI P

1P H{JS SFZ6M

2P DGMJ` , QF6ftDS SFZ6

3P JTGftDS SFZ6

4P AMWftDS SFZ6

1P H{JS SFZ6M0

Vß H 5ßFZGM ; DFG 5IZI:YTLDF\ 56 Vß jI IST :J:Y ZC[Kß
 BIFZ[ALÒ jI IST EI VGJEJ[KP TGM VY" VJM S[VF 5IZI:YTLDF\
 Sß, FS H{JS W8S SFD SZTF\ CMI KP Sß, FS ; XWVGIML V[AFATGL
 ; FIATL D/L K[Sß EI V[jI ISTDF\ JWFZ[pt5gG YFI KP H[jI ISTDF\
 ANSSAutonomic Nervous Systemf 5IFJZ6 p;L5SIML H, NLYL
 p;IHT Y. ÔI KP ALÔ Sß, FS ; XWVG äFZF V[Ô6JF D?I\ Kß EI V[
 jI ISTDF\ JWFZ[CMI Kß HGF DFTFvI5TF 56 RMSS; 5ßFZGL ; FDFgI
 IJSTL WZFJTF CMI KP CZL; [sHarrisf H6fjI\ K[Sß VJMZF OMALI FDF\
 VFGJIXS JWFZ[SFI ZT CMI KP Vß, [S[VF 5ßFZGL IJSTL JFZ; FDF\
 D/[, L CMI KP VF 5DF6[H{JS DGMJ(7FIGSNGM VJM DT CMI K[S[EI
 GL pt5I; DF\ Sß, FS H{JS W8SNGL E)DSF DCAJGL CMI KP

2P DGMJ` , QF6ftDS SFZ6 0

OM. 0 5C[, M VJM jI IST CTM HGF EI GF SFZ6MGL jI FbIF DGM
 IJ` , QF6MGF I; äFT VG; FZ VF5L KP OM. 0GF DT[NDLT . rKFVMG[
 EFJGFVMYL ZMULDF\ IRTF pNEJ[VG[ZMUL EI TZLS[TGL ; Z1FF DF8[
 :JLSFZL , [KP VCL\ jI IST 5MTFGL ÔTG[VDS ; WQDFYL ARJF DF8[
 EI GMARFJ 5I\ IST TZLS[p5IMJ SZ[KP T[J:T]S[5IZI:YTL HD S[AW
 HuIF4 prRF. JUZ[AFATMGM EI VF5D/[:JLSFZ[KP EI GL ALÒ

jI fbl f DGMJ` , qf6ftDS ZLT[VZL8L sArieti 1979f äZF VF5JDF\ VFJL4 AF/56DF\AF/S IGNMFTFGF ; DI YL 5; FZ YFI KP T[; DI [TGM VJM IJ` JF; ZC[K[S]JOL, , MSM TG[SM. 56 5SFZGL DKS, LDFYL ARFJL , KP 5ZT]BI FZ[TGM VF IJxJF; TBL ÔI K[tI FZ[T[DFTFvI5TF S[ALÔ JOL, M 5tI [IJ` JF; UDFJ[K[T[; FDFIHS 108SM6YL pIRT GYL VG[VF 5DF6[T[VR[FG ~5YL ALÔ , MSMDF\ OZG[Sß, LS J:T]S[5IZI:YTLVMDA 5:YFI5T SZL N[KP

3. JTGftDS SFZ6 0

VF I; âFT VG; FZ EI pt5gG YJFG\SFZ6 NMF5b"IX1F6 CMI KP EI GM IJSF; VIE; WFG äZF 56 YTM CMI K[VG[JFß; G[5I MU äZF ; FIAT SZ, \ CT; ; RGF äZF EI G[:JLSFZ[KP VF p5ZFT IJWF I S 5]08G[VFWFZ[56 EI IJSI; T YTM CMI KP NFPTP SM. AF/S XF/FV[HJFG\ OZYL DFTFvI5TFG[ACFGF ATFJ[KP Ô[DFTFvI5TF :JLSFZ[TM AF/SG[XF/FV[G HJ\ 50[VG[VCL\ AF/SG[DFTFvI5TF äZF IJWF I S 5]08 D/[KP

4. AMWftDS SFZ6 0

EI IJSTLDF\ Sß, FS AMWftDS SFZ6MGL Dbl E)DSF ZCL KP EI IJSTLYL U:T jI IST Ô6L Ô[G[5IZI:YTL S[TGfYL4D/TL ; RGFVMGM V[ZLT[p5I MU SZ[K[S]HGfYL TGM EI JWFZ[DHAJT AG[KP VG[VF EI DfASß, FS AMWftDS 5}UJCM EFU EHJTF CMI KP VF TyI G[; DYG VF5TF4 8MDFSG4 DF. GßF TYF SßsTomarken, Mineka & Cook) H6FJ[K[S] VF 5SFZGF EI AMWftDS bIF, G[VFWFZ[CMI KP Tß[; F5 VG[ÔJOFVMGF EI YL 5LIOT VG[; FDFgI jI ISTVMGM VeIF; SIMP TDGF

VeIF; GF IGQSQF" H6FJ[K[S]; F5 VG[ÒJOFYL JWFZ[DF+FDFAOZJFJF/F
 jI ISTVM Ô6lvÔ. G[H V[5ŞFZGL ; RGFVM 5M0FT SZ[K[VG[TGFDFA
 OZGM JWFZM YFI KP UM00LO 1984GF ; XMWGDF ; FDFIHS EI GL VNZ
 AMWFtDS SFZ6MGL :508 E)DSF ÔJF D/[KP VG[VFJF , MSM ; FDFIHS
 5IZI:YITDA YJFGF D}IF\$GG[, . G[JWFZ[IRTLT ZC[KP Bets 1950
 VFJF , MSMALÔGF DFG; p5Z 5MTFGF IJX[pt5gG YGFZ 5|TDFGM JWFZ[
 bIF, ZFB[KP

✓ EI NŹ SZJFGF\p5RFZM0

1P JTGFtDS p5RFZ 0

EI GF IJSF; DFAJTGFtDS AFATM V; Z SZ[K[JTG V[; DFH VG[
 ; \SITG[VG]-5 XLB[, }CMI KP Ô[E}, CMI TGfYL pt5gG YTM EI YL
 IJSTEFJ pN\EJTM CMI KP DMO, LU VFWFZ[EI pN\EJ[KP VF VU[
 AF0ZF (Bandura – 1988) V[VŞ 5|MU SZ[, VCL\ VŞ jI IST ; 5G[
 5MTFGF XZLZ 5Z , 5B[KP 5KL 5FKM CFYYL TG[5S0[K# U/[IJ8F/[KP
 VF Ô. G[ZMJL V[XLB[KP BZBZ ; 5YL 0ZJ\ V[jI Y" K[VG[ti FZ 5KL
 WLZ[WLZ[IRIS; S ZMJLG[; F5GL 5F; [VFJJF TG[5S0JF 5M; FICT SZ[K[
 VG[5KL ; F5GM EI T[jI ISTDFYL ; DF%T YFI KP

2P AMWFtDS p5RFZ 0

EI GF p5RFZDFA AMWFtDS 5âIT JWFZ[; 0/ ; FIAT Y. CTL
 V[, L; sEiisf V[J\ DFG[K[S[ZMJLGF V; UT IJRFZM VG[IJ`JF; M äZF
 EI GL IJSIT 5MFFI K[VŞ, F DF8[TG[, UTF IJRFZM 5FI F JUZGF KP
 T[J\IJRFZLG[TDFYL D]ST D/JJL Ô. VP Ô[ZMJL WLZ[WLZ[VFJ\SZX[TM
 ; FZF IJRFZMG\WLZ[WLZ[DGDF\5|TZM56 YX[VG[EI VMKMYXP 8G"VG[

IJ, LI d; S Turner, 1992 & Williams 1983 FSC[K[S[5IZI:YTLGM ; FDGM
SZJFGL H~Z GYLP OST 5MTFGF DGDFRF, TF V; UT IJRFZMG[NZ SZL4
EI VMKMSZL DJST D/JL XSF1 KP

IJST IRTFGL p5ZMST DFICTL BJA H IJ:TT ATFJJFGM
; XMWSFGM VFXI V[ZæM K[S[DFTEG[; FWFZ6 AF/SGF pKZGL 56 HM
BMBL IRTF YFI TM IJST IRTFDF\OZJF. HFI KP BI FZ[IJIX08 AF/SMGL
DFTEG[TM VF IRTF ìNI G[SMZL BFTL CMI VG[HM ê0L IJST IRTFDF\
OZJFI TMTGL S\JL IJ5IZT V; Z YFI K[T[; DÒ XSF1 P

2.4 IJST IRTFGL 5JL'I VeIF; M¹⁰

1. VP S[I; gCFGM VeIF; 0

; D:IF 0 jIJ; FI SFI DF\VFJUFtDSTF VG[IRTF IJOFGM VeIF;

IGNX"0 110 SDRFZLVM

TFZ6 0 DFGI; S CTFXFGI , FU6LG[SFZ6[EFUL KBJFGL JI;

WZJTF CTF VG[SFI"; TMEG\5DF6 VMK\CTP

2. IO; Z VG[VG[CFG\GM VeIF; 0

; D:IF 0 IJST IRTFGL V; Z

IGNX" 0 500 SDRFZLVM

TFZ6 0 SDRFZLVMD\ S; DFI MHG ÔUF D?I\ VG[TF, LD

VF5JFGM BR"JwI M

3. VP, ZGM VeIF; 0

; D:IF 0 DFGI; S ZMJ GF EMJ AG, F SDRFZLGM VeIF;

IGNX" 0 100 SDRFZLVM

TFZ6 0 jIFJ; FII S S; DFI MHGGF +6 SFZ6M

1. Inadequate Personalities
2. Paranoid Personalities
3. Emotional Personalities

4. :JLJg; GMVeIF; 0

; D:IF 0 VFJUFtDS S; DFI MHGGMVeIF;

IGNX" 0 D; L S5GLGF 1200 SDRFZLVM

TFZ6M 0 16% JRF6 SDRFZL4

23% IAGJRF6 SDRFZL

54% SDRFZLDFjI ISTtJGL 5FYIDS BFDLVM

24% SDRFZLDFjI ISTtJGL UVELZ DkS; LVM

5. I:DY4 SI<5G VG[S&DZGMVeIF; 0

; D:IF 0 VFJUFtDS VJZMMGL V; Z Ô6JL

IGNX" 0 TFZ DF:TZGF A[; DÇ 1 ; DFI MHT 2 V; DFI MHT

TFZ6 0 jI J; FII S IJSITVMGM EMJ AG; F V; DFI MHT HÿGF

; eIM VFJUFtDS V; DT], F JWFZ[WZEFJTF CTFP

6. :J[, VG[8], Z GMVeIF; 0

; D:IF 0 ; FDFIHSvVFIYS NZHÔ¶ pDZ VG[IRTFGM ; AW T5F; JM

IGNX" 0 1250 5pTJIGL jI ISTVM

TFZ6 0 IRTFGM êRM :SMZ Ô¶F D?IMP UZCFHZ INJ; MGL ; bIF

JrR[IJWFI S ; C; AW Ô¶F D?IMP

7. SLPV¶ **Methodological** VG[**Psychological** ãlQ8V[VeIF; 0

; D:IF 0 ; FDFIHSv VFIYS NZHÔ VG[IRTFGM ; AW T5F; JMP

IGNX" 0 132 :+L SFZSÇ

TFZ6 0 ; FDFIHS NZHÔG[IRTF ; FY[SM ; AW GYLP

8. EFZT DF\VGp SP N¿GMVeIF; 0

; D:IF 0 ; FDFIHSvVFIYS:TZ4 pDZ VG[IRTF GM ; AW T5F; JM

IGNX" 0 RNLU- ; IRJF, IGF SDRFZLVM

TFZ6 0 ; F¿I DGMJSITGF , 1F6MJF/F , MSMD\IRTFG\5DF6 BF;

JWT]GYLP ; DWFZ6 , MSMD\VF 5DF6 JWT]ZC[KP

9. A¿0LU¿GMVeIF; 0

; D:IF 0 SM, HGF IJnFYLVNG[, . G[pDZ VG[IRTFGM ; AW
T5F; JMP

IGNX" 0 219 SM, HGF IJnFYLVN

TFZ6 0 17YL 33JQF"NZdIFG IRTF JW[KP33JQF"5KL IRTF W8[K[

10. OM. OL5G ; FIM, MGMVeIF; 0

5]:TJT ; XMVGGF IJST IRTFJF/F VeIF; M ; FY[5]L'I VeIF; MGL
T], GFP

; D:IF 0 IRTF VG[EI JrRGM ; AW T5F; JM

IGNX" 0 DGMZMLVMGMVeIF;

TFZ60 VI:TtJJFNL DFG; p5RFZSM DY/E]T IRTFG[ACfZ

SF-JFGL JFT SZ[KP DGMJ` , ¿FSM GPZ EI G[ACfZ

SF-JFGL JFT SZ[KP

11. HFU'ITjIF; (2005) 0

; D:IF 0 ZFHSMB XCZGF\ CF. va, 05f; ZGF NNLVINGF DFGI; S

:JF:yI 4 ; DFI MHG VG[IJST IRVTFGM VeIF; P

IGNX"0 480

TFZ60 5]:TJT VeIF; D\ HFIT4 IJ:TFZ4 SBJAGM 5SFZ JUZGL

V; Z HMJF D/[KP

2.4.1 IJST IRVTFGF 5JL'I VeIF; ; FY[5]:TJT ; XMMGGL T], GFP

SBJADF\ AF/SMGL ; bIFGL V; Z4DFTFvI5TFGL IJST IRVTF p5Z

YFI KP TDF\I5TF SZTFDFTF p5Z JWfZ[V; Z SZ[KP Ho₀₁, Ho₀₄, Ho₀₇.

ZCPf6 UfdI K[S[XCZ TGL V; Z 56 HMJF D/[KP I5TFGL IJST

IRVTF SZTF DFTFGL IJST IRVTF VF SFZ6MYL JW] CMI KP Ho₁₃, Ho₁₉,

Ho₂₂.

DFTFvI5TFGF VeIF; GL V; Z 56 IJST IRVTF p5Z YFI KP Ho₂₅,

Ho₂₈, Ho₃₄.

SBJAGF 5SFZGL V; Z 56 IJST IRVTF p5Z YFI KP Ho₃₇, Ho₄₀,

Ho₄₆.

DFTFvI5TFGL pDZGL V; Z 56 IJST IRVTF p5Z YFI KP Ho₄₉,

Ho₅₄, Ho₅₈, Ho₆₁, Ho₆₄.

HFITGL V; Z HMJF D/[KP Ho₆₁, Ho₆₄.

DFTFvI5TFGF XMBGL V; Z 56 IJST IRVTF p5Z YFI KP Ho₇₀,

Ho₇₃, Ho₇₆.

2.5 DFGI; S :JF:yI G]; ÆFITS DctJ¹¹ 0

DFGJL HgD[K[tIFZYL DtI]I]t ; TT S\ SG[S\ S D[/JJF

5]I tGXL, ZC[K[VGI TGF ÒJGDF\ VG]SIJW ; D:IFVMGM ; FDGM SZJM

50[KP VFIYS4 ; FDFIHS4 WWFSLI 4 XFZLIZS4 DFGI; S JUZ[jI ISTG[
 DGDA; TT IRTF ; TEJ[K[VG[VFGFYL jI ISTGF DG 5Z JW] V; Z YFI
 KP T[jI IST DFGI; S :J:YTF UDFJ[K[VG[VF TDFD ; D:IFVMG[
 wI FGDA\ZFB L DFGI; S :JF:yI GM bIF, VFTZZF08EI S1FFV[:JLST 5FdI M
 K[VG[wHOGA\1946DA J5FZ YI[, F AWFZ6DA DFGI; S :JF:yI GL
 jI FbI F VF 5DF6[VF5JFDA\VFJ[KP

~:JF:yI V[DF+ ZMJ4 GA/F. S[XISTGM VG]EJ S[UZCFHZLGL
 VJ:YF H GYLP V[p5ZFT T[; DU| VG[; 5b" V]L XFZLIZS VG[
 ; FDFIHS 5I F%TTDFYL ; ÔTL I:YIT KP~

DFGI; S VFZMuI V[DGMJ7FGGL V§ XF/F K[v SF, "ZMH; GF DT
 5DF6[-DYE]T ZLT[NZ§ DF6; ; FZM K[VG[T[; FZM AGJF . rK[Kf VF
 AFATMG[wI FGDA\ ZFB L V[TM prRDA\ prRS1FFG] DFGI; S :JF:yI V[SM.
 IGZ5]F bIF, S[5IZI:YIT4 VJ:YF 56 GYL4 5ZT] IJS<5MDFYL XSI
 Tβ, L prR VJ:YF KP HG[RMSS; ; NE" D}, JL XSFI T]L ~JF:TIJS
 5IZI:YTL~ KP CA", SZM, GF DT 5DF6[~SM. 56 ; DFHG\ DFGI; S
 :JF:yI tIFZ[H ; FZ]CMI BIFZ[T[; DFHG\XFZLIZS :JF:yI ; F~ CMI P~

IJ`J VFZMuI ; \YF swhof4 X]FI6S4 J7FIGS VG[; F`SITS
 ; V]ST ZF08MGL ; \YF sunescof TDH IJxJ DFGI; S ; \YF swFMHF
 H]L VFTZZF08EI ; \YFVM DFGI; S :JF:yI ; WfZJF SFI ZT KP

VF ZLT[Ô]. V[TM 2oDL ; NL -IRTFU]:TTFGM I]U KP~ VFW]GS
 DFGJLGA\JTG 5ZYL VGDFG SZL XSFI TD K[S[DFGI; S ZLT[ARG KP
 VFJL jI IST DFGI; S ZLT[:J:Y ZC]Vβ, [5]; gG ZC]P 5]; gGTFG[VG[
 DFGI; S :JF:yI G[W6MH ; AW KP jI IST 5]; gG CMI T]GM VY"V[AG[S[

ji IST :J:Y K[VG[IJWFIS VFJÜ Vß, [:J:Y DFGI; S :JF:yI IGQFWS
 , FU6L4 VFJÜ Vß, [ji ISTGF IJREFZMFA IJ5IZT AG[K[VG[ji ISTGM
 DFGI; S :JF:yI GA/\ G 50[:J:Y ZC[T[DF8[W6F VeIF; M YI[, F KP
 VG[; XMWSFV[56 VFYL H DFGI; S :JF:yI GM 5MTFGF VeIF; DFA
 ; DFJX SZ[, KP

GMD", IJg; h8 G\ SCÜ\ K[S[IJ` JDA DMB[EFU[ji IST SM. G[SM.
 DFGI; S IADFZLYL U;T K[VG[TGF D\DA RFZ EFJM ZC[, F K[H[VF
 5PF6[KP

1P EI 2P SMW 3P . QFF" 4P W6F

VF p5ZFT VD[ZSFDA VGß ; \YFVM DFGI; S :JF:yI 1F+[SFD
 SZTL ZC[, L KP

1P DFGI; S :JF:yI GL ZF08EI ; \YF

2P DFGI; S :JF:yI G\ZF08EI ; U9G

3P DFGI; S4 TNZ:TL DF8GL DFGI; S ; DÇ VF5[, K[TÐH

UHZFTG\ ALPVDP . Ig:88I ß VMD Dh8, CkY

4P IMU Vh0 ; k0 OÜ, M5Dh8 VSFNDL

5P Dh8, CkY VHI ßXG 8÷8

p5ZGL ; \YFVM TÐH ; DU[IJ` JDA DFGI; S :JF:yI GL R/J/
 ; TT RF, TLZCL KP DFGI; S :JF:yI HF/JJ\ V[DF+ SßA4 ji J; FI 4
 , uGÖJGGL HÐ AF/pKZDA 56 DCÀJGL AFAT KP DFTFvI5TFGF
 DFGI; S :JF:yI G\ 5PF6 AF/SMGL ; bIF4 TGL HFIT4 TGL XFZLIZS
 DFGI; S :J:YTF JUZ[AFATMG[, LW[JWT] VMK] CMI KP ; XMWSFV[
 DFGI; S :JF:yI G[5ZT+ 5IZJtI" TZLS[wIFG[, . G[5;TJT ; XMWGDA
 ; FWFZ6 AF/SMGF DFTFvI5TF VG[IJIXQ8 AF/SMGF DFTFvI5TFGF

DFGI; S :JF:yI G]5DF6 XMWJF DF8[5DFI6T S; MBLGM p5I MU SZL I Ml
 ptS<5GFVM 30LG[TG[XMWJFGM 5]I tG SI M KP HG[5SZ6v4DF\ IJUT[
 NXF"J], KP VFD KTF\ VF ; XMWG 5}J[YI], F DFGI; S :JF:yI G[wI FGDF\
 , LWF K[VG[TGL ; FY[5:T]T VeIF; GL T], GF SZJFGM GD]5]I F SZ], KP
 VFJF 5}JL'I VeIF; MGLR[5DF6[K]0

2.6 DFGI; S :JF:yI IJQF[GF 5}JL'I VeIF; M¹²0

DFGI; S :JF:yI VU[IJN\DF\YI], ; XMVGMGL ; DL1FF

1. XLOFS 0 UfdI ÝN\DF\DGMM JF:YI ; J[VCPJF,

; XMWS 0 UM; P JLP D]I ZP (1948)

TFZ6 0 :SMB, bJGF\UFDL6 ÝN\XGF 56000 , MSMGF VF 5]:TSDFA
 VCPJF, KP HDA ; FDFIHS VFIYS I:YIT 5Z VF
 VCPJF, KP J:TIGF , UEU 9% , MSM V; FWFZ6 CTF\
 VG[TDFD ÝSFZGL DFGI; S :JF:yI ; D:IF CTL VG[
 HG]TFZ6 GLR[D]HA K]

(1) . u, bJGF ALHF IH<, FVMGL ; ZBFD6LDA VF IH<, FDA
 AWF H ÝSFZGL DFGI; S ; D:IFDA VFGJ]IXSTF IJXQF
 HMUF D/L CTLP

(2) GFGF AF/SM DFA\56 5pT JI GF , MSMGL T], GFDAFA]âGL
 DNTF VG[BFDL IJXQF ÝDF6DAHMUF D/[KP

2. "SMG" CfphZ VG[, M (1998)GF DT[XCZL VG[UfdI IJ:TFZGFA IJnFYLVMDFA DFGI; S :JF:yI GL AFATDA ; FYS TOEJT HMUF D/[KP H[IJnFYLVMDFA DFGI; S ZLT[:J:Y CTF T]VgI AFATDA W6F AWFGE VFU/ 50TF CTFP"

3. , UZ VG[VGY (1970)GF DT[DFGI; S :JF:yI VG[; FDFIHS VFIYS ; XMM JrR[W6F BZF ; AW KP TPGF DT[HDGFA DFTF I5TFGL VFJS ; FZL KP VG[SF8]IAS ; eIM VMKF KP TGF SZTF DFTF I5TFGL VFJS VMKL KP TPGFA AF/SM DFGI; S :JF:yI DFA GA/F KP”
4. ; XMS GLTFA[G , F, ÒEF. SFKOLI FP”
; D:IFo “DPLS, SM, HDA VeIF; SZTF IJnFYLVMDA DFGI; S :JF:yI VUGF DGMU(7FIGS T], GfDS VeIF; cc IGX" 0 80
S; MBL 0 OMP EÎ VG[ULOF ZIRT DFGI; S :JF:yI DF5GT], F VFSOFXF:+LI 5I]ST0t' U]6MTZ äZF IJ` , QF6P
TFZ6 0 (1) DPLS, SM, HDA VeIF; SZTF IJnFYLVMM VG[IJnFIYGLVMGF DFFGI; S :JF:yI 5Z HFITI TFGL V; Z 50[KP
(2) DPLS, SM, HDA VeIF; SZTF IJnFYLVMM VG[IJnFIYGLVMGF DFFGI; S :JF:yI 5Z VeIF; GF JQF" VG[SB]AGF ÝSFZGL V; Z 50TL GYLP
5. ; XMS 0 50IF OLP; LP
; D:IFo “uffdI VG[XCZL IJ:TFZGF IJS, FU AF/SMDA ; DFIMHGGL VG[DFGI; S :JF:yI VUGF VeIF; P”
IGX" 0 80 (IJnFYLVMMf
; FWGMb A], ZIRT ; DFIMHG ; XMMIGSF
S; MBL 0 OM EÎ VG[ULOF ZIRT DFGI; S :JF:yI DF5G T], F

VFSOFXF:+LI ÝI]ST`t` S; MBL VG[`F S; MBL EFZF
DFICTL IJ` , QF6

TFZ6 0 ; DFI MHG VG[DFGI; S :JF:yI GL AFATDF\ KMSZFVM VG[
KMSZLVMDFA; FYS TOFJT HMJF D/TM GYLP ; DFI MHG VG[
DFGI; S:JF:yI JrR[IJWFIS ; C; AWFBS HMJF D/[KP

6. ; XMWS 0 ; MG, VGP 5FGXZLIF

; D:IFo "HIT5Z XCZGF VG[UfdI IJ:TFZGF VeIF; SZTF 3MZ6
10 GF IJnFYLVMGF DFGI; S :JF:yI T], GftDS VeIF; "

IGNX" : 80 IJnFYLVMM

S; MBL 0 OMP EÎ VG[ULOF ZIRT DFGI; S :JF:yI DF5G T], F

VFSOFXF:+LI 5I]ST`t` S; MBL EFZF DFICTL IJ` , QF6P

TFZ6 0 HFIT VG[IJ:TFZGF\DWI SM JrR[; FYS TOFJT HMJF D/[
; V]ST VG[IJEST SBJAGL 3MP10 IJnFYLVGF DFGI; S
:JF:yI 5Z V; Z HMJF D/TL GYL

7. ; XMWS 0 RgSSFgT VP 5ZDFZ"

; D:IF 0 "VDNFJFNGL ÝFYIDS XF/FGL IXI1FSFVMGF DFGI; S
:JF:yI 38SMGF ; NEDFAVeIF; P

IGNX" : 100 IxI1FSFVM

S; MBL 0 OMP ANFDL EFZF ZRFI[, F DFGI; S :JF:yI DF5G T], F

VFSOFXF:+LI 5I]ST`t` S; MBL EFZF DFICTL IJ` , QF6
SZJFDF\VEJ[, P

TFZ60 SBJAGF ÝSFZMFA ; V]ST VG[IJEST SBJADFA ZCQFZ
IXI1FSFVMFA IYFYTFGL , FU6L VG[R[TFSLI , 1F6M JWZF[
HMJF D/P

8. ; XMWS 0 OMP 5F~, XŠ, VG[JXF, L 5RF, P
; D:IF 0 "J'âfzDDF\ZC[TF VG[Sß]ADF\ZC[TF J'âmGF DFGI; S :JF:yI
JrR[GMT], GftDS VeIF; P
IGNX" 0 120 Jâm
S; NBL 0 OMP 5PIM SPFZ ZIRT Dġ8, CġY RŠ, L:8 EFZF DF5GP
VFSOFXF:+LI 5[I]ST: 't' S; NBL wJFZF DFICTL IJ`, QF6 SZJFDF\
VFJ], P
TFZ6 0 J'âfzDDF\ZC[TF :+L 5]-QFMD\FDFGI; S :JF:yI 5Z YTL Sß]AGF
ÝSFZGL V; Z HMUF D/[ġ KP
9. ; XMWS 0 ÔTġã SP 5FG; ZLIF
; D:IF 0 " , LAOL TF, ŠF UfdI IJ:TFZGL Dfwi IDS XF/FDF\ VeIF;
SZTF\ IJnFYLVMGF DFGI; S :JF:yI 5Z DGMU{7FIGS
T], GftDS VeIF; P"
IGNX" : 80 IJnFYLVMP
S; NBL 0 OMP EÎ VG[ULOF ZIRT DFGI; S :JF:yI DF5G T], FP
VFSOFXF:+LI ÝI]ST : 't' UġMTZ 5âIT EFZF DFICTL IJ`, QF6
SZJFDF\VFJ], P
TFZ6 0 Dfwi IDS XF/FDF\ VeIF; SZTL IJnFYGLVMGF DFGI; S
:JF:yI 5Z YTL I5TFGF jIJ; FI VG[VeIF; GF WMZ6GL
V; Z 50TL GYLP
10. ; XMWS 0 ÝFP VFZP SP HFZ; I6IFP
; D:IF 0 "HġFU- IH<, FGF\ Vġ P 8LP 0F. JZGF\ DFGI; S :JF:yI GF
DGMU{7FIGS T], GftDS VeIF; P"

IGNX" : 80 0F. JZM

S; MBL 0 OMP EÎ VG[ULOF ZIRT DFGI; S :JF:yI DF5G T], FP
 VFSOFXF:+LI 5|I]ST: 't' S; MBL EFZF DFICTLIJ`, QF6 SZJFDA
 VFJ,
 TFZ6 0 V; P8LP 0F. JZM 5Z VeIF; GF WMZ6M pDZ VG[ZCPF6GL
 DFGI; S :JF:yI 5Z V; Z 50TL GYLP

11. ; XMWS 0 SP JOFF" JF, ÒEF. -M, ZLIF

; D:IF 0 "5LP8LP; LP SM, HDA VeIF; SZTL TF, LDFYL" ACGGGF
 DFGI; S :JF:yI VUJGF DGMJ(7FIGS T], GftDS VeIF; P"
 IGNX" : 80 TF, LDFYL"

S; MBL 0 OMP EÎ VG[ULOF ZIRT DFGI; S :JF:yI DF5G T], FP
 VFSOFXF:+LI Ý5]ST: 't' S; MBL EFZF DFICTL IJ`, QF6 SZJFDA
 VFJ, KP
 TFZ6 0 5LP8LP; LPDA VeIF; SZTL ÝYD VG[IETLI JOFGL
 TF, LDFYL" ACGGGF DFGI; S :JF:yI 5Z VeIF; GF JOF"
 SB]AGF ÝSFZ VG[I5TFGF VeIF; GL V; Z 50TL GYLP

12. ; XMWS 0 JF-LIF ICTX VFZP

; D:IF 0 "prRJU" Dwl DJU" VG[IGdGJU'GF :+lv5]-QFGF :JF:yI
 ; DFIMHGGL VG[DFGI; S :JF:yI GM VeIF; P-

IGNX" : 180 (:+L 5]-QF)

S; MBL 0 OMP EÎ VG[ULOF ZIRT DFGI; S :JF:yI DF5G T], FP
 VFSOFXF:+LI 5|I]ST: F-(test) (ANOVA) S; MBL wJFZF DFICTL
 IJ`, QF6 SZJFDA VFJ, P

TFZ6 0 :JF:yI ; DFIMHGGL DFGI; S :JF:yI GL HFIT VG[JU'GL
V; Z HMUF D/[KP

13. ; XMWS 0 ZFNIOIF 5F~, AG HP

; D:IFocCH]GFU- XCZGF ICgN] ; DFH 5]-QFMGF DFGI; S :JF:yI GM
DGMJ(7FIGS T], GftDS VeIF; SZJMP"

IGNX" : 80 5]-QFM (40 ICN]40 D]:, D 5]-QFM)

S; MBL 0 ONP EÎ VG[ULOF ZIRT DFGI; S :JF:yI DF5G T], FP

VFSOFXF:+LI ÝI]ST: 't S; MBL EFZF DFICTL IJ` , QF6 SZJFDF\VFJXP

TFZ6 0 (1) 30 JOFYL JW] VG[30 JOF"; WLGL pDZ WZFJTF ICN] VG[
5]-QFMGF DFGI; S :JF:yI p5Z 7FIT pDZGL V; Z 50TL
GYLP

(2) ; V]ST SBJ\ADF\ ZC[TF D];, LD VG[5]-QFMGF DFGI; S
:JF:yI 5Z SBJ\A ÝSFZGL V; Z 50[KP

(3) IJEST SBJ\ADF\ ZC[TF D];, LD VG[5]-QFMGF DFGI; S
:JF:yI 5Z SBJ\A ÝSFZGL V; Z 50TL GYLP

14. ; XMWS 0 RFcf6 ~5, ALP

; D:IF 0 "; V]ST SBJ\ADF\ VG[IJEST SBJ\ADF\ZC[TL 5ZI6T :+LVMGF
DFGI; S :JF:yI GF T], GftDS VeIF; P"

IGNX" : 80

S; MBL 0 ONPOL HP EÎ VG[SP ULTF VFZP ULOF ZIRT DFGI; S :JF:yI
DF5G T], FP

VFSOFXF:+LI 5]I]ST: 't S; MBL EFZF DFICTL IJ` , QF6 SZJFDF\VFJ], P

TFZ6 0 ; V]ST SBJADF ZC[TL :+L VMG\ DFGI; S :JF:yI IJEST
SBJADFZC[TL :+LVM SZTF ; F~ HMUF D/[P

15. ; XMWS 0 SD, X VP HMFLP

; D:IF 0 "H[T5Z XCZGF prR DfwI IDS XF/FGF IJGI G VG[
JFI6BI XFBGF IJnFYLVMGF DFGI; S :JF:yI GM T], GfDS
VeIF; "

IGNX" : 80 IJnFYLVMM

S; MBL 0 OMPOLPHP EÎ VG[SP Ò VFZP ULOF ZIRT DFGI; S :JF:yI
DF5GT], F

VFSOFXF:+LI 5[I]ST: 't' S; MBLGF EFZF DFICTL IJ` , QF6 SZJDFV
VFJ], P

TFZ6 0 (1) SBJAGF ÝSFZ VG[IJnFXFBFGF ÝJFCGF IJnFYLVMGF
DFGI; S :JF:yI 5Z V; Z HMUF D/TL GYLP

(2) HFITGF ÝSFZGL DFGI; S :JF:yI 5Z V; Z HMUF D/[KP

16. ; XMWS 0 ; H, LIF ULTF SP

; D:IF 0 "WM, XCZGF Jâ :+lv5]-QFGF DFGI; S :JF:yI VU[GM
DGMU(7FIGS T], GfDS VeIF; SZJMP"

IGNX" : 60

S; MBL 0 OMPOLPHP EÎ SP ULTF VFZPULOF ZIRT DFGI; S :JF:yI
DF5GT], F

VFSOFXF:+LI 5[I]ST: 't' S; MBLGF EFZF DFICTL IJ` , QF6 SZJDFV
VFJ], P

TFZ6 0(1) W̄M, XCZGF J'â :+lv5}-QFGF DFGI; S :JF:yI 5Z HFITGL
V; Z 50[KP

(2) W̄M, XCZGF J'â :+lv5}-QFGF DFGI; S :JF:yI 5Z
VeIF; GL V; Z 50TL GYLP

(3) W̄M, XCZGF J'â :+lv5}-QFGF DFGI; S :JF:yI 5Z pDZGL
V; Z 50TL GYLP

17. ; XMWS 0 ZFNIOIF 5F~, AĠ HP

; D:IF 0"HĠGFU- XCZGF Dġ, LD ; DFHGF 5ġ-QFM VGġ :+LVMGF
DFGI; S :JF:yI GMDGMJ(7FIGS Tġ, GfġDS VeIF; ċ

IGNX" : 80 IGNX"

S; MBL 0 OMPOLPHġ Eġ VGġ SP ULTF VFZP ULQF ZIRT DFGI; S
:JF:yI DF5GTġ, F

VFSOFXF: +LI 5ġI]ST: 't' S; MBL EFZF DFICTLIJ` , QF6 SZJFDF\VFJġ, P

TFZ6 0 (1) HĠGFU- XCZGF Dġ, LD 5ġ-QFGF DFGI; S :JF:yI 5Z
HFITGL V; Z 50[KP

(2) 30JQFYL JWġpDZ WZFJTF Dġ, LD :+L 5ġ-QFGF\DFGI; S
:JF:yI 5Z SġĠAGF ÝSFZGL V; Z 50TL GYLP

(3) ; VġST SġĠADF\ ZCġTF Dġ, LD :+lv5}-QF 5Z DFGI; S
:JF:yI GL V; Z 50TL GYL

(4) 30JQFYL VMKL pDZ WZFJTF Dġ, LD :+lv5}-QFGF
DFGI; S :JF:yI 5Z pDZGL V; Z 50TL GYLP

(5) IJEST SġĠADF\ ZCġTF Dġ, LD :+L 5ġ-QFGF\DFGI; S
:JF:yI 5Z SġĠAGF ÝSFZGL V; Z 50TL GYLP

18. ; XMWS 0 50IF OLP; LP

; D:IF0 "H[T5Z XCZGF prRTZDFWI IDS XF/FGF IJGIG vJFI6BI
 YJFCGF IJnFYLVMGF DFGI; S :JF:yI GM DGMU7FIGS
 T], GftDS VeIF; "

IGNX" : 80 IGNX"

S; MBL 0 OFP OLPHPEÎ VG[SP ULTF VFZP ULOF ZIRT Ý`GFJ, L
 VFSOFXF:+LI 5|I]ST: 't' S; MBL EFZF DFICTL IJ` , ¶6

TFZ6 0(1) prRDFWI IDS XF/FGF IJnFYLVMDA\HFITGF ; NE"DFGI; S
 :JF:yI GF DWI SMJrR[; FYS TOFJT HMF D/[KP

(2) prR DFWI IDS XF/FGF IJ7FG VG[JFI6BI ÝJFCGF
 IJnFYLVMDA\ ÝJFCGF ; NE'DA\ DFGI; S :JF:yI GF
 DFWI SMJrR[; FYS TOFJT HMF D/[KP

(3) prR DFWI IDS XF/FGF IJnFYLVMGF SBJAGF ÝSEZGF
 ; NE'DA\ DFGI; S :JF:yI GF DWI SM JrR[; FYS TOFJT
 HMF D/TMGYLP

19. ; XMWS 0 IJ9, F6L H<5F VDP

; D:IF 0 "H[T5Z XCZGF Ufg8D VG[GMG Ufg8D DFWI IDS XF/FDA\
 WMP1oDA\ VeIF; SZTA IJnFYLVMGF DFGI; S :JF:yI
 T], GftDS VeIF; P "

IGNX" : 80 IGNX"

S; MBL 0 OLPHPEÎ VG[SP ULTF VFZP ULOF ZIRT Ý`GFJ, L

VFSOFXF:+LI 5|I]ST: 't' S; MBLGF EFZF DFICTL IJ` , ¶6

TFZ6M 0 (1) HFITGF ; NEDFA DFGI; S :JF:yI GF Dwl SM JrR[; FYS
TOFJT KP

(2) Ufg8D VG[GMGvUfg8D DfwI FIDS XF/FGF ; NEDFA
DFGI; S :JF:yI GF Dwl SM JrR[; FYS TOFJT GYLP

(3) ; V]ST VG[IJEST SBJAGF IJnFYLVMGF DFGI; S
:JF:yI GF Dwl SM JrR[; FYS TOFJT GYLP

20. ; XMWS 0 R<, F IG, D V]RP

; D:IF 0“iNI ZMUGF JI ISTGF DFGI; S:JF:Y VU[DGMU{7FIGS
VeIF; cc

S; MBL 0 OFFI OLP HP EÎ ZIRT cDFGI; S :JF:yI ; XMWFIGSfc

IGNX" : 120 IGNX"

VFSOFXF:+LI 5I]ST : 't' S; MBL\EFZF DFICTL IJ` , QF6

TFZ6M 0(1) HFITGF ; NEDFA DFGI; S :JF:yI 5Z V; Z HMJF D/[KP

(2) pDZGF ; NEDFA DFGI; S:JF:yI GL V; Z HMJF D/TL GYLP

(3) NFN5ti ÔJGGF ; NEDFA DFGI; S :JF:yI GL V; Z HMJF
D/TL GYLP

21. ; XMWS 0 VFZTL ALP V]AF; 6F

; D:IF 0“VMM5PLS VG[:J:Y TZ]6MGF DFGI; S :JF:yI GMVeIF; P”

IGNX" : 80 (KMSZfv KMSZL)

S; MBL 0 DFGI; S :JF:yI DF5GT], F

VFSOFXF:+LI 5I]ST: 't' S; MBL\ EFZF DFICTL IJ` , QF6

TFZ6 0(1) VMM5PLS VG[:J:Y TZ]6M JrR[SM ; FYS TOFJT GYL

22. ; XMWS 0 U6F+F IXT, VFZP

; D:IF 0 "H[T5Z XCZDFAVG[UfdI IJ:TFZDFAWM 10 DFAVeIF; SZTF
IJnFFYLVMGF DFGI; S :JF:yI GMT], GftDS VeIF; "

IGNX" : 80 IJnFYL"

S; MBL 0 0LPHPEÎ VG[SP ULTF VFZP ULOF ZIRT Ý`GFJ, L

VFSOFXF:+LI 5II]ST0 't S; MBL EFZF DFICTL IJ` , QF6

TFZ6 0 (1) WMP 10DFA VeIF; SZTF IJnFYLVMGF HFITGF ; NEDFA
TOFJT HMJF D/TM GYL

(2) WM 10DFA VeIF; SZTF IJnFYLVMGF IJ:TFZGF ; NEDFA
DFGI; S :JF:yI DFA; FYS TOFJT HMJF D/TM GYLP

(3) WMP10DFA VeIF; SZTF IJnFYLVMGF SPJAGF ÝSEZGFA
; NEDFA DFGI; S :JF:yI DFA ; FYS TOFJT HMJF D/TM
GYLP

23. ; XMWS 0 GLDFJT HI zL VP

; D:IF 0 "RMSLGF UfdI IJ:TFZGF DFwIDS XF/FGF WMP10 GF
IJnFFYLVMGF DFGI; S :JF:yI GMT], GftDS VeIF; "

IGNX" : 60

S; MBL 0 DFGI; S :JF:yI DF5GT], F

VFSOFXF:+LI ÝI]ST : 't S; MBL EFZF DFCLTL IJ` , QF6 SZJFDA
VFJ, KP

TFZ6 0(1) WMP 10GF UfdI IJ:TFZGF KMSZF KMSZLVMDFAHFITGL V; Z
HMJF D/TL GYLP

(2) WM 10GF UfdI IJ:TFZ VG[KF+F, I GF IJnFYLVMDFA
DFGI; S :JF:yI GL V; Z HMUF D/TL GYLP

(3) WMP10GF IJnFYL p5Z SBJAGF ÝSFZGL V; Z DFGI; S
:JF:yI 5Z HMUF D/TL GYLP

24. ; XMWS 0 ÝFP ZI; SEF. HÞJF

; D:IF 0 "A\$DFA GMSZL SZTF SDRFZLVMGF DFGI; S :JF:yI VU[GF
VeIF; P"

IGNX" : 180 (SDRFZL)

S; MBL 0 OLPHEË VG[SP ULTF VFZP ULOF ZIRT

VFSOFXF:+LI 5|I]ST: 't' S; MBL EFZF DFICTL IJ` , QF6

TFZ6 0 A\$DFA GMSZL SZTF 5]-QF VG[:+L SDRFZLVMGF HFITGF
; NEDFA DFGI; S :JF:yI GL AFATDFA TOFJT HMUF D/TM
GYLP

25. ; XMWS 0 5ZDFZ CDFULGL SP

; D:IF 0 "GMSZL SZTL VG[GMSZL G SZTL :+LVMGF DFGI; S :JF:yI
VG[VftDctIF JI; VU[bIF, P"

IGNX" : 80 :+LVMGF 5; NULP

S; MBL 0 OMPOLPHP EË VG[SP ULTF VFZ ULOF ZIRT T], F

OMPVFZP ÒP D[MGFY ZIRT DF5GT], FP

VFSOFXF:+LI 5|I]ST: 't' test VG[; C; XAW EFZF DFICTL IJ` , QF6
SZJFDF\VFJ], P

TFZ6 0(1) GMSZL SZTL VG[GMSZL G SZTL :+LVMGF DFGI; S
:JF:yI DFA SM. ; FYS TOFJT HMUF D?I MGYLP

(2) GMSZL SZTL VG[GMSZL G SZTL :+LVMGL VftDCtIF
 JI¿DFA SM. ; FYS TOFJT HMF D/TMGYLP

26. ; XMWS 0 5NDF6L GC, JLP

; D:IF 0 "DPLS, SM, HDF' VeIF; SZTF IJnFYLVMGF DFGI; S
 :JF:yI VUJGMDGMU{7FIGS T}, GftDS VeIF; P "

IGNX" : 120 IJnFYLVMGV VG[IJnFYLVMP

5IZJtI "0 (1) HFIT (2) SBJAGF ÝSEZ JUZPPPPP

S; MBL 0 OLPHPEÎ VG[SP ULTF VFZ ULOF ZIRT ; XMWIGSFP

VFSOFXF:+LI 5|I]ST: 't S; MBL EFZF DFICTL IJ` , QF6

TFZ6 0 (1) IJnFYLVMGF HFITGF ; NEDFA TOFJT HMF D/TM
 GYLP

(2) IJnFYLVMGF VeIF; GF JQFGF ; NEDFA DFGI; S
 :JF:yI DFA TOFJT HMF D/TMGYL

(3) IJnFYLVMGF SBJAGFA ; NEDFA SM. TOFJT HMF
 D/TMGYLP

27. ; XMWS 0 N[+MHF JNGF HP(M.phil)

; D:IF0 "UfdI VG[XCZL IJsvI]TLVMGF DFGI; S :JF:YGF
 T}, GftDS VeIF; P"

IGNX": 120 IJVS VG[I]ITVM

5IZJtI "0 (1) HFIT (2) IJ:TFZ

S; MBL 0 OLPHPEÎ VG[SP ULTF VFZ ULOF ZIRT ÝxGFJ, LP

VFSOFXF:+LI 5|I]ST: F-test (ANOVA) EFZF DFICTL IJ` , QF6P

TFZ6 0 (1) IJ S VG[IJ TLVMGF\ DFGI; S :JF:yI DF\ HFITGL V; Z
50TL GYLP

(2) Uf dI VG[XCZL IJ FGM VG[IJ TLVMGF\ DFGI; S
:JF:yI GL IJ:TFZGL V; Z HMJF D/TL GYLP

28. ; XMWS 0 JSZLI F ZLGF HP

; D:IF 0 "H[T5ZGFXCZGF AM; DLI F SM, HGF VDP VP VG[VDP
SMDPGF IJnFYLVMGF\ DFGI; S :JF:yI GMT], Gf tDS
VeIF; P"

IGNX" : 80 (KMSZF KMSZL)

S; MBL 0 DFGI; S :JF:yI DF5GT], F

VFSOFXF:+LI YI]ST : 't' S; MBL EFZF DFICTL IJ` , QF6

TFZ6 0(1)M.A. VG[M.Com.GF VeIF; GF IJnFYLV M 5Z DFGI; S
:JF:yI GL HFIT 5Z V; Z 50TL GYLP

(2) M.A. VG[M.Com.GF VeIF; GF IJnFYLV M 5Z SBJAGF
DFGI; S :JF:yI 5Z V; Z 50TL GYLP

(3)M.A. VG[M.Com.GF VeIF; GF IJnFYLV M 5Z IX1F6GF
WMZ6 DFGI; S :JF:yI 5Z V; Z 50TL GYLP

29. ; XMWSF 0 UMJF6L VJGL V; P

; D:IF 0 "ZFHSMB XCZGF JSL, MGF DFGI; S :JF:yI GM DGMJ{7FIGS
VeIF; P"

IGNX": 60 JSL, M

S; MBL 0 ONPOLPH[E T ZIRT Y Gf J, L

VFSOFXF:+LI 5I]ST: 't' S; MBL EFZF DFICTL IJ` , QF6

TFZ6 0 (1) JSL, MGL pDZGF ; NEDFA TOFJT HMUF D/[KP

(2) JSL, MGL SBJAGF YSFZGF ; NEDFA TOFJT HMUF D/TM
GYLP

(3) JSL, MGL , uGNZdIFG ; NEDFA TOFJT HMUF D/TM
GYLP

2.6.1 DFGI; S :JF:yI IJXGF 5JLI VeIF; M ; FY[5]:TJT ; XMWGGL
T], GFP

DFGI; S :JF:yI GF p5ZMST VeIF; MFA, [FII, F IGX4 5IZJtI MS[
VgI AFATMGL T], GF 5]:TJT ; XMWG ; FY[GLR[5PF6[SZL XSFI P

VeIF; v1 DF GFGF AF/SMGL A]âGL DNTF IJX[VeIF; SZJFDA
VEJ], MKP H[VCLDNA]âGF AF/SM ; FY[S\ S VX[D/TM KP

VeIF; v2DA ZCP6 IJX[VeIF; SZ], M K[H[5]:TJT ; XMWGDA
Ho₁₃, Ho₁₇, Ho₂₂ ;]WL NXFJ], MKP

VeIF; v3DA 5]:TJT ; XMWGDA F-S; MBL 5PF6[VEJSGL V; Z HMUF
D/TL GYL Ho₉₃.

VeIF; v4DA HFITGL V; Z VU[DFTFM5TF IJX[V, UYL
ptS<5GFVMZRL K[VG[T5F; L KP HDA Ho₆₂ VG[Ho₆₅ DA HMUF D/[KP

VeIF; v5DA ZCP6GL V; Z HMUF D/[KP Ho₁₄, Ho₁₇, Ho₂₀. Ho₂₄.

VeIF; v7DA SBJAGF 5SFZ IJX[HF6JFGM 5] tG SI MKP H[5]:TJT
; XMWGDA Ho₃₈, Ho₄₁, Ho₄₄, Ho₄₇ DA HMUF D/[KP

p5ZMST ZLT[5]Ll VeIF; M; FY[5]:TJT ; XMWGL ptS<5GFVMDf\ V; Z T5F; JFGM IJGD| 5|IF; ; XMWSFV[SZ| KPHGL IJXN RRF" 5\$Z6v4DF\IH7F;]; DÒ XSXP DGMJ7FG V[JTGG\IJ7FG KP VFYL JT'G VUJGF DGMJ{7FIGS 5F; FVMDf\cIJST IRTFc4 cDFGI; S :JF:yI c VG| cÒJG ; VTMFc4 V[HI8, 5F; FVM CMU FYL TGL p5Z VG\$ 5IZA/M V; Z SZ|KP

tIFZAFN ; XMWSFV[ccÒJG ; VTMFc4 5IZJtIM IJX| V{TCFI; S E)DSF VG|TGF 5]Ll VeIF; MGLR[5]F6[ZH}SZ|, F KP

2.7 ÒJG; VTMFGL V{TCFI; S E)DSF¹⁴ 0

ÒJG ; VTMF VUJGF VwI IGGM .ITCF; 36M H HGM DFGJDF\ VFJ| KP SFZ6 S| ÒJG ; VTMF VUJGL ; S<5GF DGMJ7FGGL HD H TOFJTDFYL D/L VFJL KP gIFI JX|QFSGF DT| ; B VG|NpB V\$ALHFYL :JT+ VG|IJZMWL , FU6LVM KP T| >rKGLI VG| VIGrKGLI 5NFYGF 7FGDFYL pt5gG YFI KP ; B V| ; FG\$YTFGL , FU6L K| VG| VF VG\$YTFGL , FU6L ; VTMFG|IGWFIZT SZ| KP DCFG XZLZXf:+L RZSGF DT| ; VTMF V| XFZLIZS ZF; FI I6S ajIMGL ; DT|, F V; DT|, F 5ZYL IGWFZLT YFI KP T|VMGF DT 5]F6| ; BpBGL , FU6L XZLZDF\ ZF; FI I6S ajIMGL V; DT|, FDFYL pt5gG YFI KP DG VG| XZLZ AgGDFYL VGÊD| XFZLIZS VG| DFGI; S ; BpB pN\EJ| KP RZSGM ; BpBGM I; âFT ÒJG; VTMFGMDGMJ{7FIGS VFWFZ ZH}SZ|KP

1950DF\BEYOND PLESURE PRINCIPLE DF\EM>0[H6FjI]K[S| cÒJGG\VITD , 1I ; B ; VTMF K|P

TP6[H6fjI]S[; B V; BGL , FU6L p₂HGF GF HyYF ; FY[; AW
WZFJ[KP p₂HGF GF JWZF ; FY[V; B VG[38F0F ; FY[; BGL , FU6L
; S/FI[, L KP

Theories in contemporary psychology (1963) Grings William
w. H6FJ[K[S[; ∇MF S[V; ∇MF HD JWZF[TP VG[AWGL DHAJTL S[
GA/F>56 JWZF[; ∇MFHGS 5IZI:YIT VJL 5IZI:YIT HG[8F/JF 5f6L
S> SZT] GYLP 5ZT] ACJWF TG[5F%T SZJF VG[HF/JL ZFBJF 5|tG
SZ[KP V; ∇MF5ZS S[RL0HGS 5IZI:YIT VB, [H[5f6L ; FDfgI 56[8F/[
K[VG[ti Ò N[KP YMG0F>S (1919) Selected writing from a
connectionists psychologyDF\ c; ∇MF5M VG[cV; ∇MF5M VUJGF
bIF, GL RRF"SZL KP HG[C, p5ZFT :5g; Z4 Hq; 4 0I }>4 D\$0JU, JUZ[
HJLI VIEUD WZFJTF DGMJ(7FIGSM[56 :JLSFI M KP

Kanungo and mendonla (1994) V[Principles of content DF\
SDRFZLVMGF ; ∇MF ; FY[TPDGL SFI '5Z6F ; AWGL AFATG[NXF"JL KP

ÒJG; ∇MF VUJGF VgI VeIF; M 56 HJF HJF 5IZJtIMGF
; NEDFYIF KP HDPX

- (1) DFGI; S :JF:yI VG[ÒJG; ∇MF VUJGM I; gCF VG[I; B (1995)
; \YFISI JFTFJZ6 VG[; ∇MFGL H~ZTMGM SFI " ; FD[ULZL ; FYGF
; AWGMVeIF; P
- (2) zLJF:TJ (1996) GMVeIF; P
- (3) ÒJG; ∇MF VG[Ck5G\ VUJGM BFG VG[NJL (1999)GM VeIF;
p<, BGLI KP VF p5ZFT

(4) ÖJG; ∇MFGF 5IZJtI'G[EFZTLI JFTEJZ6GF ; NEDFA J3FI; IF (1998)DA VG[AF, L (1988) TDH ALPVDPJ3FI; IF (1999) GF VeIF; Mp<, BGLI KP

2.8 ÖJG; ∇MFG VU[YI], F 5JL'I VeIF; Mo

ÖJG; ∇MFG VUGF 5JL'I VeIF; MG[GLR[5DF6[NXF'I F KP TGL 5C[, F HJNF HJNF DGMJ{7FIGSM[5MTFGF ; DI NZdIFG H[TFZ6M VF5[, F K[TGMP<, B VCL\SI MKP

1950 DA Beyond Pleasure Principle DA EM>0[H6fjI } K[S[ccÖJGG\ VITD , II ; B ; ∇MFG KP TD6[H6fjI } K[S[; BvV; BGL , FU6L pçHGFGF HyYF ; FY[; AW WZFJ[KP pçHGF JWZF ; FY[V; B VG[38FOF ; FY[; BGL , FU6L ; S/FI], L KPcc

Theories in contemporary psychology (1963)DA Grings william w. H6fjI K[S[; ∇MFG S[V; ∇MFG HD JWZF[TD VG\AWGL DHAJTL S[GA/F> 56 JWZF ; ∇MFGHGS 5IZI:YIT VB, [VJL 5IZI:YIT HG[8F/JF DF8[5f6L S> SZT\GYLP 5ZV\ ACJWF TG[5F%T SZJF VG[HF/JL ZFBJF 5|| tG SZ[KP V; ∇MFG5ZS S[RLOHGS 5IZI:YIT VB, [S[H[5f6L ; FDFgl 56[8F/[K[VG[tI Ö N[KP YMGDF>S[(1919) Selected writings from a connectionists psychology DA; ∇MFGSM VG[V; ∇MFGSM VUGF bIF, GL RRF"SZL KP HG[C, p5ZFT :5g; Z Hð; 0I> D\$0J, JUZ[H\JI VIEUD WZFJTF DGMJ{7FIGSM[56 I:JSFI MKP

Kanungo & Mendonca (1994) V[Principles of content DA SDRFZLVMGF ; ∇MFG ; FY[TDGL SFI '5Z6F ; AWGL AFATG[NXF'JL KP

ÒJG; ¶M¶ VU¶ VgI VeIF; M 56 H¶FvH¶F 5IZJtIMGF ; NE'DFA YIF K[HPFA DFGI; S :JF:yI VG[ÒJG; ¶M¶ VU¶GM I; gCF VG[I; B (1995) ; \YFISI JFTFJZ6 VG[; ¶M¶FGL H~ZTMGM SFI " ; FD[, ULZL ; FY¶F ; AWGM zLJF:TJ (1996)GM VeIF; T¶H ÒJG; ¶M¶ VG[C¶5G¶X VU¶GM BFG VG[N¶JL (1999)GM VeIF; p<, BGLI KP VF p5ZFT ÒJGv; ¶M¶GF 5IZJtI G[EFZTLI JFTFJZ6GF ; NE'DFA J3FI; IF (1988) DMCG VG[AF, L (1988) T¶H J3FI; IF (1999)DA VeIF; M p<, BGLI KP

1. , 1DLGFZFI 6G(1990)GF ; XMWG 5DF6[ZCP¶6 ëDZ4 SFI 'GM 5¶FZ4 DFI; S VEJS VG[IX1F6G\ :TZ ÒJG; ¶M¶FGL G¶L SZJFDA VUtI GF 5F; FAKP
2. 5ZDÒT SFZ VG[S¶FZ (1993)GF VeIF; GF TFZ6M D¶HA ; FDFIHS VFIYS NZHHF VG[ÒJG; ¶M¶FGL S1FF JrR[IJWFIS ; AW H¶F D/[K[T¶H ; FDFIHS VFIYS :TZGL DGMEFZ 5Z ; FY'S V; Z H¶F D/[KP
3. ; JGTF D<CM+F VG[J¶X¶, L U¶TF (2004) 5;T¶T VeIF; D¶A C[T] 120 OMS8ZMGL jI J; FI ; FD[, ULZL VG[ÒJG; ¶M¶FGM VeIF; SZJFGM CTMP 5;T¶T VeIF; GF 5IZ6FDDFA jI J; FI ; FD[, ULZL VG[ÒJG; ¶M¶ ; FY[; C; AW H¶F D/[P HFITUT TOFJT H¶F D/[GCLP
4. V¶X JYD)T" VG[R0'F(1993)GF VeIF; G)TFZ6 NXF"J[K[S[IGJ)TGF ; DI GL V; Z jI ISTGF ÒJG; ¶M¶ 5Z YFI KP 5}]"IGJ)¿ , MSMDFA CTXF VG[IGZXF¶G\ 5DF6 VMK\ H¶F

D/[KP HIFZ[TVMDFÄRM ÖJG; VMF VG[; FDFHS VWFZ
HMUF D?I MCTMP

5. pQFFZL VG[; JGNF (1989)GF VeIF; G\TFZ6 V[NXFJ[K[S]
:+LVMDFA ÖJG; VMFG\5P66 ëR]HMUF D/[KP VF TFZ6G]
JDF"(1991)GF VeIF; G\56 ; DY'G D/[KP
6. zLJF:TJ VG[DMCG 1990GF VeIF; G\TFZ6 V[NXFJ[K[S]
ZCP66GL jIISTtJ VG[ÖJG; VMF 5Z ; FYS V; Z HMUF
D/[KPGJL SM, MGLDA ZC[TF , MSNGF jIISTtJ VG[
ÖJG; VMFDFA; FYS TOFJT HMUF D/[KP
7. Chadhdha & Easwamoorthy (1993) :
"A study on some psycho socio aspects of elderly in
relation to their pre-retirement retirement and post
retirementsGF VeIF; G\ TFZ6DA HMUF D?I\ K[S[5]"
IGJITGFA HYGA , MSMDFA VgI HYGL T], GFDA CTFXF VG[
IGZFXFG\ 5P66 VMK\ HMUF D?I\ CT\ VG[5]" IGJIGFA
, MSMDFA ëRM ÖJG; VMF VG[; FDFHS VWFZ VgI HY
SZTF JWFZ[HMUF D?I MCTMP
8. , 1DLGFZFI G (1990) UfdI IJ:TFZ VG[XCZL IJ:TFZDA
5]-QMDFA ÖJG; VMF VUJGF VeIF; GF TFZ6DA XCZL
IJ:TFZDAZC[TF Jâ 5]-QMGF ÖJG; VMF UfdI IJ:TFZGF Jâ
5]-QMGF ÖJG; VMF SZTF JWFZ[HMUF D?I MCTMP

9. **Laxmi narayan and malti (1990) :**

"Comparison of lonely aged and couples : A study in rural setting" G\ TFZ6DA UfdI IJ:TFZGF V\\$, F J'am SZTF J'a N5ITDA ÒJG; \TMEFG\ 5PF6 JWFZ[HMUF D?I \CTP

10. **ALPVDP JWF; I F (1988) 0**

SF50DL, GF SDRFZLVMGF S\\$, FS OPMJFIOS 5IZJtIMYL TPDGF DFGI; S :JF:yI VG[ÒJG ; \TME 5Z YTL V; ZGM V\\$ VeIF; G\ TFZ6DA IJEST S\B\ADA ZC[TF SDRFZLVMSZTF ; V\ST S\B\AD\ ZC[TF SDRFZLVMDA ÒJG ; \TME êRM HMUF D/[KP

11. **DNCG VG[AF, L (1988) :**

OMS8ZGF ÒJG; \TMEFGF ; NEDFAjI ISTtJ D\I M VG[IGI \+6 S\gãGM VeIF; DA HMVMG[ÒJG; \TME êRM HMUF D?I M CTMP T\JF OMS8ZM VG[ÒJG; \TME GLRM HMUF D?I M CTMP T[AG[JrR\GF jI ISTtJ VG[D\I MDA; FY'S TOFJT HMUF D?I M KP

H[OMS8ZMGM ÒJG; \TME êRM CTM T[VMG]IGI \+6 S\gã VFTIZS HMUF D/[KP H[OMS8ZMGM ÒJG; \TME GLRM D?I M CTM T[VMG]IGI \+6 S\gã Afæ HMUF D/[KP

12. **I; g3 VG[I; B (1995) :**

SDRFZLVMGM ÒJG; \TME VG[DFGI; S :JF:yI GM VeIF; DA SF50ID, DA SFD SZTF D[G\HZMDA ÒJG; \TMEFG\ 5PF6 êR] HMUF D/[KP SFZLUZMGF SZTF D[G\HZMG\ DFGI; S :JF:yI 36\

AC] ; F~ HMJF D/[KP SDRFZLVMGF ÒJG; ∇TMF VG[
DFGI; S :JF:yI JrR[; FYS ; C; AW HMJF D/[KP

13. zL JF:TJ (1996) :

SF50DL, GF SFDNFZMDF\ ; \YFISI JFTEJZ6 VG[; ∇TMFGL
H~ZTMGM SFI" ; FD[, ULZL ; FY[GF ; \VMGF VeIF; GF TFZ6M
; \YFSLI JFTEJZ6 SFI" ; FD[, ULZL JrR[IJWFIS ; C; AW
HMJF D/[KP prR S1FFGL H~ZTM :JDFG4 :JZFHI VG[
:JjI JCFIZSTFGF ; ∇TMFGM 56 SFI" ; FD[, ULZL ; FY[IJWFIS
; C ; AW HMJF D/[KP

14. BFG VG[NJL (1999) :

jIJ; FIL VG[IAG jIJ; FI :+LVMGF ÒJG; ∇TMF VG[
Ck5, [G[VU[VeIF; D\ jIEJ; FII S :+LVMDFA IAGv
jIJ; FII S :+LVMGF 5PF6DFA ÒJG; ∇TMFG[5PF6 JW] HMJF
D?I\CTP

H\YDFA SFI" SZTL :+LVM JWfZ[V; CFI TFGL , FU6L
VGJEJTL CTLP

2.9 5JL'I VeIF; M ; FY[5]:TJT ÒJG ; ∇TMFGF TFZ6MGL T], GF

VeIF; v1DFA ZCP6GL V; ZG[VG]-5 Ho₁₅,Ho₁₈,Ho₂₁,Ho₂₄DFA
NXF"JL KP

pDZ IJX[5]:TJT VeIF; D\Ho₅₁,Ho₅₄,Ho₅₇,Ho₆₀DFA NXF"J], KP

DFI; S VFJSGF ; NEDFA Ho₉₄ DARRF"SZL KP

VeIF; v3DFA HFITUT TOFJTGL V; Z T5F; L K4 H[5]:TJT
 ; XMWGDA AF/SMGF DFTF VG[I5TFGL HFITUT V; Z OJG ; VMF p5Z
 Ho₆₃, Ho₆₆ DFNXF"J], KP

VeIF; v1oDFA SBJAGF 5SFZGL V; Z NXF"JL K[H[5]:TJT ; XMWG
 Ho₃₉, Ho₄₂, Ho₄₅, Ho₄₈ DFNXF"JL KP

VF ZLT[; XMWSFV[5]:TJT ; XMWGDA HJNF HJNF 5IZJtI MGL V; Z
 T5F; JFG\ ; TT 5|I tG SIM KP H[5SZ6v4DFA t- S; MBL4 r- S; MBL4 F
 S; MBL JUZJGL ptS<5GFVMDFAIJUTYL :508 YFI KP

5SZ6 VFI MHGDA NXF"JF 5DF6[5SZ6v3DFA ; XMWG I MHGF4
 C[T]MM VG[5|S|I FGL RRF"CJ[5KL SZJFDA VFJXP

; NE",]R

1. ccHJGFU- XCZGF Aß SDRFZLVNGL ; DFIMHG4 DFGI; S :JF:yI
VG[SFI"; ∇MFGM DGMJ{7FIGS VeIF; Pcc OF¶ GNF6LI F4 5LV¶RPOLP
DCFIGAWs2001f4 ; FZF08=I]GJI; 8L4 ZFHSMBP 5P GP142.
2. ccUJHZFT EFZ[Z; FI 6 , LDL8D S5GL JZFJ/GF SDRFZLVNMF
; DFIMHG4DFGI; S :JF:yI VG[SFI"; ∇MFGM VeIF; PccOF¶
XFgTFA[G VFZP; M, Sls2003f45LV¶RPOLPDCFIGAW4; FZF08=
I]GJI; 8L4 ZFHSMBP
3. ZLOLU D8LZLI , SM.A. External Psychology Paper No.VIII f
OF¶ HMJX6s2006f4 ; FZF08=I]GJI; 8L4 ZFHSMBP
4. ZLOLU D8LZLI , SM.A. External Psychology Paper No.VII f
OF¶ OLP HP EÎ VG[VgI s2006f4 ; FZF08=I]GJI; 8L4 ZFHSMBP
5. A study of Level of Anxiety of Primary School Teachers
along with some Co-relation. OF¶ RFZ6 ZFHjãl; C V[P , 3]
IGAW ccOL%, MFA S, LGLS, ; FI SM, MÒcc DGMJ7FG EJG4 UJHZFT
I]GJI; 8L4 VDNFJFNP
6. VHGv!
7. VHGv!
8. OF¶ IG, DAG GSD45LV¶RPOLP DCFIGAW s2004fP ; FZF08=
I]GJI; 8L4 ZFHSMBP
9. ccZFHSMB IHDFGF ALPV[; PV[GpV[, PGF SDRFZLVNMF ÒJG ; ∇MF4
; \YFUT 5IFJZ6 VGjIJ; FI ; FD[, ULZLGM DGMJ{7FIGS
VeIF; cc OF¶ DLTf WGXF45LV¶RPOLP DCFIGAWs2008f4 ; FZF08=
I]GJI; 8L4 ZFHSMBP

5|SZ6 v 3

; XMWG IMHGF4 VeIF; 5âIT4

C[T]MM VG[DFICTL V|+LSZ6

5§Z6 V 3

; XMMG I MHGF4 VeIF; 5âIT4 C[T]MM VG[DFICTL V\$+LSZ6

3.1 5]:TFJGF 0

JTDFG ; DI D\ jI IST ; TT S\ S D\ J JF DF8[SFI XL, ZC[K\ VG[T\ D\ D/TL IG00/TFYL jI IST V:J:Y AGL ÔI KP jI ISTGF DG XZLZ p5Z T\ GL 36L U\ ELZ IG0FWS V; ZM Ô\ F D/[KP Ô[V\ FJL U\ ELZ V; ZM G\ 5\ P6 JWT] ÔI TM jI IST cV\ F5W\ Tc J\ T TZ0 56 5\ F\ KP 5]:T\ VeIF; D\ ; D:IFGF D\ D\ AF/SMGF -D\ T\ V\ I5T\ - ZC[F K[5ZT] V\ F D\ T\ V\ I5T\ 5; N SZJF D\ V\ FJ, K[S[H[; FWFZ6 AF/SMGF D\ T\ V\ I5T\ G[5M\ T\ FGF AF/S G[; DFH D\ V\ FJ\ :YFG4 5\ T09F4 S\ J6L V\ F5JF DF8[H[; W0F4 5IZzD SZTF ZC\ F KP T\ GFYL 56 JW] ; W0F" V\ F D\ T\ V\ I5T\ SZ[K[S[HGF 3ZD\ DNA]â AF/S s:5kI , RF. <0f HgD[KP V\ F D\ T\ V\ I5T\ FG[S\ JL 5IZI:YTL D\ CTFXF4 ; W0F4 JUZ[D\ kS, LVNGM ; FDGM SZJM 50[KP T\ YL T\ GF ÔJG 5Z S\ JL V; Z YFI KP T\ GM VeIF; VCL SZJF D\ V\ FJ, KP V\ FD ; FWFZ6 AF/SMGF D\ T\ V\ I5T\ VG[IJIX08 AF/SMGF D\ T\ V\ I5T\ FGL IJST IRTF4 DFGI; S :JF:yI VG[ÔJG ; T\ M\ FGL RRF" T\ PH J{7FIGS 5IZA/M äfZF ; ZBFD6L SZJFGM V\ F ; XMMGD\ 5FI FGM C[T] KP V\ FYL T\ GL RRF" SZTF 5C, F ; XMMG V\ B, [X]n T[; DHJ\ Ô[V\ P ; XMMGG[V\ U\ ÒD\ Research SC\ JF D\ V\ FJ[KP H\ GM V\ Y" cOZLYL XMMJ\ T\ J\ YFI V\ YJF YI, ; XMMGG\ GJ\ :J~5 V\ F5J\ T\ G[-; XMMG- Research SC\ JF I P

J{7FIGS VYDFA; XMMG VB, [SM IGIÜT ; D:IFG[J{7FIGS ZLT[S[
J:T], 1FL ZLT[; DHJFGM jI JI:YT4 IGZL1F61FD TPDH VFSOFXF:+LI
5âITVMäFZF D/J, F 5IZ6FDMVFWFZLT 5|F; KP

; XMMGGM jIF5 36M DMBM KP ; D:IFGL 5; NUL 5KL ; D:IFGF
pS[, DF8[; XMS ; XMMGGL IMHGFGL ZRGF SZ[KP VB, [S# ; XMMG
; D:IF VU[bIF, FtDS DF/B\ T\FZ SZ[KP HGF VFWFZ[; XMMGG\
; RF, G YFI KP ; XMMGGL 5|S|FDF\VG\$ AFATM V\$ ALÔ ; FY[; AW
WZFJTL CMI KP H[:JT+S\DG[VG]; ZJFG[AN, [; TT V\$ALÔDFA E/L
H. G[V\$ALÔG[V; Z SZ[KP VF 5|1; V\$ 5Z VB, L 5Z:5ZFJ, IAT
CMI K[S[; XMMG IMHGF\ 5YD ; M5FG DMB[EFU[VITD ; M5FGGF
:J~5GM IG6" SZ[KP VFD4 ; XMS[; DU[; XMMG DF8[SB, F V\$DMG[
, UTL DFICTL V\$+ SZJL K[T[5C[, |L G\PL SZL , |FG\CMI KP

UJ VG[CÎ H6FJ[K[S# ccS|/ CSLSTMGM HyYM E|UM SZJFYL
IJ7FG S[; tI D/T\GYLP UD[T[E|UL SZ[, L CSLSTM :JI\ VY" JUZGL
AGL ZC[KP 5IF%T ; tI 5F%T YFI V|JL ZLT[; XMMGGL UY6L ZRFI T[
H~ZL KPcc¹

5LPJLP IU TG[J{7FIGS ; XMMGGL 5FYIDS H~ZLIFT TZLS[
VM/BFJ[KP VFYL H J{7FIGS ZLT[; XMMG SZJF DF8[; XMS[IMHGF
AGFJL H~ZL AG[KP ALÔ ZLT[SCLV[TM# ; XMMG IMHGF ; XMMG SFI G[
INXF ; JRG VF5JF DF8G\TFISS VG[; JIMHT ; FWG KP²

VFD4 ; XMMG IMHGF ; XMMGGL VFWFZIX, F KP ; XMMG IMHG
SIF" JUZ SFI "SZJFDF\VFJ[TM# 36L URJ6M µEL YFI K[VG[RMP;

CITGF TFZ6 ; ML 5CMRL XSFTJGYL4 ; XMWGGL I MHGF TQ FZ SZTL JBTL
 ; XMWGGL ; D:IFG[VG]-5 IJLW AFATM VU[IJRFZ SZJFGM ZC[KP
 T[YL DFICTLGL 5F1%T V[UL ZLT[YJL Ô[. V[S[DFICTLGL I YFY"TF VG[
 IJ`J; GLI TFGL S1FF pRL ZCP VFD4 ; XMWS ; XMWG I MHGFGF WOTZDF\
 HB, L JWFZ[SF/Ò ZFB[TB, JTG]; XMWG RMS; F. IJST4 :5084 jI JI:YT4
 IJxJ; GLI VG[I YFY AGL XS[KP

5:JTJ ; D:IF DpI tJ[; FWFZ6 VG[IJIX08 AF/SMGF DFTFvI5TF GL
 IJST IRVF4 DFGI; S :Jf:yI4 ÔJG; TMF 5Z SB, FS jI ISTUT
 5IZJtIGL V; Z Ô6JF DF8[CFY WZJFDF\ VFJ[, K[VG[T[DF8[
 . g8ZGB4 , F. A[IL4 ; FDFI SMA VG[5]:TSM ; XMWG5+M , WJGAWM
 DCFIGAWM JUZ[GM VFWFZ , . G[VF VeIF; SZJFDF\ VFJ[, KP5:JTJ
 ; XMWG ; DFH DF8[VTL p5I MUL KP VFYL H TG[; FDFIHS ; XMWG SCL
 XSFI P

3.2 ; FDFIHS ; XMWGGL jI FbIF 0

-; FDFIHS ; XMWG VB, [; DNFI MGL ; FDFIHS W8GFVMG\ VYJF
 ; FDFgI ZLT[DFGJJTGGF :J~5 TYF 5pFCMG\ 5yYSZ6 SZL jIF5S
 I; âFTMJ{7FIGS 5tI I MGL ZRGF-

J{7FIGS 5âIT äZFZ 5pTDFG 7FGDF\J1â SZT\DAI, S 5NFG VB, [
 ; XMWGP ; XMWG +6 ZLTG\CM. XS[KP

1. 7FGDF\J1â SZT\DAI, S 5NFG GJL CSLSTMGL XMW :J~5G\
2. HJL CSLSTMGL RSF; 6L :J~5G\
3. CSLSTM JrR[GF SFI SZ6GL ; DHJTL VF5GFZ\

5M P IS, OM" D]L SC[K[S] -VFBZ]; XMMG :JT0 ; tI GL XMM DF8GL
 V] 5âIT KP H[JF:TJDA ; DL1fftdS IJRFZ6FGL 5âIT KP VDA
 ; JF, MGL JFZJFZ jI FbIF SZJFDA VFJ[KP SF<5IGS I; âFTMGL ZRGF
 SZJFDA VFJP VYJF ; JRT pS, M XMMJFDA VFJ[KP ; FDU]GM ; U]C4
 jI J:YF TYF D]IFSG SZJFDA VFJ[VG[VG]DFGM TYF 5IZ6FDM
 TFZJJFDA VFJ[KP VG[K]J8[5IZ6FDM AWF ZIRT SF<5IGS I; âFT ; FY
 S] ,] V]X[AW A] TF KP- VFD4 X~YL VT ;]ML J}FIGS 38SM EFZF
 ; S, G SZJFDA VFJ[KP

v ; XMMGGL jI FbIFVM

- 1) “ To research is to search again.”

-; XMMG XaNGM VY" YFI K[OZLYL XMMJP ALÔ XaNMDF
 ; XMMG V] , [JW] Ô6JF DF8[OZLYL JW] RMP; F. 5]JS
 Ô]t³

- 2) -; XMMG V] , [VDS RMP; G[jI JI:YT ZLT] J}FIGS -A] VG[J:T], 1FL ZLT[; DHJFGM V]M 5]F; S[H]G[5IZ6FD[
 IGI}6 VG[VFUFCL XSI AGP⁻⁴

- 3) -; XMMG V] , [CSLSTMGL XMM VG[CSLSTMGL VFUFCL T]H
 IGI}6 DF8[J}FIGS 5âITVMGMjI JI:YT p5I MU⁻⁵

- 4) 5M, LG I U 0 -; FDFIHS ; XMMG GJL CSLSTMGL XMM SZJFGL
 VYJF H]GL CSLSTM] T]DG] VG]D VFTZ; AW SFZ6ftDS
 B] F; FVM VG[T]DG[, UTF 5]SITS IGI DM DFZOT
 5]T5FNG SZJFGL jI JI:YT 5âIT KP⁻⁶

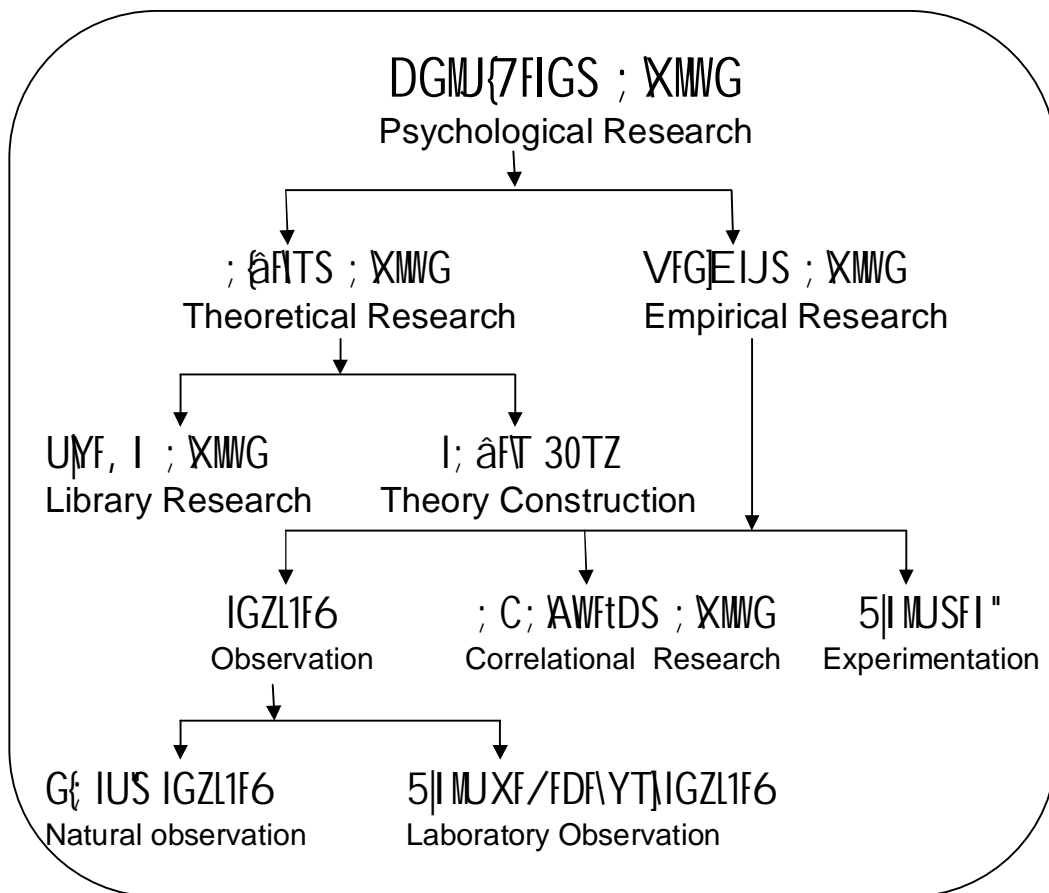
- 5) HCMG 0 -; XMMG GM C[T] J}FIGS 5âITGA p5I MU äZF

5] GNGF\pTZM XWJFGM Kf7

6) 5]P UMF, ov -J:T], 1fL VG[RSF; 6LHgI 5âITVM äfZF
 CSLSTM XWJF DF8GL CSLSTM JrRGM ; AW XWJF DF8GL
 VG[TG[VFWFZ[I; âFT S[IGI DM TFZJF DF8GL jI JI:YT
 T5F; G[; XWVG SC[KP-8

7) ZPDG VG[YMZL ov -GJ\7FG D/JJFGM 5âIT; Z GM 5]I F;
 VB, [; XWVG-9

DGMJ7FIGS ; XWGGF 5]fZMNXF"JTM RF8" GLR[5]Pf6[K[



5]:TJT ; XWGG\IGZL1F6ftDS ; C; \AWftDS ; XWVG KP

VFD4 p5ZMST jIFbIFVM ; XMMGGM VY" :508 SZ[K[VG[
; XMMG UY6LGM pDB V5U8 ZLT[SZ[KP HGL ; DHJTL GLR[5DF6[
VF5L XSFI P

3.3 ; XMMG UY6L VB, [X]n 0

; XMMG UY6L VB, [; XMMG ; D:IF S[T5F; GL AFATDFX]SIF
SIFZ# SB, # VG[SIF; FWG äZFZ S]L ZLT[SFI "SZJFDFVFJXP T[VUJGF
IG6I GL ;]IJIYT4 ;] UI9T UM9J6 TDF VF 5xG 5Z IJXDF WIFG
V5FI T[H~ZL KP

- 1P VeIF; XGF IJX[K]n
2. XF DF8[CFY WZJFDFVFJ[K]n
- 3P VeIF; SIFSZFX]n
- 4P S]F 5]FZ GL DFICTL V]SI+T SZFX]n
- 5P SIM ; DIUF/MCX]n
- 6P S]F 5]FZGM VG[S]L ZLT[YX]n
- 7P DFICTL 5yYSZ6 S]L ZLT[YX]n
- 8P S]L ZLT[SIF-FRDFVY"38G YX]n
- 9P S. 5âITYL V[DFICTL V]SI+T SZFX]n
- 10P VC]F, S]F -UDF, BFX]n

VF AFATMG]WIFGDFZFBLG[; XMMGGL UY6L 5DF6[5]SZ6MG[VCL
XFlaNS :J~5 VF5JFDFVFJ]KP

HCMDF JUZ[, BSM H6FJ[K[S# ; XWVG GL UY6L VB, [; XWVG
; D:IF VG[TGF VFXIG[VG]-5 DFICTL VSI+SZ6 VG[DFICTLGA
5YBZ6 VG[VY"38GGL SZS; ZI BT VG[SJC5]SGL UM9J6P¹⁰

S, l9UZ H6FJ[K[S# ; XWVG UY6L VB, [5FI MUS E}, IGJFZL S[
IGI1+T SZL ; XWVG ; D:IFGF pS[, DF8[T5F; GM -FRM TYF T5F; GL
VFBL3BLGM jI C AFWJM T[T5F; GM GSXM 5C[, YL K[, [; WL X\SZJFG\K[
T[; DU|SFI SPGL hFBL SZFJ[KP¹¹

; XWVGGL UY6L ; XWWSFV[5MTFGL ; D:IFG[VG]-5 DFUNXSGL
; FY[RRF" IJRFZ6F SZLG[VeIF; 1F+DF\; FWFZ6 VG[IJIX08 AF/SMGF
DFTvl5TF DF8[jI ISTUT DFICTL4 5IZJtI M# IJQFI 5; NULG[VG]-5
VeIF; 1F+GL DFICTL D/J[, KP H~Z H6FI tI \; CFIS VeIF; M#
VFS0XF:+LI 5aIT4 5YBZ64 VYW8G VG[VCJF, ; WGL UY6L
J{7FIGS VG[JF:TIJS AG[T[DF8[5: T]T VeIF; DFWIFG ZFB[, KP VF
AFATG[; DÖG[; XWVG IMHGF AGFJL KP CJ[VF AFATG[VF 5DF6[
; DHFJL XSFI P

3.4 ; XWVG IMHGF 0

; XWVG IMHGF[; DHTF 5C[, F ; XWVG IMHGFGL VFJxI STF GLR[
5DF6[; DÖJL XSFI P

; XWVGGL 5; NUL YIF AFN ; XWVG IMHGF V[V\$ AFAT
; XWVSGL ; DIF p5I:YT YFI KP VB, [S[; XWVGGL a,]I5j8 T[FZ SZJL
50[KP IJQFI G[5; N SZL ; XWVG IMHGF AGFJL H~ZL KP SFZ6S[
; XWVG IMHGF IJGF VFG]EFIJS ; XWVG SZL XSFT] GYLP H\YL ; XWVS[

; XMWG IMHGF AGFJJL V\$ VIGJFI "AFAT AGL ÔI KP ; XMWG IMHGF
 V\$ VJL IMHGF KP HGF äZF BAZ 50[K[S[; XMWGDFA SB, F :JT+
 5IZJt MGM 5| MU SZJFDA VFJ[KP ; XMWG IMHGF ; XMWG ; D:IFVM
 IJQFpçZ 5f%T SZJFGL V\$ IMHGF K[VYJF ~5ZBF KP

HCMDFGF DT[; XMWG IMHGF VB, [; XMWG ; D:IF VG[TGF
 VFXIG[VG]-5 DFICTL V\$|+T SZJL4 IJ` , QF6 VG[VY38GGL SZS; Z
 I\$T VG[VFI MHG 5}JSGL UMØJ6L SZJL T[KP¹²

SZI, UZGF VG; FZ -; XMWG IMHGF ; XMWG SZJF DF8[AG[L V\$
 VJL IMHGF TYF ZRGF K# HGF äZF ; XMWG ; D:IFVMGM pTZ 5f%T
 SZJFDA VFJ[KP-

; XMWG IMHGFDA DpI tJ[GLR[H6FJ, L AFATMDFA ; DIJ08 YTL
 ÔJF D/[KP¹³

1P IJQFI VUJL DFICTL SIF ; MTFDFYL D/JJFGL KP HDS[
 N:TFJÛ ; MT DFYL S[1F+ ; MTFDFYL S[AG[; MTFDFYL HGL
 :508TF CMJL H~ZL KP

2P VeIF; VFS0FXF:+LI :J~5GM S[jI IST T5F; K[S[AGG]
 ; VMHG K[S[5KL T], GfDS VeIF; KP TGL :508TF56 CMJL
 H~ZL KP

3P ; XMWGGMC[T] IMHGFDA:508 SZJM Ô[VP

4P ; FDFIHS4 ; F\$SITS VG[EÁUM, S ; NEDFA; XMWGG}DF/B}
 IJRFZJP

- 5P ; XMMGDF\~; DU\ S[\~; DU\GF SM. EFU-GM VeIF; SZJF
DFU[K[T[VUJGL :508TFP
- 6P IGX'GGL J{7FIGS ã108V[5; NUL SZJLP
v IGX"~; DU\G\5|TIGIWtJ SZTM CMJM Ô|. VP
v 5}JUÇ ZICT CMJM Ô|. V[
v SF/Ò5}S GD)GFG L 5; NUL YJL Ô|. VP
- 7P ; XMMGGL DFICTL Vß+ SZJF H[5|I]STGM p5 I MJ SZJFGF
CM T[VUJGL :508TF CMJL Ô|. VP

3.5 ; XMMG I MHGFGF ; M5FGM 0

- 1P ; XMMG ; D: I FGL 5; NUL
- 2P ; XMMG ; D: I FG\30TZ VG[T]GL :508TF
- 3P ; XMMG ; D: I FG\Stã VG[T]GL :508TF
- 4P ; XMMGGF\C[T]MGL :508TF
- 5P ; XMMGDF\ptS<5GFG L ZRGF VG[T]GL :508TF
- 6P ; XMMG DF8[H~ZL ; FDU\ VG[T]GL :508TF
- 7P ; XMMG VeIF; G\j I F5vIJxJ VG[T]GL :508TF
- 8P VeIF; GL 5âITVM# 5|I]STVMGL :508TF
- 9P VßI+T DFICTLG\JULSZ6 VG[IJ` , QF6
- 10P IJ` , QF6 5ZYL VY'38G
- 11P ; XMMG VCUF,
- 12P ; XMMGGF\TFZ6M

VF D]FVMG[VF ZLT[:5Q8 SZL XSFI P

3.6 ; XMMG I MHGFGL DpI IJXQFTFVMo

1P ; XMMG I MHGF V§ I MHGF K¶ H[G]; XMMGSTF"V[ZLT[T¶ FZ SZ[
K[S[TDF\ptS<5GF4 , BG TYF TGM IS|I FtDS VFXI YL , . G[
DFICTLVMM VITD IJ` , ¶F6 ; ¶LGL ~5ZBF ; DFI¶, L CMI KP

2P ; XMMG I MHGF DF+ V§ GSXM H GYL4 5ZT[V§ V¶L ZRGF
56 K¶ H¶F\ ; XMMGDF\ ; FD¶, SZJFDF\ VFJ¶, 5IZJtIMGF
; XMMG¶; XMMG SZJFGM V§ IJXQF GD)GM CMI KP

3P ; XMMG I MHGF ; XMMGGL V§ V¶L I MHGF TYF ZRGF CMI K¶
HGF äZF ; XMMG ; D:IFGM p5I)T p¿Z T¶ FZ SZJFDF\ VFJ[
K¶ ALÔ XaNMD\ ; XMMG I MHGF ; XMMGSTFG[; XMMGGF\
JF:TIJS , 1I ; ¶L 5CMRJFDF\ DNN SZ[KP VF DF8[; XMMG
I MHGF GF\5§FZM GLR[5¶F6[; DÒ XSFI P

3.7 ; XMMG I MHGF GF 5§FZMo

; XMMG I MHGF GF IJW 5§FZM ; FDFIHS ; XMMG DF8[V¶M
; XMMGGM 5§FZ G¶L SZJM Ô¶ V[S[H[T[; D:IFGF Veiff; DF8[; FZM
U6FI P

OF¶ VZIJNZFI GFZFI 6 N¶ F. G¶ 5¶:TS ¬; FDFIHS ; XMMG
5âITVM-DF\T¶6[; XMMG I MHGF GF +6 5§FZM NXF¶J¶, KP

1P XMMGFtDS 5§FZ

2P J6GftDS 5§FZ

3P 5ZL1F6ftDS 5§FZ

VF I; JFI ; XWVGftDS VeIF; MG[VF 5pF6[; DÒ XSFI PPP
ZRGftDS VYJF VgJQF6ftDS ; XWVG0

XWVGftDS Veiff; M ; FDFIHSIJ7FGMGF\ ; XWVGDF\ VpJL ; ZRGF
Veiff; M K[S[HDF\ V7FT TÀJM VG[CSLSTMGL XWV ; FY[; \AW WZFJ[KP
VFGMp5IMU VpJF VeIF; M DF8[SZJFDF\ VFJ[K[S\ HGF IJQFI DF\ 7FG
; LIDT CMI P

HCMDF VG[C\ , bI\ K[S[-VgJQF6ftDS ; XWVG VG[EJ DpJF
DF8[H~ZL K[VG[T[JWfZ[IGixRT ; XWVG DF8[ptS<5GFVM ZRJDFA
; CFI YXP- 8\SDFA SCLV[TM HIF HIF ; D:IFVMG\ ; \FITS 7FG p5, aW
G CMI tIF; XWVGDF\ptS<5GFVMG\IGDF\ SZJF DF8[XWVGftDS Veiff;
SZJM H~ZL KP XWVGftDS V[; XWVGGF\ SFI M VYJF C[T]VM KP HDS\
Ttsf, LG I:YTLVMGF\ ; \AWDF\ DFICTL VF5JL TpH XWVGftDS VeIF;
; XWVGGL VFWFZIX, F KP HGF 5Z ; XWVGGL ; DU| >DFZT pEL SZL
XSFI KP 5FYIDS 7FG XWVGftDS Veiff; äZF 5F%T YFI KP TpH
XWVGftDS VeIF; ; D:IFGF DCÀJG[NXF"J[KP Hp S\ GJL GJL
; D:IFVMG[5\pFXDF\ , FJ[K[VG[; FY[; FY[T[; D:IFVMG\ ; FDFIHS
DCÀJ X\ K[T[NXF"J[KP XWVGftDS VeIF; VIGixRT ; D:IFVMG[
IGixRTTF 5pFG SZ[KP XWVGftDS 5âIT jIF5S 5âIT KP TpL SM
IGixRT ; LDFVM GYLP T[G[, LW[TpGF DF8[RFZ\ INXFVM Bk, L KP
5IZ6FD[UD[TpJF V5IZIRT jI ISTVMGM 56 VeIF; SZL XS[KP p5ZFT
; FDFgI DFUNXSM\ DNGMUf0; 4 ; FI SM, MÒ HG", Ô[, pF Ô[VP TpL
DI FNF V[K[S\ T[DF+ VFTZ^1Q8 VYJF ptS<5GFVMGL ZRGF TZ0 , .
ÔI KP 5ZT]TpL RSF; 6L SZTF GYLP

J6GftDS & IGNEGftDS ; XMWGo

J6GftDS ; XMWGDA SM. 56 J:TGM 5SFZ VG[NZHÔGL IJUTMA
 DF6; MGF ; DÇGM VGS 5NFYML 5IZI:YTLVMDA ; DÇGL HG\ jI IST
 ; XMWG SZJF DFU[KP TGM ; DFJX SZJFDA VEFJ[KP J6GftDS ; XMWGM
 HNL HNL ZLT[p5I MUL YFI KP HDS# VF ; XMWGM WWFSLI IG6" SZJF
 DF8[DFICTL 5ZL 5F0[KP IJ7FGDA 56 DMBM OF/M KP TÐH VF ; XMWGM
 ; XMWGDA ; FWGM 5ZF 5F0JFDA DNN~5 YFI KP VF ; XMWGGF TASSFDA
 pNkI MG\ IG~564 ; FDU\ ; \$, GGL 5âITGL 5; NUL4 DFICTLG\
 V\$+LSZ6 VG[RSF; 6L4 5IZ6FDMG\ IJx, ¶F64 5IZ6FDM GM VC¶F,
 JUZ[TASSFVM KP TGL DI FNF Ô. V[TM VF ; XMWGGM C[T] OST 7FG
 5F%T SZJFDA CMI KP ; D:I FDA 5:TJT SFZ6MG[5IZJIT" SZJFGM SM.
 5|F; SZJFDA VEFJTM GYLP ; XMWSG[5FI MUS ; XMWG SZJFDA 56
 J6GftDS ; XMWG p5I MUL YFI KP

5ZL1F6ftDS VYJF 5FI MUS ; XMWGo

VF 5SFZGF ; XMWGDA 5I MUM SZJFDA VEFJ[KP 5I MU Vß, [C[T]
 5J\$4 IJIX08 5IZI:YIT p5ÔJL VG[T[5IZI:YTL 5Z IGI#6 D/JJF
 SZJFDA VEFJT\ IGZL1F6 HGf DpI 5SFZMDA 5üFT 5I MU4 5J" VG[
 5`RFT ; XMWG VFI MHG4 Vß; s5M:8f 0ß8ZM ; XMWG JUZPPP

; XMWGGF 5SFZM VgI A[ZLT[56 5FOL XSF I

1P V5FI MUS ; XMWG

2P 5FI MUS ; XMWG

VF 5SFZGF VFWFZ[p5I MUDA, ¶FDA VEFJTL ; XMWGGI

I MHGFV MGF 56 A[5ŞFZ 5F0JFDF\VFjI F KP

1P V5FI MUS ; XMMG I MHGF

2P 5FI MUS ; XMMG I MHGF

[1] V5FI MUS ; XMMG I MHGF\JULSZ6 0

VF 5ŞFZGL I MHGF VGŞ 5ŞFZGL CMI KP 5ZT]T[GL VŞ ; FDFgI
 IJXDFTFVMK[S[VF 5ŞFZGL I MHGFDA5I MHI FGL G TM I FNIRKS 5; NUL
 Y. XS[K[VG[G TMT[GL IJIEgG 5FI MUS VJ:YFDF\I FNIRKS ; DFJX
 Y. XS[KP

HGF DpI 5ŞFZMGLR[5DF6[KP

1P 5J"5FI MUS I MHGF

2P VW"5FI MUS I MHGF

3P ; C ; XWFtDS I MHGF

4P S[:80L I MHGF

5P IJZMWL S[T], GftDS

p5ZMST 5IZA/MGL RRF"VF 5DF6[KP

1P 5J"5FI MUS I MHGF 0

5J"5FI MUS I MHGF V[UL I MHGF\SCJFDF\VFJ[KP HGF\5FI MUS
 I MHGF\GF TAJM VMKDF\VMKF CMI K[VG[V5FI MUS I MHGF\GF TAJM
 JWDF\JW]CMI KP

5I MUS I MHGF\ DpI TAJ V[K[S[:JT+ 5IZJtI DA C:T
 5I MHG4 5I MHI GL I FNIRKS 5; NUL TYF I FNIRKS ; DFJX VG[T], GF

DF8[VMKFD\ VMKM V\ 5FI MUS ; D\ TYF V\ IGI+T ; D\CG]
IF;lrKSZ6 äZF D\I CMU\VF 5FI MUS IMHGFG +6 5\FZ KP

iP JGXMBS; :80L 0

v VF IMHGF D\5I MHI GM V\ ; D\ CMI KP

v HG[BF; 88D\8 s:JT+ 5IZJtI MF VF5JFD\VFJ[KP

v 5KL T\GL V; ZG\; XMWG SZJF DF8[T\G\DF5G , \FD\VFJ[KP

iiP JGU\ 5\ 8\8 IMHGF0

v VF IMHGF\ 5I MHI G[5FI MUS 5IZJtI G\ C:T5I MHG SZTF
5C\ FH[T\ , 1F6G\ DF5G SZJFD\VFJ[KP

v 5KL 5FI MUS 5IZJtI G\ C:T5I MHG SZJFD\VFJ[KP V\TDF\
OZL 5FK\H[T\ , 1F6G\DF5G SZJFD\VFJ[KP

iiiP I:YZ ; D\ T\ , GF IMHGF 0

v VF IMHGF D\IGZL1F6 SZJFD\VFJ[KP

v 5I MHI GF V\ ; D\G\A[JBT IGZL1F6 SZJFD\VFJ[KP

v V\ ; D\G[5FI MUS 5IZJtI " VF5JFD\VFJ[KP VG[ALÔ
; D\G[5FI MUS 5IZJtI "VF5JFD\VFJ\GYLP V\TDF\VF AG[
; D\GL T\ , GF SZJFD\VFJ[KP

2P VW5FI MUS IMHGF 0

VF IMHGF 5\}5FI MUS IMHGFGL z\9 CMI KP

100ZGF DT D\HA VW" 5FI MUS IMHGF V\JL IMHGF K\ H\DF\
IFnrKLS ZLT[TANL, ; D\ TYF T\I ; D\ GYL CMFP T\GF AN, FD\VC\I
5FI MUS VJ:YFVM VG[V5FI MUS VJ:YFVMD\ D\I ; D\GM , . G[
; XMWG SZJFD\VFJ[KP VF IMHGFG D\I 5\FZ GLR[D\HA KP

iP ; DI z6L I MHGFo

v VFI MHGFDF\5FI MHI G\H U5 CMI KP

v HG\SB, LI JBT IGZL1F6 YMF YMF ; DI GF VTZ[SZFI KP

v tIFZAFN 5FI MUS 5IZJtI "NFB, SZJFDF\VFJ[K[VG[5FK\YMF
YMF VTZ[IGZL1F6 SZJFDF\VFJ[KP

iiP Tki ; DI I MHGFo

v VFI MHGFDF\5FI MHI GF\VS ; DCGMp5I MU SZFI KP

v HDF\YMF YMF ; DI GF VTZ[5FI MUS 5IZJtI M VF5JFDF\VFJ[
KP TYF TGL V ; ZGMD5G SZJFDF\VFJ[KP

iiiP VTki IGII+T ; Dc I MHGFo

v DGMJ7FGDF\ ; XMWGSTFVM[SB, LS JBT VJL 5IZI:YTLVMGM
; FDGM SZJF 50[K[TYF TGL ; XMWG SZJF DF8[5FI MHI MGM H[
; Dc 5F%T Y. XS[KP

v TDF\SM. 5SFZGF C:T5I MHGGL ; EFJGF GYL CMTL VG[; DCMG\
HJFAK[TUF H ~5DF\ ; XMWG SZJ\ 50[KP VF 5SFZGF\ ; DCMDF\
VS ; Dc 5FI MUS VG[ALÔ[IGII+T ; DCGF ~5DF\SF"SZ[KP

ivP 5IT ; DT], T I MHGFo

v VF I MHGF VJL I MHGF KP HDF\ 5FI MUS 5IZJtI M G[IJIEgG
; DCMDF\JCRL NUFDF\VFJ[KP

v 5FI MUS 5IZJtI G[5IT ; T], T SZJF DF8[DM8FEFU[, I8G JU"
GMp5I MU SZJFDF\VFJ[KP

3P ; C; \AWftDS I MHGFo

v VF I MHGFDF\DMB[EFU[; \XWGSTF" 5| MH I MGF V\§ H ; DÇM 5Z

A[S[A\Y L JW] 5f I MUS 5IZJti M NFB, SZLG[5f%TFS SZ[KP

v VF AG[JrR\GF ; C; \AW Ô6JFDF\VFJ[KP

4P S[:80L I MHGFo

v VF I MHGF V\§ V\JL I MHGF K[S[H\DF\ J\I ISTS S[G\ ; \XWVG

SZJFDF\VFJ[KP

v VCL\ IJT[, L I:YTL 5Z IJRFZ SZJFDF\ VFJ[KP VG[5f%T

DFICTLG\IJ` , \F6 SZL IGQSQF" 5Z 5CMR\JFDF\VFJ[KP

5P IJZMWL S[T], GftDS I MHGFo

v VF I MHGFDF\H\NF H\NF 5f I MUS 5IZJti "NFB, SZL VF 5IZJti 'GL

TDGF 5Z 50[, L V; ZGL T], GF VFWFIZT 5IZJti 'G[VFWFZ[

SZJFDF\VFJ[KP

[2] 5f I MUS ; \XWVG I MHGF G\JULSZ6 o

VF 5\§FZGL I MHGFDF\ ; \XWGSTF":JT+ 5IZJti D\AC:T5| MHG SZ[

KP 5| MH I G[H]NL 5f I MUS VJ:YFVMD\ I FNlrKS ZLT[TANL, SZ[KP

5f I MUS I MHGFDF\ D\bi 5\§FZ GLR[D]HA KP

iP DF+ I FjlrKST 5M:8 IGI\+T ; DÇ I MHGF

iiP DF+ I FjlrKST T\I 5M:8 IGI\+T ; DÇ I MHGF

iiiP I5\§:8 v 5M:8 8\§:8 IGI\+T ; DÇ I MHGF

ivP I FjlrKS V\§DFUL'I VFI MHG

vP I FjlrKST 38SU]6T I MHGF

iP DF+ I FNlrKST 5M:8 8f:8 IGI\+T ; DÇIMHGF 0

VF IMHGFDA[; DÇ CMI KP H[I FNlrKS ZLT[TAIN, CMI KP VŞ
; DÇDA 5fIMUS 5IZJtI " VF5JFDA VFJ[KP HIFZ[ALÔ ; DÇDA T[
VF5JFDAVFJT]GYLP

VF ZLT[IMHGF 5ŞFZMG[wIFGDA , . G[; XMWSFV[5]:TJT
; XMWGDA IAG5fIMUS IMHGFGM p5IMU SZ[KP CJ[; XMWG ; DI08
Vß, [X]m T[GLR[5PF6[; DÔJL XSFI P

3.8 ; XMWGGL ; DI08 0

HIFZ[SM 56 ; XMWGSFI " SZJFG\ CMI tIFZ[TGf 1f+GF AWF H
5f+MS[VŞDMGF ; DÇG[IJ7FGGL EFQFFDA ; DI08 SCLV[KLVP ; DI08G\
; XMWGDA 36\H DCÀJ ZC[,]KP ; DI08 Vß, [; XMWS H[H]YMG VeiF ;
SZJF DFUTF CMI T[; DFHDAO[, FI[, F ; DÇG[; DI08 SCJFDAVFJ[KP

. ; OMZ R[G ; DI08GL jIFbIF VF5TF H6FJ[K[S] c ; DI08 Vß, [
IGIxRT U]6WDMGF J6G RMS9FG[VG] ; ZTM ; DU[VŞD S[; DÇcP¹³

IU<0F0" H6FJ[K[S[- ; DFG U]6WDMWZfJTF AWF 5NFYMA jI ISTVM
S[5IZI:YTLVMGM ; DI08DA ; DFJX YFI KP H[H]YDFYL IGNXGGL
5 ; MUL SZJFDAVFJL CMI T[; DU[H]YG[; DI08 SCJFI KP⁻¹⁴

8ŞDAH[1f+GL H[38GFGM VeiF ; SZJFGM CMI T[1f+DA ; DFJ08
YTL AWL H W8GFGM ; DU|HyYMP HDS] H]GFU- IH<, FGA ; FWFZ6 VG[
IJIX08 AF/SMGF DFTFvI5TFGL S] ; bIF Vß, [; DI08P VFD ; DI08GM
VFWFZ ; XMWG ; D:IF 5Z ZC[, M KP ; XMWG VG[; XMWGSTF" V[; DI08

VG[VSDGL jI fbl FDFYL AG[JrRGM ; AW GSSL SZJM Ô[VP ; DI08GF
+6 W8SMGLR[D]HA KP

1P ; DI08 G\ EÁUM, S W8S

2P ; DI08G\ VSD

3P ; DI08G\, 1F6

1P ; DI08GM EÁUM, S 38S 0

; DI08G\ 5C[, \DCÀJG\ 5IZDF6 cEÁUM, S W8Sc KP EÁUM, S 38S
Vß, [EÁUM, S ãI08V[; XMWG DF8[5; N SZJFDF\ VFJ[, \ 38S SI F\ :YFG[
KP TG[EÁUM, S 38S TZLS[VM/BFJL XSFI P VCL\ HGFU- IH<, FV[
; DI08G\ EÁUM, S 38S KP VF 5IZ6FD ; XMWG 1F+GL CN K[S[DI FNF
IGWFIZT SZ[KP VF 38SGL :508TF äZF ; DI08GM IJ:TFZ GPL YFI KP [
IGNX"VeI F; GF TFZ6MSI F IJ:TFZG[, FU\ 5F0JFGF KP T[:508 YFI KP

2P ; DI08GM 5IZDF6 VSD 0

; DI08G\ ALH\ 5IZDF6 VSD c; eI M KP ; DI08 W6F VSDMGM S[,
HyYM KP Vß, [S[; DI08 VSDMG\ AG[, KP TDF\ ; DI08 YTF AWF VSDMG[
IGNX'G VSDM S[; DI08GF ; eI M SCJFDF\ VFJ[KP VCL\ HGFU-
IH<, FGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFvI5TF VM IGNX'G VSDM S[
; DI08GF ; eI M KP

3P ; DI08G\, 1F6 0

; DI08GF VSDMG\c, 1F6c V[; DI08G\+LH] DCÀJG\ 38S KP VCL\
5]:TJT ; XMWGDF\ ; FWFZ6 VG[IJIX08 AF/SMGF DFTFvI5TFVMGL IJST

IRTF4 DFGI; S :JF:yI 4 VG[ÒJG ; VMF 5tI GF , 1F6M ; DI08G\DCAJG\
W8S KP VF AFATG[WI FGDFZFBLV[TM ; DI08 jI ISTVMGL AG[, L GYLP
5ZT]jI ISTVMS[VSDMGF , 1F6MGL AG[, L KP

D, Z VG[X} , Z ; DI08GF GLR[D]HAGF +6 JULSZ6MJW]DCAJGF
U6[KP

à !P UβftDS VG[; bI ftDS ; DI08

à ZP DI FINT VG[VDI FINT ; DI08

à #P IGNIX" T VG[, 1I ; DI08

5]:TJT ; XMMGGL ; DI08 VG[TG]J6G 0

5]:TJT ; XMMGGL ; DI08DF\HGFU- IH<, FGF ; FWFZ6 VG[IJIX08
AF/SMGF DFTFvI5TFVMGL ; bI FGM ; DFJX YFI KP Vβ, [S[; XMMGDF\
; DI08GF VSD TZLS[; DFJX YFI KP

3.9 ; XMMGGMIGNX"0

; XMMG SFI "DF8[DFICTL D/JJL H~ZL KP VF DFICTL A[ZLT[D/JL
XSFI KP

✓ VFBL ; DI08G[VFJZL , . G[

✓ ; DI08GF 5]TIGIW~5 VDS EFUG[VFJZL , . GP

DFICTL D/JJF DF8[; DI08GL T5F; SZJDF\ VFJ[TG[; DI08
T5F; SC[KP VFBL ; DI08GL T5F; SZJFG[AN, [VDS EFUGL T5F;
SZJDF\ VFJ[TG[IGNX" T5F; sSample Inquiryf SC[KP VF IGNX" T5F;
5ZYL D/[, L DFICTLG[VFWFZ[TFZJ[, MIG6" ; DI08G[, FU]5F0JDF\ VFJ[
KP; DI08DF\ , JDF\ VFJ[, F VDS EFUG[GDGF VYJF

IGNX\$Samplef SC[KP VF IGNX" 5ZYL 5F%T YI[, F 5IZ6FDMG\ ; DU|
 ; DI08 DF8[GF 5IZ6FDM TFZJJF VDFGF J(7FIGS VeIF; G\ DCÀJG\ VU
 KP VFYL H IGNX'GL 5; NUL RMP; WFZF WMZ6M 5DF6[SZJFDF\ VFJP VF
 DF8[IJIJW 5âITVM KP ; XMWS 5MTFGF C[T]G[wI FGDA ZFBL RMP;
 5âITYL IGNX"5; N SZ[KP T[5C[, F IGNX"Vß, [X]m jI fbIF VF 5DF6[
 KP

-IGNX"Vß, [IJXF/ ; DI08G\ 5|TIGIWtJ WZFJTM p5; DCP-15

vUÞ VG[CÎ

VFSOFXF: +LI ZLT[jI fbIF VF5TF 5M, G I U H6EJ[K[S[-VFSOF
 IJQFI S IGNX"; DU| ; DCG[5; N SZJFDF\ VFJ[, L GFGL VFJTL Kf¹⁶

-; DI08 IJQF[DFICTL D/ JJFGF C[T]YL V[; DI08DFYL 5; N SZ[, F
 VSDMGF ; DCG[dIGNXt SCJFDF\ VFJ[KP-17

v JMSZ VG[, Þ

-; DCDFYL SZJFDF\ VFJTL VDS ; bI FGL 5; NULG[IGNX"SC[KP-

vAMJF0"

-; DI08GM UD[T[EFU IGNX" GYLP 5ZVT] ; DI08GF H[EFUG[
 ; DI08GL , F1F16STFVM NXFJJF DF8[p5 I MUFA , JFDF\ VFJ[T[EFUG[
 ; DI08G\IGNX"SCJFI P-19

v D[, Z VG[X]; , Z

; FZF IGNX'GL , F1F16STFVM0

UÞ VG[CÎGF DT[; FZF IGNX'GL , F1F16STF GLR[D]HA KP

1P IGX"; DI08G); 5b"5|TIGIWtJ SZTMCUM Ô. Vb

IGXDF; DI08G) VSNZ[AWL , F1F16STFVM VFJZL , [DFDF VFJL
 CMI TUF IGX" G[5|TIGIWtJ WZFJT) IGX" SCUF I KP VB, [S[
 ; DI08GF H[, 1F6M ; DFJX YTF CMI T[AWF H , 1F6M IGXDF CUMF
 Ô. VP Ô[VF 5SFZ[IGX"5; N SZJDFVVFJ[TM TG[5|TIGIWtJ WZFJTF
 IGX" SCUF I P VG[TM H IGXGF VWFZ[TG[5IZ6FDM G[; DU ; DI08
 SZ , FU]5F0LG[VFUFCL SZJFG)XSI AG[KP

2P IGX"5I F%T SNGMCMUM Ô. V[0

; DI08GF 5DF6 DHA IGX"G)SN CMU Ô. VP IGX"; DI08 SZTF
 ; FJ VMK)S[V; DTM, G CMU Ô. VP TGfYL I MUI DF5G G Y. XSP
 IGXDF IJ`J; GLI 5IZ6FDM D/JL XSFI Tß, F 5DF6DF IGX" CMU
 Ô. VP VB, [S[I MUI DF5G Y. XS[T[DF8[IGX" 5| F%T SNGM CMUM
 Ô. VP

3P IGX'GF; eIMGL 5; NUL ; FJ IGZ5|F CMUL Ô. Vb

IGZ5|F VB, ß[51F5FT ZICTP ; DI08DFYL H[IGX" 5; N SZJDFV
 VFJ[K[TDF; eIMGL 5; NUL SZTL JBT[51F5FT G ZFBJM Ô. VP
 T8:YTFYL IGX'GL 5; NUL SZJL Ô. VP Ô[5; NULDF 51F5FT ZFB,
 CMI TM TDF Vß 5SFZGM J/FS VFJ[KP VG[TGL V; Z 5IZ6FD p5Z
 YFI KP TYL IGX" p5ZGF 5IZ6FDM I MUI VFJL XS[VG[; DI08 p5Z
 , FU]5F0L XSFI TUF CMI KP

Vf p5ZFT IGX'GL , F1F16STF VM VF 5DF6[KP

1P IGX"; 5b"; DU|5|TIGIWtJ SZ[KP

2P IGNX"; DU| V5[|FFV[GFGL DF+FVMDF\CM| KP

3P U|bftDS VG[; b| ftDS IGNX"

4P DI FINT VG[VDI FINT IGNX"

5P IGNIXT VG[, 1I IGNX"

IGNX'GGF\5|FZM0

1P IAG I FN|rKS IGNX'G 0

VFDFA VFSI:DS IGNX'4 p5, aW IGNX'4 C[T], 1FL IGNX'4 '108FX
IGNX'4 :GMAM, IGNX'GM; DEJX YFI KP

2P I NrK IGNX"0

VFDFA ; FN| I NrK IGNX" 5a|T; ZG| I NrK IGNX" :TIZT I NrK
IGNX'4 h|DBF\IGNX'GM; DEJX YFI KP

√ ; EFJGF IGNX"0

1. ; FNM I NrK IGNX"

2P :TZLST I NrK IGNX"

3P h|DBF IGNX"

√ IAG ; EFJGF IGNX"

1P VFSI:DS IGNX"

2P IGI T IC:; F IGNX"

3P ; C[T]S IGNX"

✓ ; EFJGF IGNX"0

-; DI08GF 5tI § VSDGIGNXDA5JX 5FDJFGL Sß, LS ; EFJGF
IGNX"SC[KP-; EFJGF IGNXGF 5SFZMGLR[DHA KP

1P ; FNM I F¹IrKS IGNX"0

-; DI08GF NZß ; eI G[IGNXDA ; DFJJFGL TS D/[V[ZLT[
IGNX" 5; N SZJFDA VFJ[tIFZ[VJF IGNXG[; FNM I NrK IGNX"
SCJFI KP

v ; Á 5YD ; DI08GF AWF ; eI MG[SD VF5JFDA VFJ[KP

v SDGL : , L5M AGFJL AWL : , L5MG[E/JL NUFDA VFJ[KP

v Hß, MIGNX", JFGM CMI Tß, L : , L5MG[VF E/J, L : , L5M
DFYL p9FJJFDA VFJ[KP

NFPTP , MBZLGF GAZ4 IRöl GFBJL4 UÖ5FGF 5FGDFYL

5FGF BRJF4 I; ÞM pKF/JM JUZP

2P : TZLTST I NrK IGNX"0

-IGNXG[hMS ZICT AGFJJF DF8[VG[TG[JWFZ[5|TIGIWtJ ~5
AGFJJF DF8[:TIZT IGNX"5ait V5GFJJFDA VFJ[KP HI FZ[; DI08 HJNF
HJNF :TZMGL AG, L CMI KP T[NZß :TZDFYL jI ISTVMGL 5; NUL SZJFDA
VFJ[KP TG[:TZLT IGNX"5ait SCJFDA VFJ[KP-

; DI08G[TGF Uß S[, 1F6MGF ; NE"IJIJW :TZMFA JCRJFDA VFJ[
KP JCRFI, F 5tI § :TZMDFYL IGNX" D/JJFDA VFJ[KP NFPTP UI6T
VIEIMuI TF S; NBL TqFZ SZTL JBT[XCZGF IJnFYLVMG[UFD0FGF
IJnFYLVMG[; DFHGF HJNF HJNF VFIYS ; FDFIHS :TZMDFYL jI ISTVMG[
IGNX"TZLS[5; N SZJFDA VFJ[TG[:TIZT I NrK IGNX"SCJFI KP

3P h)DBF IGNX"0

-h)DBF VB, [VMK[JT[VX[SFI DL CMI VU] HY- ; Á 5YD
h)DBFMGL I FNL T[FZ SZJFDA VEFJ[KP VF I FNLD FYL h)DBFGL 5; NUL
YFI KP 5; N YI[, F h)DBFMDFYL VITD VSD TZLS[j I ISTVMS[SB]AGL
5; NUL YFI KP

✓ IAG; VEFJGF IGNX"0

-; DI08GF 5tI S VSDG[IGNXDA 5U]X 5FDJFGL SB, LS
; VEFJGF T[IGIÜT SZL XSFTL G CMI TM TG[IAG; VEFJGF IGNXG
SC[KP- IAG; VEFJGF IGNXGGF 5SFZMGLR[D]HA KP

1P VFSI:DS IGNX"0

VF IGNX" TGf GFD 5DF6[U]6 WZEFJ[KP ; C[, F. YL VG[TftSI, S
VF IGNX"D/L ZC[KP T]YL VD]S HYG[IGNX" TZLS[5; N SZJFDA VEFJ[TM
T[VFSI:DS IGNX" KP VFDA pTZNFTEGL 5; NUL G CMI 5ZT] 5ZTL
; bI FDA/D/L ZC[T]D CMI T]YL IGNX" TZLS[,]FDA VEFJ] I F CMI VB, [S[VF
5SFZGF IGNXGDA; XMMG DF8[Ô]. TL DFICTL D]/JJF DF8[5]TIGIWTJGL
DF+FG[, 1I DfAZfb I F IJGF VFSI:DS ZLT[H]GM EBM Y. ÔI T]JF VSDMGF
IGNX" TZLS[5; N SZJFDA VEFJ[KP

2P IGI T IC:; F IGNX"0

IGI T IC:; F VB, [S[RMSS; EFUP VF 5SFZGF IGNXDA; DI08GF
W8SMG[; DI08DFGF T]DGF 5DF6 VG; FZ IGNX" DF8[5; N SZJFDA VEFJ[
KP VF IGNX'GGL 5]S]I F GLR[D]HA KP

; Á 5YD ; DI08G[IJ1JW :TZMDF\ JCRJFDF\ VFJ[KP ; DI08DF\ V[
:TZG\ 5PF6 GSSL SZJFDF\ VFJ[KP VG[VT[V[:TZGF 5PF6 G[VFWFZ[
IGNXDF\ TGM EFU GSSL SZFI KP

3P ; C[T]S S[; 5|| MHG IGNX"0

SM. V[H[BF; 5|| MHGYL 5; N SZJFDF\ VFJ[I] CMI SFZ6S[
VD[AFATDF\ T[; DI08G\ 5|| TIAA 5F0T] CMI VD 5F% DFICTL äZF
bIF, VFjIM CMI TM T[; 5|| MHG IGNX" KP V[, [S[5|| MHS SM. C[TG[
WIFFGDF\ ZFBLG[>ZFN5]S ; DI08DF\ YL VD[V[DMGL 5; NUL SZJFDF\
VFJP VF IGNX'GL 5|| S|| FDF\ T]F , 1F6M ; DI08GF H[; eI CMI T]L
5; NUL IGNX"TZLS[SZ] KP

✓ IGNX'GL H~ZLI FTM0

IGNX'GM DpI C[T] cEFUcGL Ô6SFZL äZF c; DU[IJ0FGL Ô6SFZL
D/ JJFGM KP JTDFG ; DI DF\; FDFIHS ; XMMG DF8[DpI A[; D:IF KP
! P GF6FGL ZP ; DI GLP VF A[; D:IFVM C, SZJFDF\ S[T]G[C/JL
SZJFDF\ 5] "U6TZLGL T], GFDF\ IGNX'GL V[H~IZI FT AGL ZC[KP

1. IGNX'G VG[FZ 5] "U6TZLGL T], GFDF\ DFICTL D/ JJFDF\
VG[5yYSZ6 SZJFDF\ VMKM ; DI , FU] KP
- 2P ; XMMG 5FK/ 5PF6DF\ VMKM BR"YFI KP
- 3P HI FZ[; DI08 B]A IJXF/ CMI P ; DI08 IJ0F[5]L Ô6SFZL G
CMI ; DI08 K]F KJFI F CMI tIFZ[IGNX"VIGJFI "AGL ZC[KP
- 4P 5] "U6TZLGL T], GFDF\ IGNX" JW] RMSS; F. 5] "VG[IYFY"
5IZ6FD D/ JJFDF\ p5I MUL AG[KP

5P IGNX"äFZF µ0F65}JS VG[VGS 1I08SM6YL VeIF; SZJM
XSI AG[KP

✓ IGNX" DI FNF 0

1P IGNX"E} M

2P IAG IGNX"E} M

✓ IGNX"T5F; GF OFI NFVM 0

1P RMS; F. 0 IGNX" 5Z DF5G SZJFYL TDF\ RMS; F. VFJ[KP
; DI08 IJXF/ CMI KP VG[IGNX"TGGM GFGM; DÇ CMI KP IJXF/
; DÇ SZTF GFGF; DÇ 5Z JW]RMS; F. YL DF5G SZL XSFI KP

2P h050 ; DI08 JW] CMJFYL Veiff; SZJDF\; DI W6M 5; FZ YFI
KP 5ZT]Ô[IGNX'GFGM; DÇ CMJFYL h05YL SFD Y. XS[KP VG[
IG0S0F"; Z/TFYL TFZJL XSFI KP

3P ART0 ; XMMG DF8[GL ; DI08 IGNX"Ô[GFGM CMI TM; DI 4XIST4
GF6FGL ART YFI K[VG[I MUI 5IZ6FD D/JL XSFI KP

4P JW]; XMMGG[VJSFX0 VŞ H IGNX"5Z JWfZ[; XMMG SZL XSFI
KP Vß, [S[VŞYL JWfZ[; XMMG 56 Y. XS[KP

5P ; tI TFGL BFTZL 0 IGNXGL T5F; SZJFYL ; tI TFGL BFTZL Y.
XS[KP

3.10 5;TJT ; XMMGGM IGNX"sIGNX"5; NULF 0

I 1rK IGNX"VG[IAGI 1rK IGNX"VF A[5ŞFZGF\KP ; DI08DFYL
5]TIGIWtJ WZFJTF 5F+MG[GD]GM , . TÇF 5Z ; XMMG 5]S|F YFI VG[

V[5IZ6FDM ; DI08G[, FU] 5F0JFDF\ VFJ[VG[; XMMWGM ; DI 4
 XIST4GF6FGL ART YFI KP :508 DFICTL4 5IZ6FDM RMP; F. I]ST 5F%T
 YFI KP 5;TJT VeIF; DFI 1rK IGNXGL 5âIT EFZF IGNX"5; N SZJFDF\
 VFJIMKP

√ 5;TJT VeIF; DFIGNX"5; NULGL 5]S] FG]5YÐZ6 0

5;TJT VeIF; DF HGFU- IH<, FGF 480 ; FWFZ6 VG[IJIX08
 sDNA]âf AF/SMGF DFTFvI5TFGL 5; NUL SZJFDF\ VFJ[, VG[TG[A]
 IJEFU Vß, [S[240 ; FWFZ6 AF/SMGF DFTFvI5TF VG[240 IJIX08
 AF/SMGF DFTFvI5TFGL 5; NUL I 1rK IGNX"5]Ðf6[SZJFDF\VFJ[, KP
 IGNX"0

; XMMG SFI" SZJF DF8[SM. IJQFI 5; N SZL T[IJQFI G[VG]-5
 IGNX" äZF DFICTL Vß+ SZJFGL CMI KP VF DFICTL D/JJF GLR[
 NXF"] A[ZLTMKP

1P VFBL ; DI08G[VFJZL , . G[DFICTL Vß+ SZJFDF\ VFJ[TG]
 ; DI08 T5F; SC[KP

2P ; DI08GF 5]TIGIW~5 VDS EFUG[VFJZL , . G[T5F; SZJFDF\
 VFJ[TG[IGNX"T5F; SC[KP

VFBL ; DI08G[AN, [VDS EFUGL T5F; SZJFDF\ VFJ[VG[H]
 IG6I SRESULTF VFJ[TG[; DI08 , FU] 5F0JFDF\ VFJ[K[VG[VFG[
 IGNXG sSamplef SC[KP

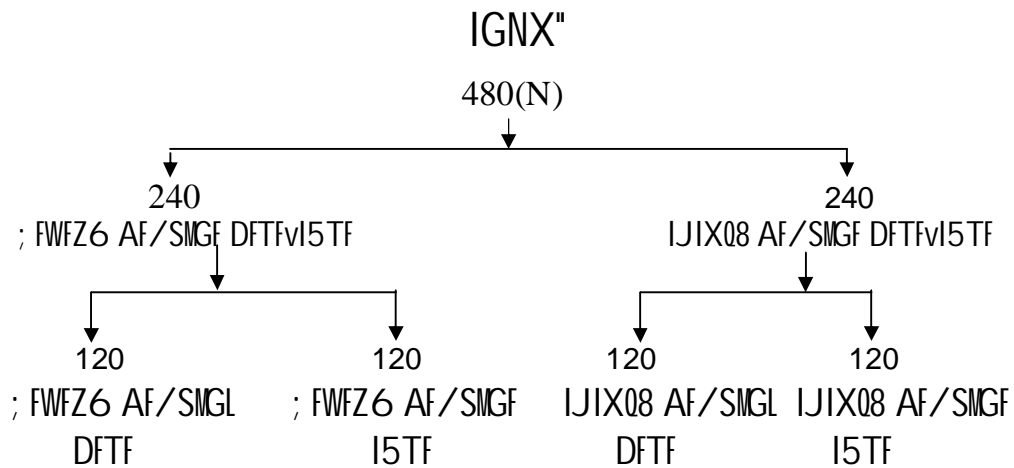
VfSamplefIGNXG[SJL ZLT[,]M TGL IJIJW 5âITVM VF D]HA
 KP

- 1P I NrK IGNX"5âIT
- 2P :TIZT IGNX"5âIT sStratified Samplef
- 3P ; 5| MHG IGNX"5âIT SPurposive Samplef
- 4P VFSI:DS IGNX"Sinidental Samplef

✓ IGNX"GL T5F; GF OFI NF 0

- 1) RMS; F.
- 2) h05
- 3) ART
- 4) JW]; XMWGG[VJSFX
- 5) ; tI TFGL BFTZL

Ý:TJT VeIF; GF C[T]G[WIFGDA ZFBL HJGFU- IH<, FGA 240 ; FWFZ6 VG[240 IJIXQ8 AF/SMGF DFTF I5TF V[D S], 480 DFTFvI5TFG[GD]GF TZLS[; XMWG DF8[5; N SZFI F KP H[IGNX'G 5; NULGF ; FDFgI RF8"GLR[ÝDF6[KP



VF ZLT[5]:TJT ; XMMGDFAIGNX"5âITGF IGI DM 5P6[SZLG[ti FZ
AFN Sß, FS VUtI GF 5NMGLR[D]HA wI FGDA, LWF KP

VUtI GF 5NMGL jI FbI F 0

Ý:TJT ; XMMGDFA Sß, FS 5NMGM JFZJFZ p5I MU SZJFDA VFjI M KP
HGL VCL "Operational definition" Vß, [IS| FtDS jI FbI Fcc VF5JFDA
VFJ[KP

VeIF; Df p5I MUDA, LW, ; FDFgI XaNM VG[5FIZEFIQFS XaNMGL
jI FbI F SZJFYL JFRS TGM RMS; VY" ; DHJF DF8[Y. XSP Ý:TJT
VeIF; Df VUtI GF 5NMGL jI FbI F GLR[ÝDF6[SZJFDA VFJL KP

1) IJ:TFZ sUfdI VG[XCZL fo

H[IJ:TFZGL J:TL BJA H JWFZ# IJSF; GL ; 56"; JWF4; UJ0TF
CMI TG[XCZL IJ:TFZ SCJFI P IJ:TFZ VG[J:TLG]ÝFD6 BJAH
VMK]CMI VG[AWL ; JWFGM VEFJ CMI TG[UfdI IJ:TFZ SCJFI P

2) DFI; S VFJS 0

; FWFZ6 S[IJIX08 AF/SMGF DFTFvI5TFGL VFIYS VFJSG[DFI; S
VFJS TZLS[U6JFDA VFJ, KP

3) VeIF; 0

AF/SGF DFTF S[I5TF BIFZ[VeIF; DF8[NFB, YFI tIFZYL WMP1
YL 7 G[ÝFYIDS S1FFGM VeIF; H[8 YL 10 ; JMGF VeIF; G[DFwI IDS
VeIF; 11 YL12 ; JMGF VeIF; prRTZ DFwI IDS VeIF; SCJFI
SM, HGF +6 JQFGF VeIF; G[:GFTS VG[ti FZ 5KLGf VeIF; GL
IOU.G[VG:GFTS IOU. SCJFI KP

4) SBĀGF ÝSFZ0 s ; VĴT \IJEST f0

AF/S DFTF I5TF TĠF ; VFGM ; FY[CMI TĠ[IJEST SBĀGM ÝSFZ
 SCĴFI VG[DFTF I5TF ; VFGM p5ZFT NFNF NFL S[VgI VFIZT
 ; eIM ; FY[ZC[TF CMI TĠ[; VĴT SBĀ SCĴFI P

5) HFIT/AF/SGL HFIT 0 Male – female / Boy - Girl.

jI IST GL HFIT VB, [TDGL :+L VG[5]-OF CMJGL 5IZI:YIT

6) XMB 0 sDFGI; S v XFZLIZS f

XMB VB, [jI IST SM. AFATDFAZ; ~IR VIE~IR WZFJ[KP VFDA
 jI IST SM. GF DFUNXG S[NAF6 JUZ IN, YL SFI "SZ[KP TĠ[XMB
 SCĴFI KP NFPTJFRG4, BG4ZDT UDT4 DGMZHG4 ÝJF; JUZGM
 XMBP NZŞ jI ISTDFAZ; 4 ~IR V, U V, U CMI KP SM. G[XFZLIZS
 XMB CMI TM TDFAZDT4 UDT VFJL XSP DFGI; S XMB CMI TM
 TDFAJFRJĴ , BJĴ ; ULT ; FE/JĴJUZZPP VFJL XSP

7) IJIX08 AF/SGF VG[TĠL HFIT 0 Boy - Girl

VgI AF/SGL ŞI08V[IJIX08 AF/SGL SFI "1FDTF VG[AfIâS 1FDTF
 VMKL CML VG[VFDA 56 AF/SGL HFIT TĠF XFZLIZS , 1F6NGF
 VFWFZ[GSSL YFI KP

8) AF/SGL ; bIF 0

SBĀDAF INSZFvINSZL TZLS[SB, F KP TĠF VFWFZ[AF/SGL ; bIF
 U6JFDAVFJ[KP

9) jIJ; FI 0

DFTF S[I5TF VFIYS VFJS DF8[H[ZLT[GMSZL4 WWWĴ jI F5FZ4
 B[TL4WZSFD JUZDFAÔPFI, CMI TĠ[jIJ; FI U6JFDAVFJ[KP

10) pDZ 0

DFTF S[15TF GL HgD TFZLB 5pDf6[pDZ U6JFDF\VFJ]KP

11) 7Fitf 0

DFTFvI5TF H[5Bf 7FITDFACMI TG[7FIT U6JFDF\VFJ]KP

3.11 ; XMWGGF p5SZ6M0

Y:TJT ; XMWGDF C[TVMG[WI FGDF ZFBLG[GLR[NXF"J, ; FWGMGL
DNNYL DFICTLG\VS+LSZ6 SZJFDF\VFJ] KP

1) jI ISTUT DFICTL5+S 0

; XMWG GDGFDF ; DIJ08DFYL , [FfI [F pTZ NFTMM VUJGL SB, LS
jI ISTUT DFICTL ; XMWG DF8[p5IMJL GLJ0[KP jI ISTUT DFICTL
D/JJF DF8[VG[; AW 5YBZ6 WI FGDFZFBLG[; XWWS[DFUNX'S ; FY[
IJRFZ6F SZLG[jI ISTUT DFICTL 5+S ZR[] HGF ; FWFZ6 VG[IJIX08
AF/SMGF DFTFvI5TFGL HFIT4pDZ4IX1F64DFI; S VFJS4 7FIT IJIX08
AF/SGL HFIT4AF/SGL ; bIF4 SB]AGF\ YSFZ VG[XMB JUZ[AFATMGL
DFICTL D/JJFDF\VFJL CTLP

2) IJST IRTF ; XMWIGSF S; NBL 0

VCL\OMPSP5L I; CF VG[V, P VG VG S[ZIRT IJST IRTF
SANXIETYf; XMWIGSFGM p5IMJ SZJFDF\VFJ]M KP HDA 90 IJWFGM KP
TDA pTZNFTF 5MTFGL YITIS|F 5\GGF HJFADF\VF5JFGL CMI K[VG[
HGF cCfc DF8[1 U6F VG[cGfc DF8[0 U6 DgI]V, YDF6[VF5JFDF\
VFJ] KPHGL IJ`J; GLI TF 0.92 KP VF S; NBLDA HD 5F%TFSM GLRF
TD IRTFG\ YDF6 VMK\ VG[HD 5F%TFSM JW] TD IRTFG\ YDF6 JW]

U6FIP HGL IYFY"TF êRL CTLP

DNA]âGF AF/SMGF DFTFvI5TF DF8[5DFI6T ; XMMIGSF :JZIRT
 AGFJJFDF\ VFJL4 HDF\ VgI Ý`GFJ, LVMGF VFWFZ[VG[JF, L D], FSFT
 äFZF JF, LG[pÑEJTL IJIX08 AF/SMG[, UTL ; D:I FG[, 1FDF\ ZFBLG[
 S], 78 ÝxGMGL 5; NUL SZLP DGMJ7FG 1F+[ACF/MVG[EI WZFJTF
 14 TH7FG[; XMMGGFC[T]G[; 0/ AGFJFGF T5F; JF DF8[VF5JFDF\VFJL
 CTL4 tIFZ AFN TDFYL S], 60 ÝxGM 5; N SZL S; MBL VG[5G0S; MBL
 5âIT DJHA IJ`J; GLI TF VG[IYFY"TF XMMJFDF\ VFJ], CTLP HDF\
 S; MBLGL IJ`J; GLI TF 0.88 K[VG[5G0S; MBLGL IJ`J; GLI TF 0.87
 D/, CTF VG[IYFY"TF DF8[5t11F IYFY"TF S; MBLGF VFWFZ[D/, L
 IYFY"TF 0.57 KP

3) DFGI; S :JF:yI ; XMMIGSF / S; MBL 0

Ý:TJT ; XMMIGSF OMPOL H[EÎ VG[OMPÒPVEZ UL0F ZIRT DFGI; S
 :JF:yI ; XMMIGSF p5IMJ SZJFDF\ VFJIM KP VF “; XMMIGSFDF\ S], 40
 IJWFGM KP HDF\ pTZNFTE ÝxG ; FD[VF5], ; CDT qV; CDTDF\ “✓”
 IGXFGL SZJFGL CTL VG[TGF DgI]M, ÝDF6[VYW8G SZJFDF\ VFJ],
 CT]TGL IJxJ; GLI TF 0.87 KP HD 5F%TFS êRM TD DFGI; S :JF:yI JW]
 ; FZ] VG[HD 5F%TFS GLRM TD DFGI; S :JF:yI GLR] V]V VY*38G SZL
 XSFI P

; FWFZ6 AF/SMGF DFTFvI5TFG\ DFGI; S :JF:yI IJIX08 AF/SMGF
 DFTFvI5TF SZTF JW] CMI TD ; XMMWSFV[ptS<5GFG[VFWFZ[XgI
 ptS<5GFVM 30L CTL VG[AG[JrR]GM EN t-S; MBL êFZF p5IMJ SIMCTMP

4) ÒJG; ∇TMF ; XMWIGSF S; MBL 0

Ý:TJT S; MBL 0MP VF, D VG[zL JF:TJ ZIRT ÒJG; ∇TMF (Life satisfaction)GM p5I MU SZJFDF\ VFJ[, KP HÐF\ S], 60 IJWFGM KP VG[pTZNFTEFV[CF VG[GF ÝxG ; FD[, B[, CMI KP TÐF\ pTZNFTEF V[JT\YGL IGXFGL SZJFGL CTL VG[pTZ CF CMI TM 1 UþFS VG[GF CMI TM 0 UþFS VF5JFGM CTMP HÐ5F%TFŠ êRM TÐ ÒJG; ∇TMFG\ JW] VG[HÐ 5F%TFŠ GLRM TÐ ÒJG ; ∇TMFG\ 5ÐF6 VMK\ VG[TGL IJxJ; GLI TF 0.84 HMJF D/[KP

:JFEFIJS ZLT[; FWFZ6 AF/SMGF DFTFvI5TFGM ÒJG ; ∇TMF IJIX08 AF/SMGF DFTFvI5TF SZTF JW] CMI TÐ ; XMWSFV[JŠI<5S ptS<5GFGL VFWFZ[XþI ptS<5GFGL ZRGF SZL CTL VG[AG[JrRGM EN t- S; MBL EFZF XMWJFGM GD|5|I tG SZ[, KP

3.12 5]:TJT VeIF; G\VFIMHG 0

JTDFG IJJ{7FIGS ; XMWGGM IJU KP VFH[ZMHAZMHGL 38GFVMG[T5F; JF DF8[VGŠ GJF GJF ; XMWGM YTF ZC[KP HGF äZF I; äFTMIJS; [KP VG[IJ7FEGMIJSF; YFI KP SM. 56 38GFGL ; XMWG SZJFG\ CMI K[tIFZ[; F\ ÝYD ; XMWGGI a,] I5þ8 Tq FZ SZJL 50[KP IJQFI G[5; N SZL ; XMWG IMHGF AGEJJL H~ZL KP SFZ6 S[; XMWG IMHGF IJGF VFGJEFIJS ; XMWG SZL XSFT] GYL H\YL ; XMWS[; XMWG IMHGF AGEJJL VŠ VIGJF\ AFAT AGL HFI KP

; XMWG I MHGFGM VY"jI FbIF o

cc5LPJLPIU TG[J7FIGS ; XMWGGL YFYIDS H~IZIFT TZLS[
VM/BFI KP VFYL H J7FIGS ZLT[; XMWG SZJF DF8[; XMWS[I MHGF
AGFJFGL H~ZL AG[KP ALÒ ZLT[SCLV[TM ; XMWG I MHGF ; XMWG SFI "
INXF ; JRG VF5JF DF8G\TFISS VG[; JI MHT ; FWG KP²⁰

ccHCMDFGF DT[; XMWGGL I MHGF Vß, [; XMWG ; D:IF VG[TG[
VFXIG[VG]-5 DFICTL VßI+T SZJL VG[DFICTLGF IJ` , p6 VG[
VY"38GGL SZS; ZIßT VG[VFI MHG5JJS GL UM9J6L SZJLPcc²¹

; XMWS 5MTEGF ; XMWG DF8[X~VFTYL , . G[VT ; JML H[SFI
SFI"JFCL SZ[K# T[IJOF[T[FZ SZ[L ~5ZBF Vß, [; XMWG I MHGF VD
SCL XSFI P VFD ; XMWG I MHGF Vß, [SM. 56 ; XMWGFtDS VeIF; GL
X~VFTYL , . G[5ß"YTF ; JMLGL ; DUJ YISIFGL I MHGFPcc²²

~; XMWG DF8[5C[, LYL H ; FDU\ T[FZ SZL ZFBJL TG[; XMWG
I MHGF SC[KP~²³

v :8LJg; G v

cc; XMWG I MHGF Vß VßL YISIF K[S[HGF ; XMWGGL SFI"JFCL X~
YFI T[5C[, F , JFDF\VFJTF IG6"IMGM ; DFJX YFI KP²⁴

v 5M, G IU v

cc; VMFSFZS DFICTL YF%T SZJFGL Vß jIÇZRGF Vß, [; XMWG
I MHGFPcc²⁵

v 5M UM5F, v

; XMWG I MHGFGF ; M5GM0

- 1) ; XMWG ; D: I FGL 5; NUL
- 2) ; XMWG ; D: I FG[WOTZ VG[T]GL :508TF
- 3) ; XMWG ; D: I FG]Sgã VG[T]GL :508TF
- 4) ; XMWGGF C[T]MGL :508TF
- 5) ; XMWGDF\pt5S<5GF ZRGF VG[T]GL :508TF
- 6) ; XMWG DF8[H~ZL ; FDU| VG[T]GL :508TF
- 7) ; XMWG VeIF; jIF5IJ`J VG[T]GL :508TF
- 8) VeIF; GL 5âITVMA ÝI]STVMGL :508TF
- 9) V\$I+T DFICTLG\JULSZ6 VG[IJ` , QF6
- 10) IJ` , QF6 5ZYL VY38G
- 11) ; XMWG VCJF,
- 12) ; XMWGGF TFZ6MP

; XMWG I MHGF GF ÝSFZM0

C[T]MGL[wI FGDF\ZFBLG[; XMWG I MHGFGF ÝSFZM 5F0JFDF\VFJ],

KP H\$F\K ÝSFZM KP H[VF D]HA KP

- 1) VgJQF6fDS ; XMWG I MHGF
- 2) J6GfDS ; XMWG I MHGF
- 3) IGNEGfDS ; XMWG I MHGF
- 4) ÝIMUfDS ; XMWG I MHGF
- 5) V{TCFI; S ; XMWG I MHGF
- 6) T], GfDS ; XMWG I MHGF

; XMWG I MHGFL IJIX08TF 0

- 1) ; XMWG I MHGF ; XMWS T{ FZ SZ[KP HPAFX~VF TYL VITD
IJ` , QF6 ; WLG L ~5ZBF ; DFI L, L CMI KP
- 2) ; XMWG V[I MHGF DF+ %, FG GYL 56 V\$ ZRGF KP HPA
; FD[, SZ[, AFATM IJQF[5IZJT'GMGF\; XWVG\; XMWG V\$
IJXQF GDGM KP
- 3) ; XMWG I MHGF ; XMWGSTFG[; XMWGGF JF:TIJS , 1I ; W
5CMRJFDADNN SZ[KP

; XMWGG L I MHGF VFJxI STF 0

- 1) ; XMWG DF8[RMS; VFI MHG CMJ]HM. VP
- 2) ; XMWG DF8[VMI MHG GMVD, YJM HM. VP
- 3) RMS; :508 DFICTL V\$F9L SZJF ; XMWG I MHGFL VFJxI STF
- 4) VFI MHG JUZ ; XMWGDF\; DI , XIST4 GF6FGMJ I YFI DF8[
; XMWG I MHGFL VFJxI STF KP
- 5) ; XMWG I MHGF äZF VYW8G :508 RMS; :J~5 DF\SZL
XSFI P

; XMWGGF I; âFT DF8GF SFI M 0

- 1) ; XMWG I; âFTMGM ÝFZE SZJFG\SFI "SZ[KP
- 2) ; XMWG ÝJTDFG I; âFTG[VWZM 5ZJFZ SZJDF\VG[GJF I; âFT
:YF5JFDF\OF/M KP
- 3) ; XMWG I; âFTGL 5Go jI FbI F SZJFG\VG[:508 SZJFG\SFI "SZ[KP
- 4) ; XMWG I; âFTGF\; FDFgI ÝJFCMG[GJL INXF VF5[KP

5) ; XWVG 5JFGDFG S[EFIJ SYG SZJF DF8GL XSI TF pEL SZ[KP

6) ; XWVG DF8GF GJF 1F+[IJQFG]7FG VF5[KP

7) ; XWVG SI F 1F+DF\SZJFG\AFSL K\T[TZO ; XWMSG\WI FG NMZ[KP

3.13 :JT\+ 5IZJtI "G\IJ` , QF6 0

5]:TJT ; XWVGDF\jI ISTUT DFICTLDF\VF5], F :JT\+ 5IZJtI "HGL
; DHJTL 5SZ6 1 DF\VF5JFDF\VFJ], K\ T[G]IJ` , QF6 SZLG[TG[VG]-5
ptS<5GFVMGL ZRGF SZL KP VF ptS<5GFVM5SZ6 1 DF\XF"JL K\ VG[
5]:TJT 5SZ6DF\T[G]\VFSOFXF:+LI 5YSSZ6 SZL TFZ6MD/J], KP

3.14 VFSOFXF:+LI 5|I]STVM0

; XWVG SFI DF\ VSI+T SZ], L DFICTLG\ 5YSSZ6 VG[VYW8G
SZJF DF8[VFSOFXF:+LI ÝI]STVMGM pI 5MU SZJDF\ VFJ[KP Ý:TJT
; XWVGDF\ C[T]MG[WI FGDF\ ZFBLG[7FGG[D/J], DFICTLG\ IJ` , QF6
SZJF DF8[GLR[D]HAGL VFSOFXF:+LI ÝI]STVMGM p5I MU SIMKP

1. DwI S
2. 't' S; MBL
3. 'r' ; C; AW
4. 'F' S; MBL

VCL\NZS IJUTGM GLR[5DF6[VY"VG[; DHJTL VF5], KP

VFSOFXF:+FGM VY"0

cc; DFHDF\AGTL W8GFG[VFSOFDF\DSJFDF\VFJ[T[VFSOFXF:+cc

cc ÝtI 1F DFICTL S[UÁ6 DFICTLG\5ySSZ6 SZL DFICTLG\VYW8G

SZL VFSOFDF\S[; bI FDF\, BJFDF\VFJ[T[VFSOFXF:+ KPcc

ccVFSOFXF:+ ; FD)CS ~5YL TYF ; DU| ā108SM6YL ; FDFIHS
 jI J:YFG[DF5JFG]IJ7FG KPcc

v Afp, v

ccSM. 56 IJQFI ; DHJF T[G]M T], GFDA\ VeIF; SZJF T[IJQFGL
 VFSOFSLI DFICTL E[JL SZJL T[G]JULSZ6 VG[SM8S ZRGF ; FY[; AW
 WZEJT]IJ7FG Vβ, [VFSOFXF:+Pcc

v , IJ8 VG[CM8 h], F

cc; DÇDA\ VFJ], L ; FDFIHS S[G{ luFS ÝIS|I FVM S[; XMMGDA\
 U6TZL S[VGDFGM äZF Vβ9L SZLG[DFICTLGF 5YÞZ6 J0[D]/J], F
 5IZ6FDMGF I MuI VY"38GGL 5âITVMGM VeIF; SZT] IJ7FG Vβ, [
 VFSOFXF:+Pcc

CJ[VFSOFXF:+LI 5âITVMG[IJUTYL GLR[5DF6]; DHEJ], K[0

$$M \frac{\sum fx}{N} = OR \bar{X} \frac{\sum fx}{N}$$

$$\beta IFM = Dwl S$$

$$\bar{X} = Dwl S$$

$$f = VFJ]ç$$

$$x = SFRF 5F%TFS$$

$$N = VFJ]ç GL S], ; bIF$$

5DF6IJR, G 0

5DF6 IJR, GGM bIF, ; F{ 5YD SF, " I5I ; G[1814 DA\ZH}SI M VG[
 jI FbIF VF5TF H6FJ[K[S[cc5F%TFSMGL ; ZF; ZL ; FY[GF 5F%TFSMGF

IJR, GGF\JUMGL ; ZF; ZLG\JUDY T[5DF6 IJR, G KP\ VB, [5]; FZ S[
RI, TTFG\ ; FYL JW] I:YZ VG[VFWFZE]T DF5KP ; DI08DFYL IGNX"
IJR, G XMMJFG\; FYL ; Z/ DF5 KP

UZB 0 5DF6 IJR, GGL jIFbIF VF5TF H6FJ[K[S# \5DF6
IJR, G VB, [S[5F%TF\$MGF Dwl SDFYL , [F1], F IJR, GJUFGF ; ZJF/FGF
Dwl SG\JUDY/P

D], Z VG[X]; , Z 0 5DF6T IJR, GGF A[, 1F6M GMM[KP H[VF
D]HA K[0

(1) 5DF6T IJR, G z6LGF 5tI § 5IZ6FDGJUUG\5|TIAIAT SZ[KP

(2) 5DF6T IJR, GMDA AWF IJR, GGM JU" YTM CMJFYL GSFZfDS

IJR, GM56 CSFZfDS IJR, GMDA~5FTZ 5FD[KP

5DF6 IJR, GGF A[, FEM VF 5DF6[K[0

s1f 5]; FZGF ALHF DF5MGL ; ZBFD6LDA TGF 5Z IGNXGL JW38GL

V; Z VMKL YFI KP

s2f IAHUI6TGL 5|S|FGF; C], F. YL VF 5âITDFAp5IMJ YFI KP

VFJ] IJRZ6 5ZYL 5DF6 IJR, G XMMJFG\; }+ GLR[5DF6[K[0

$$SD = s_x = \sqrt{\frac{\sum f_y^2}{N} - C^2}$$

i = JU", YF.

f = VFJ]

x = IJR, G

C = ; WfZM

$\sqrt{\quad}$ = JUDY

A[5IZJtI MGf\DWI SMGF TOFJTGL 5DF6 E}

$$S_E D = \sqrt{S_{EM_1} + S_{EM_2}}$$

$$S_2 D = \text{A[5IZJtI MGf TOFJTGL 5DF6 E}$$

$$S_{EM_1} = \text{5YD HYGF DWI SGL 5DF6 E}$$

$$S_{EM_2} = \text{ALHF HYGF DWI SGL 5DF6 E}$$

't'-S; MBL 0

VUÏ VFSOFXF: +LI 0A<I] V; PUZB[VF IJTZ6 S; MBL XMWL SF-L
 KP 't' S; MBL EFZF A[IGNX" JrR[U6FTM TOFJT ; DI08DF\56 V:TltJ
 WZFJ[K[S[SD T[GpL SZL XSF I KP Vp, [S; DI08GF 5DF6[IJR, GG]
 DF5 V7FG CMI VG[IGNX'GF 5DF6 IJR, GDF\ VFWFZ[; DgJI TFGL
 U6TZL SZJFGL CMI T[; DI DMBF EFUGF ; XMWGDF\ ; ZFX XMWJDF\
 VFJ[KP TjL ; ZFXGM TOFJT ; FYSTF RSF; JF DF8['t'- S; MBLGM JW]
 p5IMJ SZJDF\VFJ[KP

5:TjT VeIF; DF\ A[DWI SM JrR[TOFJT K[S[GCL\ T[RSF; JF
 IGZFSZ6LI 5IZS<5GF ZRL CTLP V['t'- S; MBL 5ZYL ; FYSTFGL S1FFV[
 IGZFSZ6LI 5IZS<5GFGM :JLSFZ S[V:JLSFZ SZJDF\VFJ I MCTMP

't'-Uj; Z 5âITG); }+ 0

$$S \sum_n = \frac{SD}{\sqrt{N}} \quad S_{\Delta M} = \text{DWI SGF TOFJTGF 5DF6 E}$$

$$SD = \text{5DF6 IJR, G}$$

$$N = \text{VFJ; GL S, ; bIF}$$

$$\sqrt{\quad} = \text{JUDY}$$

$$S_{\Sigma D} = \sqrt{S_{\Sigma_1} + S_{\Sigma_2}}$$

$$S_{\Sigma D} = 5\text{YD E}, \text{GMT OFJT}$$

$$S_{\Sigma_1} = 5\text{YD DWI SGF TOFJTGL 5DF6 E},$$

$$S_{\Sigma_2} = \text{ALHF DWI SGF TOFJTGL 5DF6 E},$$

$$M_1 = 5\text{YD DWI S}$$

$$M_2 = \text{ALHM DWI S}$$

$$\frac{m_1 + m_2}{S_{\Sigma D}}$$

; C; \AWGL ; DH}TL 'r' 0

ccA[VYJF A[SZTF JWFZ[R, JrR}GF ; C; \AW S[; C 5IZJT'GGM
VeIF; VG[TG}DF5G SZJF DF8[; C; \AW 5âITGMp5I MU SZJFDF
VFJ[KPcc

ccA[S[JWFZ[R, JrR[BI FZ[5IZDF6ftDS :J~5GM ; \AW CMI tIFZ[
VF ; \AWGL XMW TYF TG}DF5G SZJF T}PH TG[V\$; \1F%T ; }+DF}I ST
SZJF DF8GL I MuI VFSOFXF:+LI 5âIT ; C; \AW TZLS[VW/BFI KPcc

"When the relationship is of a quantitative nature, the appropriate satisfaction tool for discovering and measuring the relationship and expressing it in brief formula is known as cor-relation."

-Croxtton and Cowden

$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$

"Correlation is an analysis of the co-variation between two or more variables."

- **A.M. Tuttle**

$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$

$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$

$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$

$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$

$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$

$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$

$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$

$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$

; C; \AWFSG\ VY'38G 0

0.20 YL VMKF v AC] YNDM GICJT ; \AW

0.20 YL 0.40 ; C; \AW VMKMq YNDM 56 IGIÜT ; \AW

0.40 YL 0.70 ; FWFZ6 ; C; \AW 9LS 9LS ; \AW

0.70 YL 0.90 ; FNM ; C; \AW GMM5F+ ; \AW

0.90 YL 0.99 B\A JWFZ[; C; \AW 5Z:5Z VFWFIZT ; \AW

1.00 ; 5\6" ; C; \AW

Cr cGL ISDT k6 CMI TM k6 ; bI FGF ; NEDF\VF H VY'38G

, FU]50[KP 56 TGM ; \AW jI :T CMI KP

3.15 5]:TJT VeIF; GL DFICTL G]V\+LSZ6 0

; \MWSFV[5MTFGF X\FI6S jI J; FI G[VG]-5 ; D:IF DF8[
DFUNXS ; FY[D], FSFTM SZL ; DU| ; \MNG SFI'G\ VFI MHG SZ], KP
; \ZFQ8=I]GJI; 8LGF IGI D 5DF6[5\5Mh, T\ FZ SZL R.D.C. DF\>g8ZjI }
VF5L 5MTFGF DFUNXS VG[; IDTLGF ; eIMM[NXF'J], ; , FCv; RGM
wiFFGDF\ , LW], KP tIFZAFN 5\GFJ, L AGFJL DFUNXSG[ATEJL K5FJL
KP ; \MNG SFI'GL X~VFT ; FWFZ6 AF/SMGF VG[IJIXQ8 AF/SMGF\
DFTF I5TF 5F; [EZFJLG[S], 480 5\GFJ, LDF\DFICTL V\+ SZL KP VF
DF8[DFTFv I5TFGL ~A~ D], FSFT , . H~ZL DFICTL V\+ SZL KP

5\Z6 VFI MHGDF\ NXF'J I F 5DF6[5\Z6 4DF\ CJ[5KL VFI MHG
5DF6[; \MNG4 5Y\Z64 VY'38G VG[5IZ6FD RRF"SZJDF\VFJL KP

; NE", JR

1. ccHJGFU- XCZGF A\$ SDRFZLVNGL ; DFI MHG4 DFGI; S :JF:yI
VG[SFI "; TMDFGM DGMU{7FIGS VeIF; Pcc OFF GNF6LI F4 5LVRPOLP
DCFIGAWs2001f4 ; FZF08=I]GJI; 8L4 ZFHSMBP 509 GP142.
2. cc; FZF08GL 8LPALP CM:58, GF 8LPALPGF NNLVNG\ VftDIJ` , QF64
CTXF VG[DtI] IRTFGM DGMU{7FIGS VeIF; cc OFF SLXMZEF.
VGP DCITfs2008f45LVRPOLPDCFIGAW4 ; FZF08= I]GJI; 8L4
ZFHSMBP508 GP164.
3. ccSM%l }Z prR IX1F6 VG[GMGvSM%l }Z prRIX1F6 D/JTF
IJnFYLVNMF jI J; FII S J, 6 5IZ5SJTF4 VftDIJ` , QF6 VG[
DFGI; S :JF:yI GM VeIF; cc OFF IG, DAG VGP GSD4 5LVRPOLP
DCFIGAWs2004f4; FZF08=I]GJI; 8L4 ZFHSMBP509 GP111 TO
113.
4. ZLOLU D8LZLI , SM.A. Part-II, External Sociology Paper No.II f
; FZF08=I]GJI; 8L4 ZFHSMBP 509GP 85 TO 87.
5. ccDFKLDfZMGF jI ISTtJ , 1F6MDGMU{7FIGS ; BFsFZL VG[jI J; FI
; FD[, ULZLGM DGMU{7FIGS VeIF; PccOFF ZTGAG 5LP ; M, 8L4
5LVRPOLP DCFIGAW s2004f4; FZF08= I]GJI; 8L4 ZFHSMBP 509
GP134 TO 136.

5\$Z6_v4

; XMWG 5Y PZ64 VY"38G

VG[5IZ6FD RRF"

ÝSZ6V 4

; XMBG 5YÐZ64 VY"38G VG[5IZ6FD RRF"

4.0 5]:TFJGF

5]:TJT ; XMWGGM C[T] -HGFU- IH<, FGF ; FWFZ6 VG[IJIX08
 AF/SMsDNA]âfGF DFTFvI5TFGL IJST IRTF4 DFGI; S :JF:yI VG[ÒJG
 ; TMFGM DGMU{7FIGS VeIF; - KP TG[VG]-5 VCL\5IZ6FDG\5YÐZ6
 VG[VY"38G V[Vß VIT VUtI GL AFATGL RRF" VCL\ SZJFGM GD|
 5|IF; SIM KP 5F%T DFCLTL DF\5YD ãI08 V[NBFTF VFSOF VG[TyI MDA
 36F DCtJGF I; âFTM KÿFI |, F KP VFJF I; âFTMS[VY"38GG[5S0JF DF8|
 H DFICTL G[RSF; JL 50[KP DFICTL GF :J~5 5ÐF6[SMØFGF 5ßFZ GÐL
 YFI KP VG[V[ZLT[5IZ6FDMG]5YÐZ6 VG[VY"38G SZJFDF\VFJ[KP
 H[T[DFICTL GM DF+ HyYM Sÿ/ IGZYS AMH AGL ZC[KP V[p5ZFT
 jIF%TSZ6 S[; FDFgI LSZ6 S[SM 56 5ßFZGM ; FZ TFZJ JM V[5YÐZ6
 IJGF XSI H GYLP DFICTL GF IJIJW VßDMG[I MuI :YFG[UMØJJF VG[
 TDGL JrR[GF TFISS ; AWG[:JFEFIJS :J~5DF\jI ST SZJF V[H DFICTL
 G]5YÐZ6 SZJ]Vß VUtI G]SFI" AGL ZC[KP VFYL VCL\5YÐZ6
 Vß, [X]m T[: DHJ]H~ZL KP

4.1 5YÐZ6 Vß, [X]m

SM 56 AFAT DF\VF56G[p5ZYL NBFI K[T[GL GLR[X] K[T[
 Ô6Jp V]JL H ZLT[: XMWS DFICTL D/J# ; ZBL ZLT[GMW SZ]TG[AZFAZ
 UMØJ[tIFZAFN ; D:I FG[V8S/GF ; NE"DF\5YÐZ6 SZ[KP

5YÐZ6 Vß, [D/J, L DFICTLDA KßFI, L ; FDfgI AFATMA
 ENJF/L AFATMG[V, U 5F0JL4 5YÐZ6 Vß, [U]6ftDS AFATMG[
 ; bI ftDS ~5FTZ4 5YÐZ6 Vß, [VFS0FXF:+GL HNL HNL 5âIT äZF
 DFICTLDAKßFI, L IJUTMG\RMÞ; ZLT[JULSZ6P

VF D/J, L ; bI ftDS DFICTL VD]T" :J~5[CMI KP VF VD]T"
 DFICTLG[VY"; EZ VG[T], GF1FD AGFJJF DF8[IJLW VFS0FXF:+LI
 5I]STVMGMp5IMU SZJFDA VEFJ[KP VF VFS0FXF:+LI 5âITGF DpI A[
 5ßFZ 50[KP

1. J6GftDS VFS0FXF:+LI 5âITVM
2. VFS0FXF:+LI VGDFG 5âITVM

1. J6GftDS VFS0FXF:+LI 5âITVM

VF 5âIT äZF YT] 5YÐZ6 DIFINT ZLT[HYGF 5F+MG[
 ; FDfgI LSZ6 SZ[KP ; AIWT HYMG[H TGF TFZ6M , FU] 50[KP VgI HY
 DF8[; FdI 5IZ6FDMGL 3FZ6F SZL XSFTL GYLP DFICTL DF+ Vß H HYG[
 J6G SZ[KP

2. VFS0FXF:+LI VGDFG 5âITVM₀

; XMWG DFICTLGM VFS0FSLI HyYM Vß, M IJXF/ CMI K[S[D/J, L
 DFICTLG[VF3FZ[VGDFG SF-JF DKS], AG[KP VF p5ZFT TFZJ], F
 VGDFGM IJ`J; GLI 4 IYFY" CMUF H~ZL KP Ô[VFS0FXF:+LI 5âITGM
 p5IMU SZJFDA VEFJ[TM T] 5IZ6FD VßALÔ 5IZJtIMGL V; Z4
 VßALÔ ; FYGL VFTZ ISIF NXFJ], KP T]L T] DctJ VG[D]I JWL
 ÔI KP DF8[; XMWGDF\ VFS0FXF:+LI 5âITGMp5IMU SZJFDA VEFJ[KP

TGF 5ZYL VY"38G SZJFD\VFJ[KP

VY"38G V[; XMGDFYL D[/J], F TFZ6MGF IJXF/ VY" XMWJF
DF8GL V§ T5F; KP VF T5F; GF DpI A[5F; F KP

1. ; FDFIHS ; XMGDF\; FTtI :YF5J\

2. T5F; VF56G[RMP; TFZ6 TZ0 NMZL ÔI KP

4.2 ; FWZ6 VG[IJIXQ8 AF/SMGF DFTfvI5TF IJX[GL ; FDFgI DFICTLo

5;TJT ; XMGDF\jI ISTUT DFICTL5+SD\IGNXGF 5§FZ4 TGL
; bI F VG[TGL 8SFJFZL GLRGF SM8SMD\VF5], L KP

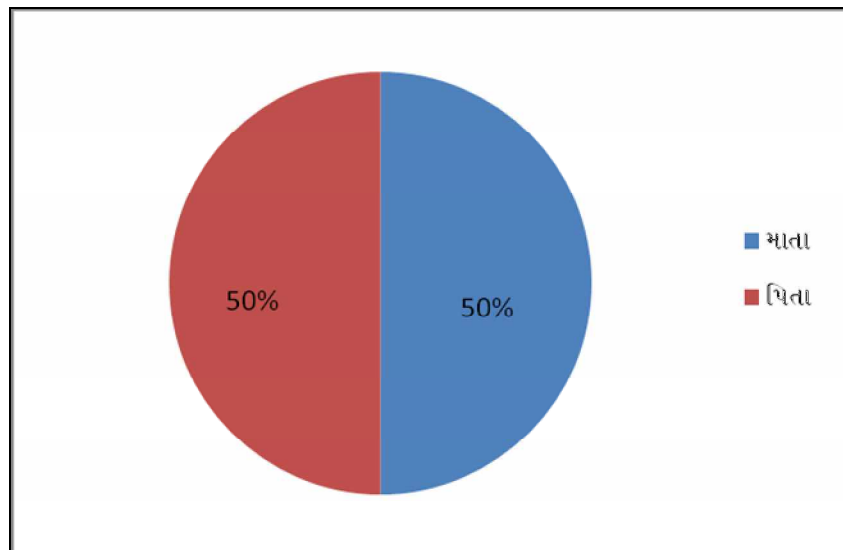
SM8S GPv1

; FWFZ6 VG[IJIX08 AF/SMGF DFTFVI5TFGL ; bIF VG[

8SFJFZL NXFJT)SM8S

SPFS	IJUT	; bIF	8SFJFZL
1	DFTF	240	50 %
2	I5TF	240	50 %
	S,	480	100%

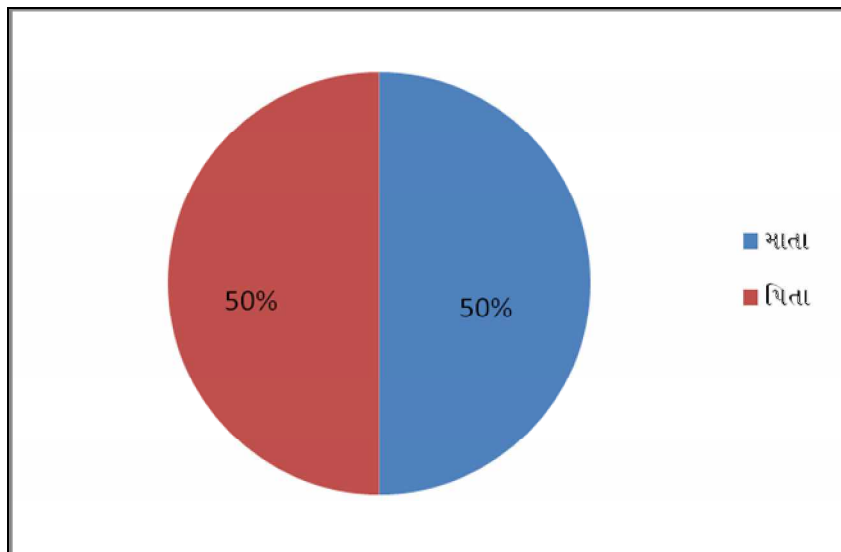
SM8S GP1DF; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL 8SFJFZL 50%
 VG[I5TFGL 8SFJFZL 50% HB,) HMUF D?I) CTP HGL UFO EFZF GLR[
 5PF6[ZHMFT SZL KP



SM8S GPv2

SPFS	IJUT	; bIF	8SFJFZL
1	DFTF	120	50 %
2	I5TF	120	50 %
	S,	240	100%

SM8S GP2DF\ ; FWFZ6 AF/SMGL DFTFGL 8SFJFZLG\ 5DF6 50%
 VG(I5TFGL 8SFJFZLG\ 5DF6 50% H\B, \HMUF D?I \CTP H\GL Ufo EFZF
 GLR[5DF6[ZH]MFT SZL KP



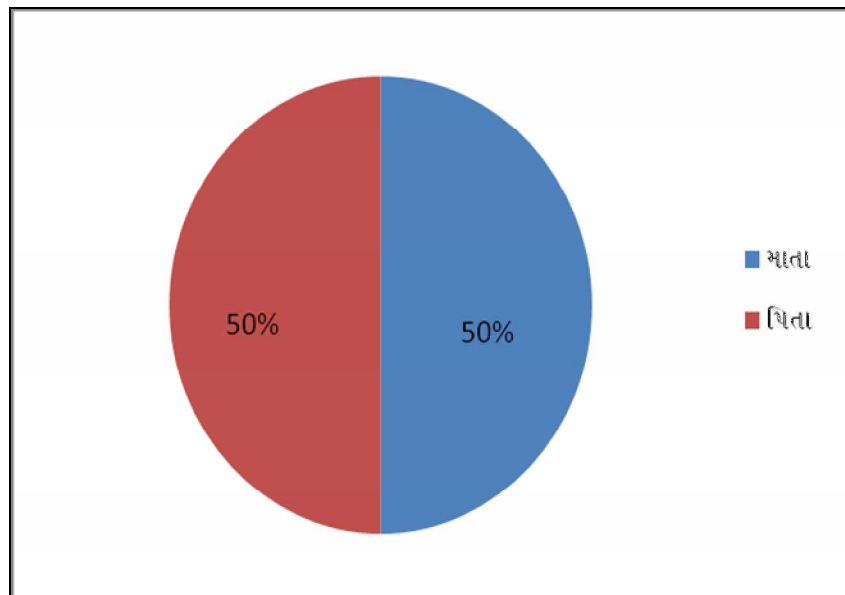
SM8S GPv3

IJIX08 AF/SMGF DFTFVI5TFGL ; bIF VG[

8SFJFZL NXFJT)SM8S

SPFS	IJUT	; bIF	8SFJFZL
1	DFTF	120	50 %
2	I5TF	120	50 %
	S,	240	100%

SM8S GP3 DF IJIX08 AF/SMGF DFTFGL 8SFJFZLG) 5DF6 50%
 VG[I5TFGL 8SFJFZLG) 5DF6 50% HB,)HMUF D?I)CTP HGL UFO EFZF
 GLR[5DF6[ZHMFT SZL KP



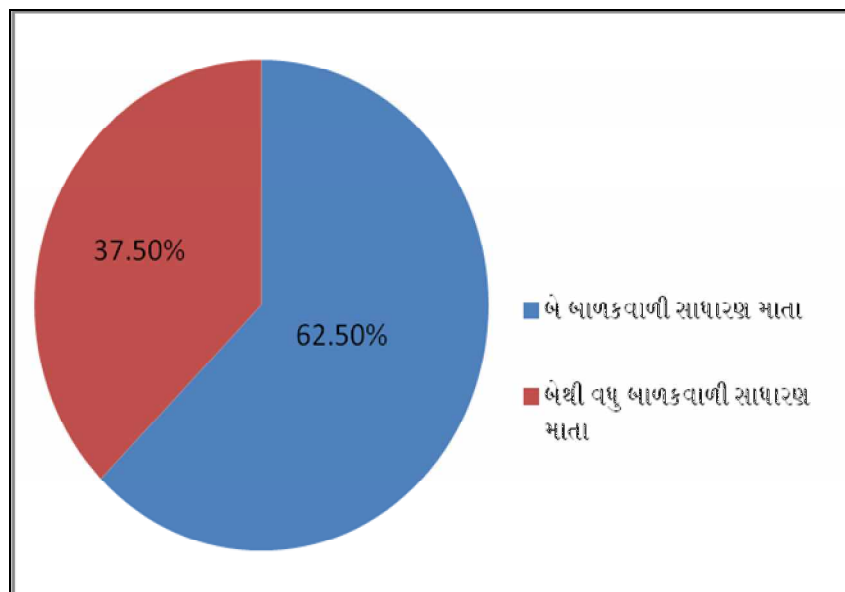
SM8S GPv4

A[AF/SJF/F VG[A\YL JW]AF/SJF/F S\]AGF ; FWZ6

AF/SMGL DFTFGL ; bIF VG[8SFJFZL NXFJT]SM8S

SPFS	IJUT	; bIF	8SFJFZL
1	A[AF/SJF/L ; FWZ6 AF/SMGL DFTF	75	62.5 %
2	A\YL JW]AF/SJF/L ; FWZ6 AF/SMGL DFTF	45	37.5 %
	S,	120	100.0 %

SM8S GP4DF\ A[AF/SJF/F VG[A\YL JW] AF/SJF/F S\]AGF
; FWZ6 AF/SMDF\ A[AF/SMGL DFTFGL 8SFJFZL 62.5 % VG[A\YL JW]
AF/SMGL DFTFGL 8SFJFZL 37.5% H\B, \HMUF D?I \CTR H\GL UFO EFZF
GLR[5DF6[ZHMFT SZL KP



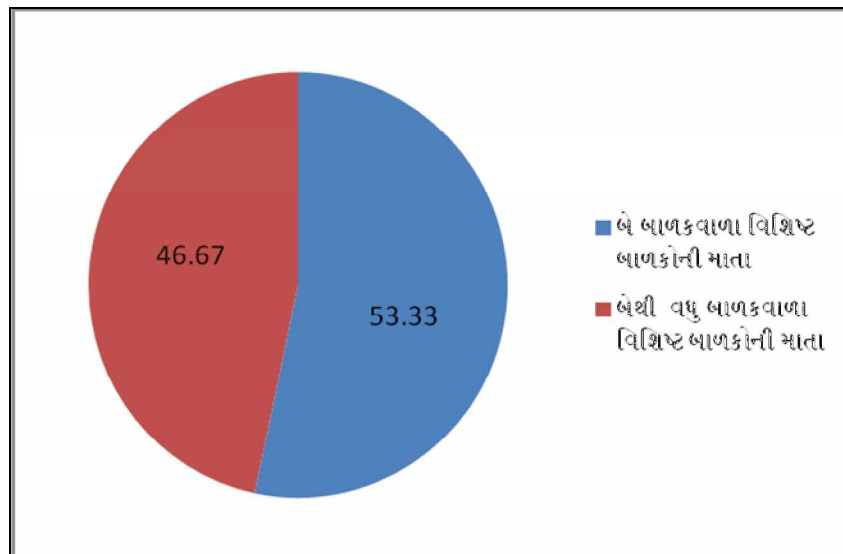
SM8S GPv5

A[AF/SJF/F VG[A\YL JW]AF/SJF/F IJIX08 AF/SMGL

DFTFGL ; bIF VG[8SFJFZL NXF"JT]SM8S

SPFS	IJUT	; bIF	8SFJFZL
1	A[AF/S JF/F IJIX08 AF/SMGL DFTF	64	53.33 %
2	A\YL JW]AF/SJF/F IJIX08 AF/SMGL DFTF	56	46.67 %
	S,	120	100.0 %

SM8S GP5DF\ A[AF/SMJF/F VG[A\YL JW] AF/SMJF/F IJIX08
AF/SMGL DFTFGL ; bIFDF\ A[AF/SM JF/L DFTFGL 8SFJFZL 53.33 %
VG[A\YL JW] AF/SM JF/L DFTFGL 8SFJFZL 46.67% H\B, \ HMJF D?I \
CTP HGL UFO EFZF GLR[5DF6[ZHYFT SZL KP



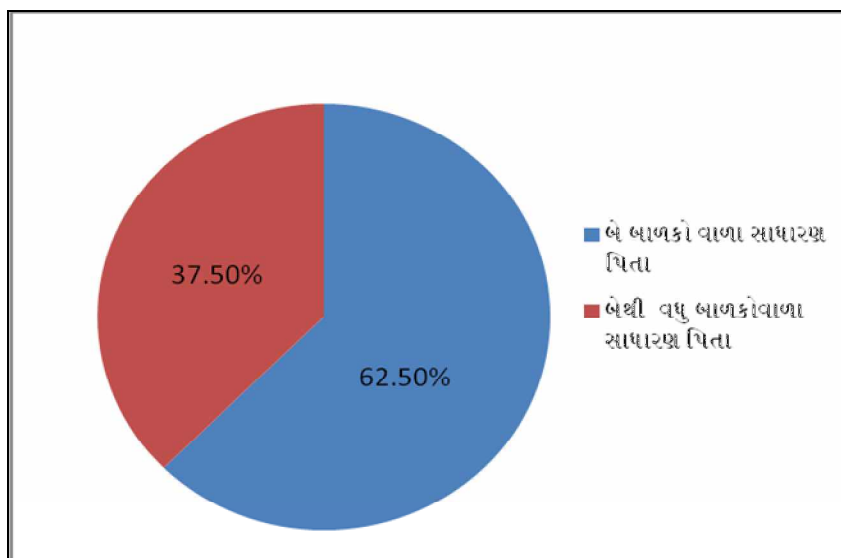
SM8S GPv6

A[AF/SJF/F VG[AJL JW]AF/SJF/F ; FWFZ6 AF/SMGF

I5TFGL ; bIF VG[8SEJFZL NXFJT]SM8S

SPFS	IJUT	; bIF	8SEJFZL
1	A[AF/SMJF/F ; FWFZ6 I5TF	75	62.5 %
2	AJL JW]AF/SMJF/F ; FWFZ6 I5TF	45	37.5 %
	S,	120	100.0 %

SM8S GP6DF A[AF/SM JF/F VG[AJL JW] AF/SM JF/F S]AGF ; FWFZ6 AF/SDF A[AF/SMGF I5TFGL 8SEJFZL 62.5 % VG[AJL JW] AF/SM JF/F I5TFGL 8SEJFZL 37.5 % H,)HMUF D?I]CTP HGL UfO EFZF GLR[5DF6[ZHMFT SZL KP



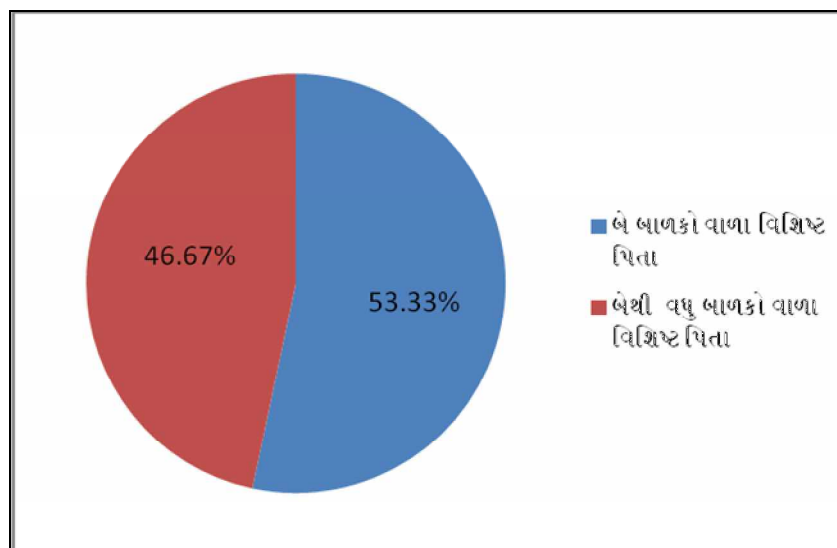
SM8S GPv7

A[AF/SM JF/F VG[A\YL JW] AF/SM JF/F IJIX08

AF/SMGF I5TFGL ; bIF VG[8SFJFZL NXF'JT] SM8S

SPFS	IJUT	; bIF	8SFJFZL
1	A[AF/SM JF/F IJIX08 I5TF	64	53.33 %
2	A\YL JW] AF/SM JF/F IJIX08 I5TF	56	46.67 %
	S,	120	100.0 %

SM8S GP7DF\ A[AF/SM JF/F VG[A\YL JW] AF/SM JF/F S\]AGF
IJIX08 AF/SMD\ A[AF/SGF I5TFGL 8SFJFZL 53.33 % VG[A\YL JW]
AF/SMGF I5TFGL 8SFJFZL 46.67% H\B, \HMUF D?I \CTP H\GL U\FO EFZF
GLR[5Df6[ZHMFT SZL KP



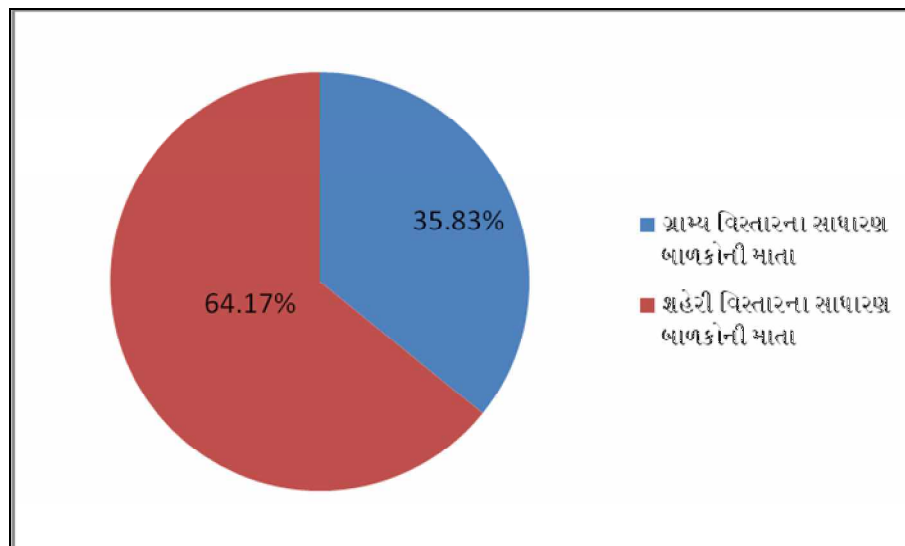
SM8S GPv8

UfdI IJ:TFZGF VG[XCZL IJ:TFZGF ; FWFZ6 AF/SMGL

DFTFGL ; bIF VG[8SFJFZL NXF"JT\SM8S

SPFS	IJUT	; bIF	8SFJFZL
1	UfdI IJ:TFZGF ; FWFZ6 AF/SMGL DFTF	43	35.83 %
2	XCZL IJ:TFZGF ; FWFZ6 AF/SMGL DFTF	77	64.17 %
	S,	120	100.0 %

SM8S GR8DA UfdI IJ:TFZGF VG[XCZL IJ:TFZGF ; FWFZ6
AF/SMDA UfdI IJ:TFZGL DFTFGL 8SFJFZL 35.83% VG[XCZL IJ:TFZGL
DFTFGL 8SFJFZL 64.17% Hb,) HMUF D?I\ CTP HGL Ufo EFZF GLR[
5DF6[ZHMFT SZL KP



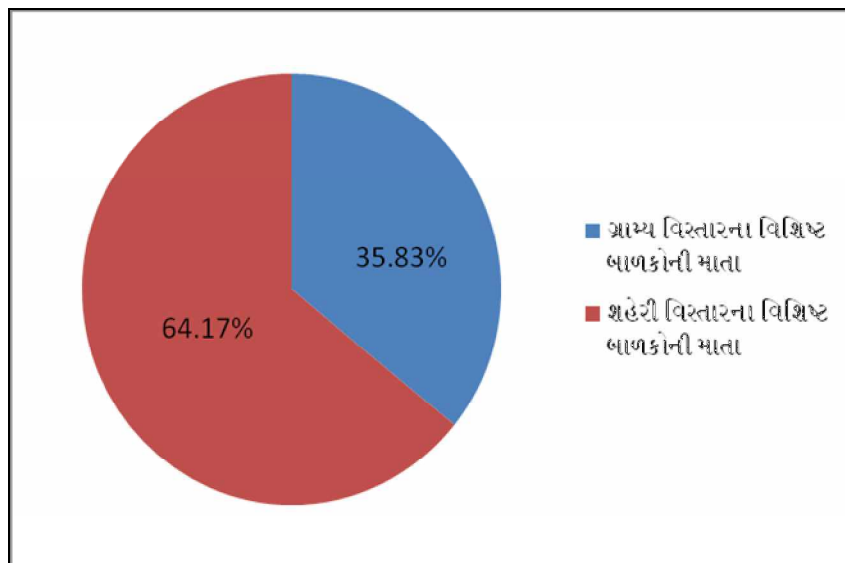
SM8S GPv9

UfdI IJ:TFZGF VG[XCZL IJ:TFZGF IJIX08 AF/SMGL

DFTFGL ; bIF VG[8SFJFZL NXF"JT\SM8S

SPFS	IJUT	; bIF	8SFJFZL
1	UfdI IJ:TFZGF IJIX08 AF/SMGL DFTF	60	50 %
2	XCZL IJ:TFZGF IJIX08 AF/SMGL DFTF	60	50 %
	S,	120	100.0 %

SM8S GP9DFAUfdI IJ:TFZ VG[XCZL IJ:TFZGF IJIX08 AF/SMDF
UfdI IJ:TFZGL DFTFGL 8SFJFZL 50 % VG[XCZL IJ:TFZGL DFTFGL
8SFJFZL 50 % Hß, L HMJF D/L CTLP HGL Ufo EFZF GLR[5DF6[ZHMFT
SZL KP



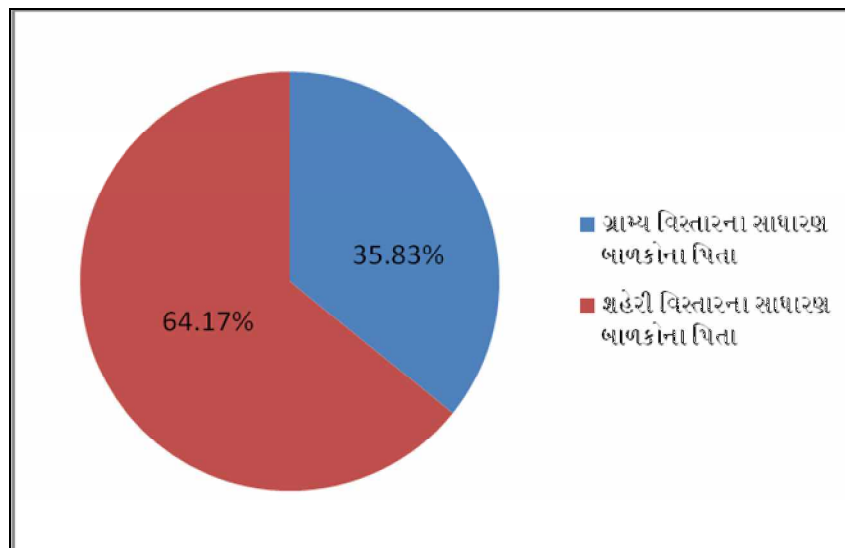
SM8S GPv10

UfdI IJ:TFZGF VG[XCZL IJ:TFZGF ; FWFZ6 AF/SMGL

I5TFGL ; bIF VG[8SEJFZL NXFJT\SM8S

SPFS	IJUT	; bIF	8SEJFZL
1	UfdI IJ:TFZGF ; FWFZ6 AF/SMGF I5TF	43	35.83 %
2	XCZL IJ:TFZGF ; FWFZ6 AF/SMGF I5TF	77	64.17 %
	S,	120	100.0 %

SM8S GP10DFA UfdI IJ:TFZ VG[XCZL IJ:TFZGF ; FWFZ6
AF/SMDF UfdI IJ:TFZGF I5TFGL 8SEJFZL 35.83 % VG[XCZL
IJ:TFZGF I5TFGL 8SEJFZL 64.17 % Hß, L HMUF D/L CTLP HGL UF0
EFZF GLR[5DF6[ZHMFT SZL KP



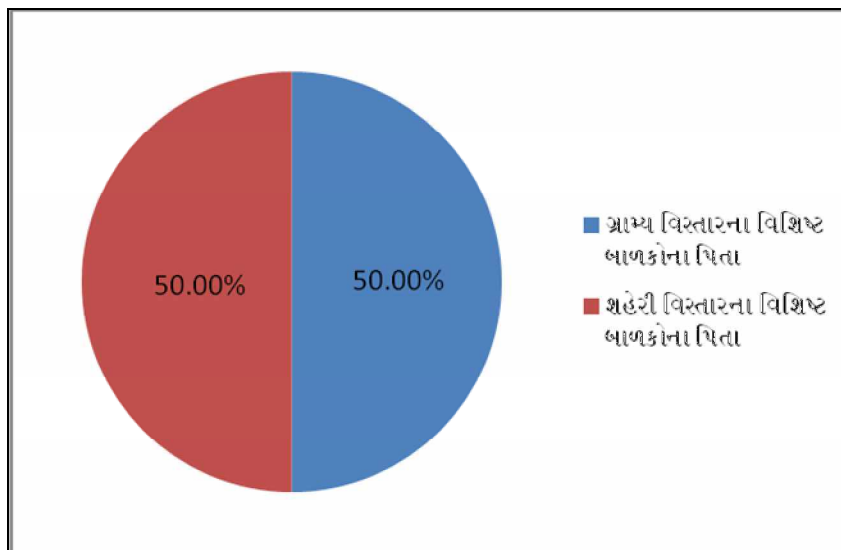
SM8S GPv11

UfdI IJ:TFZ VG[XCZL IJ:TFZGF IJIX08 AF/SMGF

I5TFGL ; bIF VG[8SFJFZL NXFJT\SM8S

SPFS	IJUT	; bIF	8SFJFZL
1	UfdI IJ:TFZGF IJIX08 AF/SMGF I5TF	60	50 %
2	XCZL IJ:TFZGF IJIX08 AF/SMGF I5TF	60	50 %
	S,	120	100.0 %

SM8S GP11DFUfdI IJ:TFZ VG[XCZL IJ:TFZGF IJIX08 AF/SMDFA
UfdI IJ:TFZGF I5TFGL 8SFJFZL 50 % VG[XCZL IJ:TFZGF I5TFGL
8SFJFZL 50 % Hß, L HMJF D/L CTLP HGL Ufo EFZF GLR[5DF6[ZHMFT
SZL KP



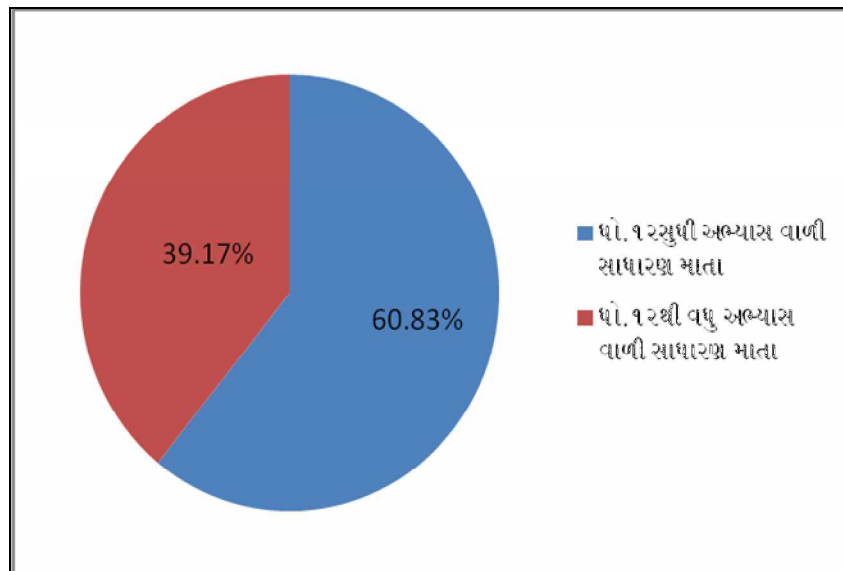
SM8S GPv12

WMP12 ;]WL VG[WMP12 YL JW] VeIF; JF/L ; FWFZ6 AF/SMGL

DFTFGL ; bIF VG[8SFJFZL NXF"JT\SM8S

SPFS	IJUT	; bIF	8SFJFZL
1	WMP 12 ;]WL VeIF; JF/L ; FWFZ6 DFTF	73	60.83 %
2	WMP 12 YL JW] VeIF; JF/L ; FWFZ6 DFTF	47	39.17 %
	S,	120	100.0 %

SM8S GP12DF\ WMP12 ;]WL VG[WMP12 YL JW] VeIF; JF/L
; FWFZ6 AF/SMGL WMP 12 ;]WL VeIF; JF/L DFTFGL 8SFJFZL 60.83 %
VG[WMP 12YL JW] VeIF; JF/L DFTFGL 8SFJFZL 39.17% HÞ, F\ HMUF
D?IF CTFH HGL GLR[UFO EFZF GLR[5DF6[ZHMFT SZL KP



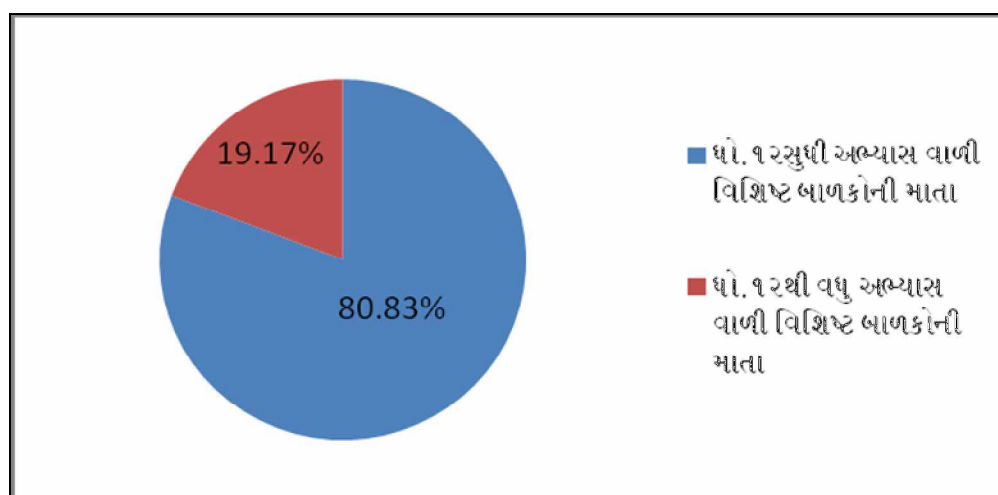
SM8S GPv13

WMP12 ;]WL VG[WMP12 YL JW] VeIF; JF/F IJIXQ8 AF/SMGL

DFTFGL ; bIF VG[8SEJFZL NXF"JT\SM8S

SPFS	IJUT	; bIF	8SEJFZL
1	WMP 12 ;]WL VeIF; JF/F IJIXQ8 DFTF	97	80.83 %
2	WMP 12 YL JW] VeIF; JF/L IJIXQ8 DFTF	23	19.17 %
	S,	120	100.0 %

SM8S GP13DF\ WMP12 ;]WL VG[WMP12 YL JW] VeIF; JF/L IJIXQ8 AF/SMGL DFTFDF\ WMP 12 ;]WL VeIF; JF/L DFTFGL 8SEJFZL 80.83 % VG[WMP 12YL JW] VeIF; JF/L DFTFGL 8SEJFZL 19.17% HÞ, F\HMUF D?IF CTF4 HGL GLR[5ÞF6[Uf0 EFZF ZHMFT SZL KP

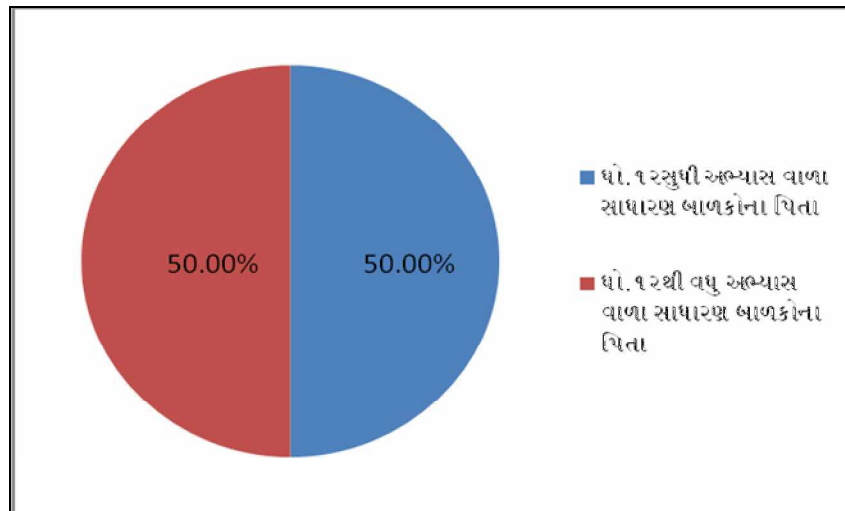


SM8S GPv14

WMP12 ; WL VG[12 YL JW] VeIF; JF/F ; FWFZ6 AF/SMGF
I5TFGL ; bIF VG[8SFJFZL NXFJT] SM8S

SPFS	IJUT	; bIF	8SFJFZL
1	WMP 12 ; WL VeIF; JF/F ; FWFZ6 I5TF	60	50 %
2	WMP 12 YL JW] VeIF; JF/F ; FWFZ6 I5TF	60	50 %
	Sj,	120	100.0 %

SM8S GP14DF\ WMP12 ; WL VG[WMP12 YL JW] VeIF; JF/F
; FWFZ6 AF/SMDF\ WMP 12 ; WLGF VeIF; JF/F I5TFGL 8SFJFZL 50 %
VG[WMP12 YL JW] VeIF; JF/F I5TFGL 8SFJFZL 50 % Hß, Æ HMUF
D?IF CTF\ HGL GLR[5DF6[UFO EFZF ZHMFT SZL KP



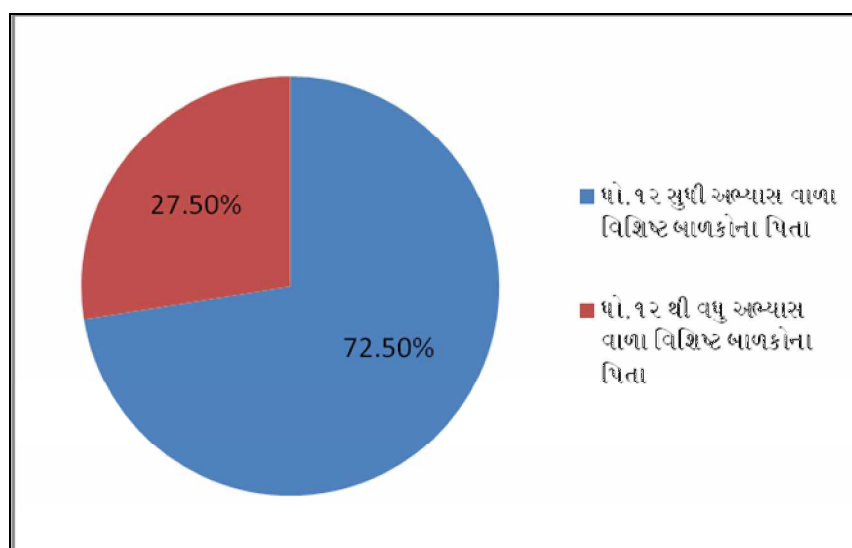
SM8S GPv15

WMP12 ; WL VG[WMP12 YL JW] VeIF; JF/F IJIXQ8 AF/SMGF

I5TFGL ; bIF VG[8SEJFZL NXFJT]SM8S

SPFS	IJUT	; bIF	8SEJFZL
1	WMP 12 ; WL VeIF; JF/F IJIXQ8 AF/SMGF I5TF	87	72.5 %
2	WMP 12 YL JW] VeIF; JF/F IJIXQ8 AF/SMGF I5TF	33	27.5 %
	S,	120	100.0 %

SM8S GP15DF\ WMP12 ; WL VG[WMP12 YL JW] VeIF; JF/F IJIXQ8 AF/SMDF\ WMP 12 ; WLGf VeIF; JF/F I5TFGL 8SEJFZL 72.5 % VG[WMP 12 YL JW] VeIF; JF/F I5TFGL 8SEJFZL 27.5 % Hß, F HMUF D?IF CTFH HGL GLR[5DF6[UFO EFZF ZHMFT SZL KP



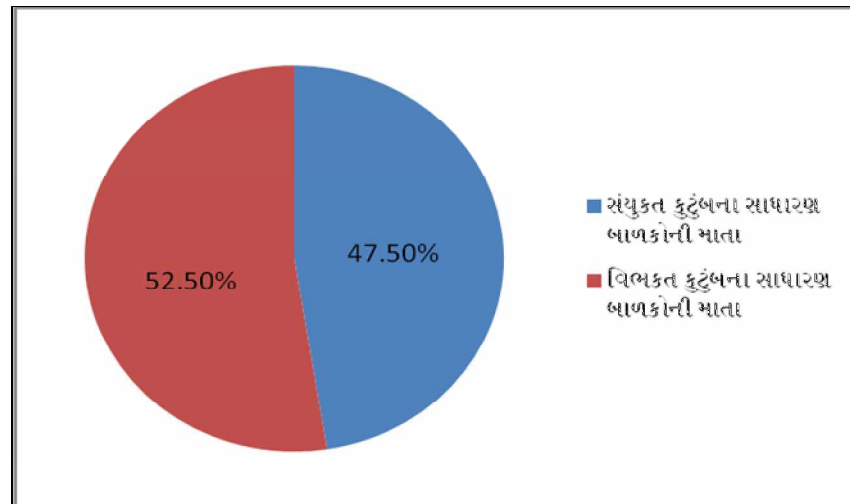
SM8S GPv16

; V JST SBJAGF VG[IJEST SBJAGF ; FWFZ6 AF/SMGL

DFTFGL ; bIF VG[8SFJFZL NXF"JT\SM8S

SPFS	IJUT	; bIF	8SFJFZL
1	; V JST SBJAGF ; FWFZ6 AF/SMGL DFTF	57	47.5 %
2	IJEST SBJAGF ; FWFZ6 AF/SMGL DFTF	63	52.5 %
	S,	120	100.0 %

SM8S GP16DF; V JST SBJA VG[IJEST SBJAGF ; FWFZ6 AF/SMGF
DFTFGL 8SFJFZL 47.5 % VG[IJEST SBJAGL DFTFGL 8SFJFZL 52.5 %
Hß, FHMUF D?IF CTF#HGL GLR[5DF6[U]0 EFZF ZHMFT SZL KP

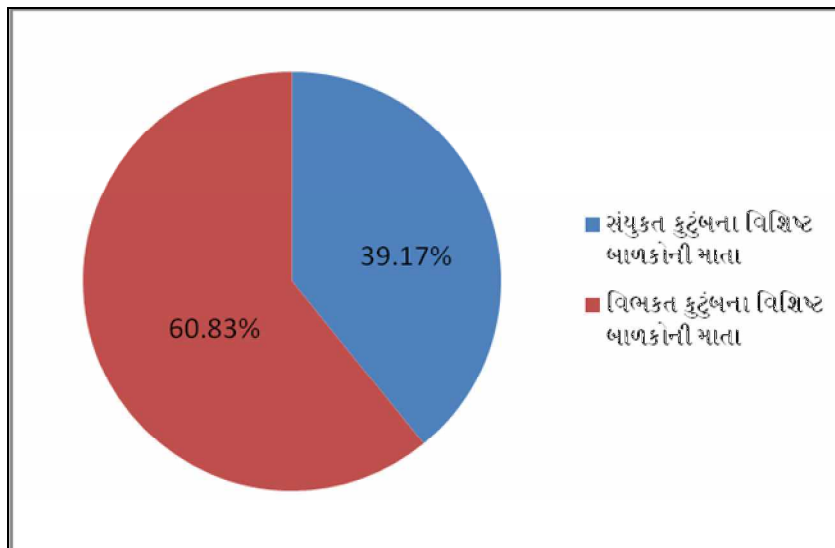


SM8S GRv17

; V JST SBJAGF VG[IJEST SBJAGF IJIX08 AF/SMGL
DFTFGL ; bIF VG[8SFJFZL NXF"JT] SM8S

SPFS	IJUT	; bIF	8SFJFZL
1	; V JST SBJAGF IJIX08 AF/SMGL DFTF	47	39.17 %
2	IJEST SBJAGF IJIX08 AF/SMGL DFTF	73	60.83 %
	Sj,	120	100.0 %

SM8S GR17DA ; V JST SBJA VG[IJEST SBJAGF IJIX08 AF/SMGL
DFTFDA ; V JST SBJAGF I5TFGL 8SFJFZL 39.17 % VG[IJEST SBJAGF
I5TFGL 8SFJFZL 60.83 % HJ, FHMUF D?IF CTFH HGL GLR[5DF6[UF0
EFZF ZHMFT SZL KP



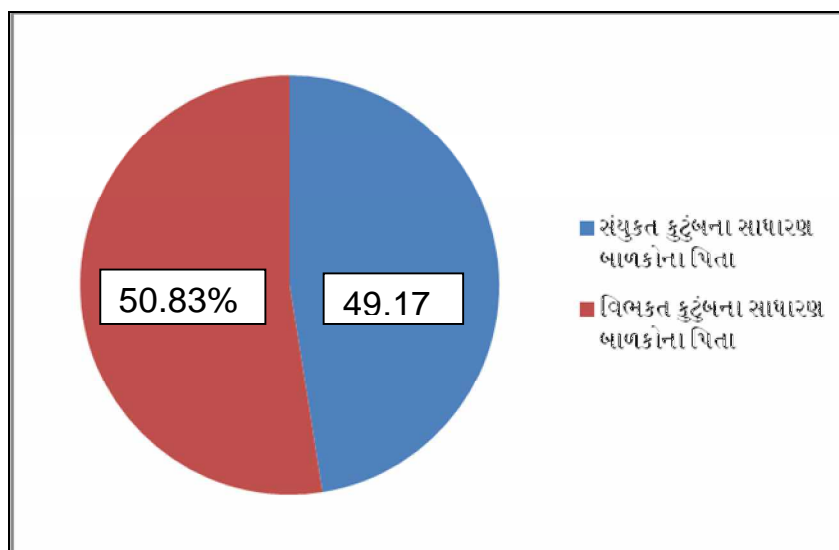
SM8S GPv18

; V JST SBJA VG[IJEST SBJAGF ; FWFZ6 AF/SMGF

I5TFGL ; bIF VG[8SFJFZL NXFJT\SM8S

SPFS	IJUT	; bIF	8SFJFZL
1	; V JST SBJADFA; FWFZ6 AF/SMGF I5TF	59	49.17 %
2	IJEST SBJADFA; FWFZ6 AF/SMGF I5TF	61	50.83 %
	Sj,	120	100.0 %

SM8S GP18 ; V JST SBJA VG[IJEST SBJAGF ; FWFZ6 AF/SMDF
; V JST SBJAGF I5TFGL 8SFJFZL 49.17% VG[IJEST SBJAGF I5TFGL
8SFJFZL 50.83% HB, F HMUF D?IF CTF4 HGL GLR[5DF6[UF0 EFZF
ZHMFT SZL KP



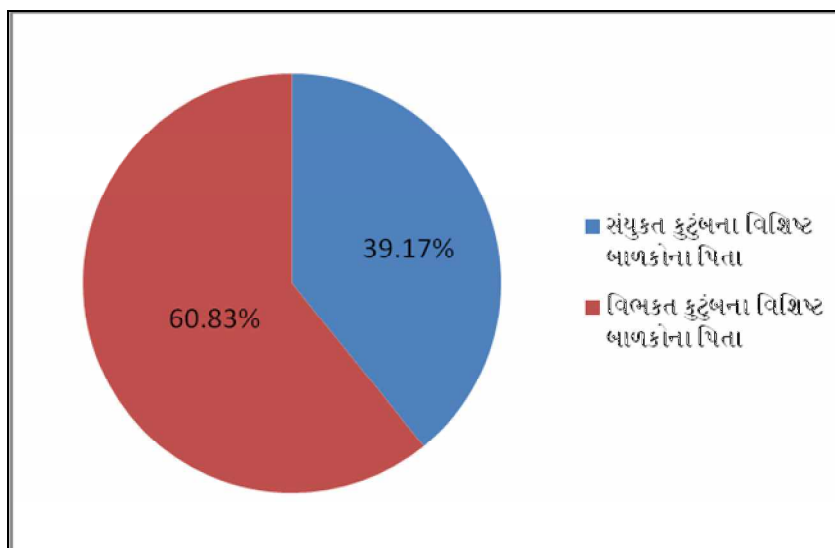
SM8S GPv19

; V JST SBJA VG[IJEST SBJAGF IJIX08 AF/SMGF

I5TFGL ; bIF VG[8SEJFZL NXFJT\SM8S

SPFS	IJUT	; bIF	8SEJFZL
1	; V JST SBJADFIJIX08 AF/SMGF I5TF	47	39.17 %
2	IJEST SBJADFIJIX08 AF/SMGF I5TF	73	60.83 %
	S,	120	100.0 %

SM8S GP19DA ; V JST SBJA VG[IJEST SBJAGF IJIX08 AF/SMDF
; V JST SBJAGF I5TFGL 8SEJFZL 39.17 % VG[IJEST SBJAGF I5TFGL
8SEJFZL 60.83 % HJ, F\HMUF D?IF CTF\ HGL GLR[5DF6[UF0 EFZF
ZHMFT SZL KP

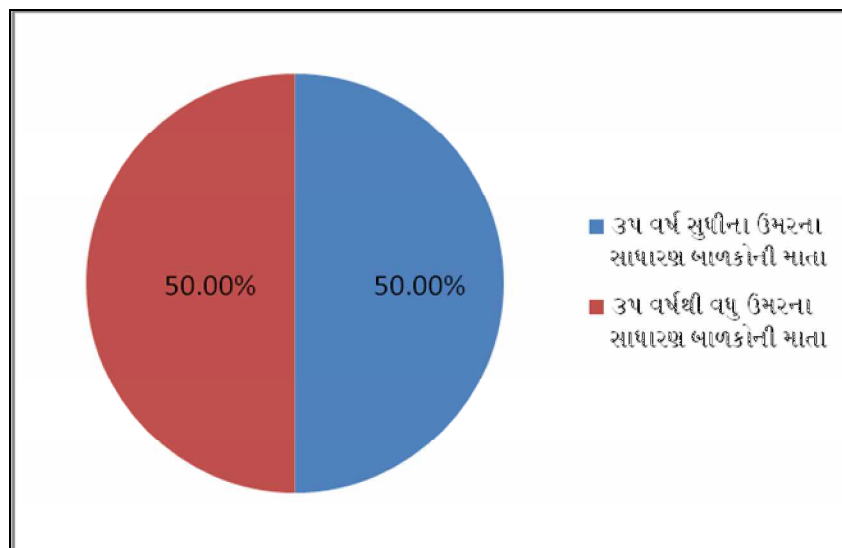


SM8S GPv20

35 JQF" ; WL VG[35 JQFYL JW]pDZGF ; FWFZ6 AF/SMGL
DFTFGL ; bIF VG[8SFJFZL NXF"JT]SM8S

SPFS	IJUT	; bIF	8SFJFZL
1	35 JQF" ; WLGF ; FWFZ6 AF/SMGL DFTF	60	50 %
2	35 JQFYL JW] ; FWFZ6 AF/SMGL DFTF	60	50 %
	S,	120	100.0 %

SM8S GP20DA 35 JQF" ; WL VG[35 JQFYL JW] pDZGF ; FWFZ6
AF/SMDA 35 JQF" ; WLGL DFTFGL 8SFJFZL 50 % VG[35 JQFYL JW]
DFTFGL 8SFJFZL 50 % HB, F\HMJF D?IF CTFH HGL GLR[5DF6[UFO EFZF
ZHMFT SZL KP



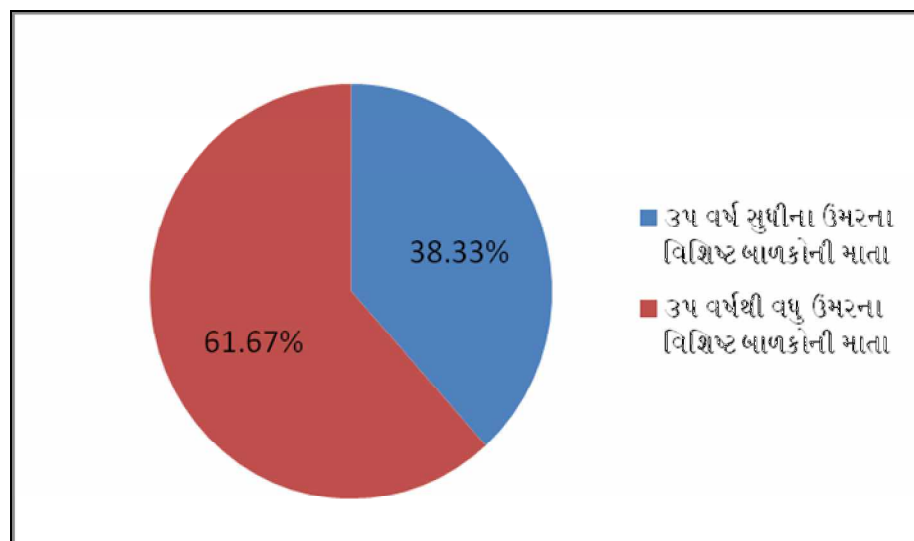
SM8S GRv21

35 JQF" ; WL VG[35 JQFYL JW] pDZGF IJIX08 AF/SMGL

DFTFGL ; bIF VG[8SFJFZL NXF"JT\SM8S

SPFS	IJUT	; bIF	8SFJFZL
1	35 JQF" ; WLGF IJIX08 AF/SMGL DFTF	46	38.33 %
2	35 JQFYL JW] IJIX08 AF/SMGL DFTF	74	61.67 %
	S,	120	100.0 %

SM8S GR21DF\ 35 JQF" ; WL VG[35 JQFYL JW] pDZGF IJIX08
AF/SMDA\ 35 JQF" ; WLGL DFTFGL 8SFJFZL 38.33 % VG[35 JQFYL JW]
pDZGL DFTFGL 8SFJFZL 61.67 % Hβ, F\ HMUF D?IF CTFH HGL GLR[
5DF6[UFO EFZF ZHMFT SZL KP



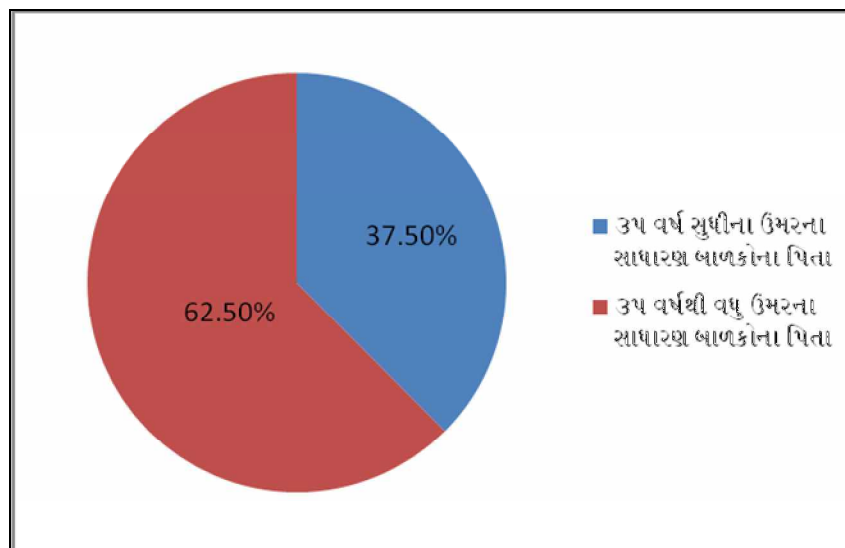
SM8S GRv22

35 JQF" ; WL VG[35 JQFYL JW]pDZGF ; FWFZ6 AF/SMGF

I5TFGL ; bIF VG[8SEJFZL NXF"JT]SM8S

SPFS	IJUT	; bIF	8SEJFZL
1	35 JQF" ; WLGf ; FWFZ6 AF/SMGF I5TF	45	37.5 %
2	35 JQFYL JW] ; FWFZ6 AF/SMGF I5TF	75	62.5 %
	Sj,	120	100.0 %

SM8S GR22DF\ 35 JQF" ; WL VG[35 JQFYL JW] pDZGF ; FWFZ6
AF/SMGF I5TFDF\ 35 JQF" ; WLGf I5TFGL 8SEJFZL 37.5 % VG[35 JQFYL
JW] pDZGF I5TFGL 8SEJFZL 62.5 % Hß, F\ HMUF D?IF CTF\ HGL GLR[
5DF6[UFO EFZF ZHMFT SZL KP



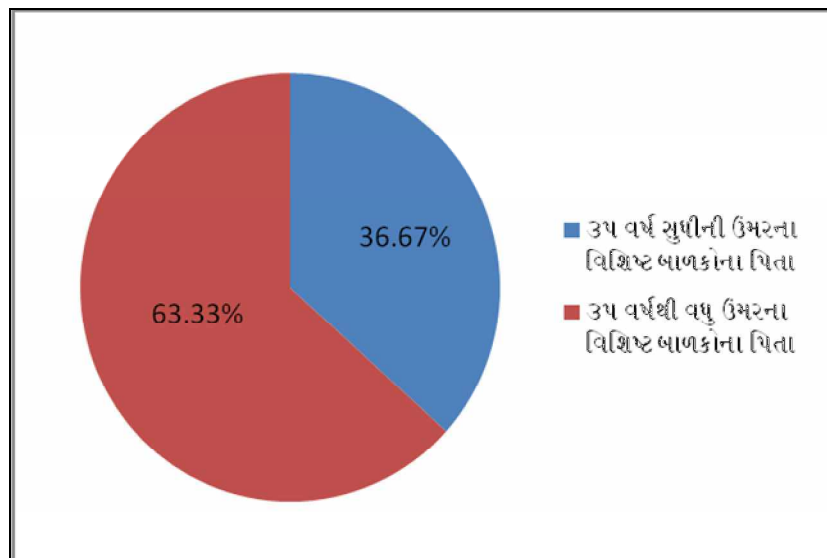
SM8S GPv23

35 JQF" ; WL VG[35 JQFYL JW]pDZGF IJIX08 AF/SMGF

I5TFGL ; bIF VG[8SEJFZL NXFJT\SM8S

SPFS	IJUT	; bIF	8SEJFZL
1	35 JQF" ; WLGL pDZGF IJIX08 AF/SMGF I5TF	44	36.67 %
2	35 JQFYL JW]pDZGF IJIX08 AF/SMGF I5TF	76	63.33 %
	S,	120	100.0 %

SM8S GP23DF\ 35 JQF" ; WL VG[35 JQFYL JW] pDZGF IJIX08 AF/SMGF I5TFDF\ 35 JQF" ; WLGL pDZGF I5TFGL 8SEJFZL 36.67 % VG[35 JQFYL JW] pDZGF I5TFGL 8SEJFZL 63.33 % Hß, F\HMJF D?IF CTFH HGL GLR[5DF6[UFO EFZF ZHMFT SZL KP



4.3 ; DU|:JT+ 5IZJtIMNXFJT}o

SM8Sv23-A

SM8S GP	CPLU	IJUT	; bIF	8SFJFZL
1	; FWZ6 VG[IJIX08 AF/SMGF DFTFvI5TFGL ; bIF VG[8SFJFZL	; FWZ6 VG[IJIX08 AF/SGL DFTF	240	50 %
		; FWZ6 VG[IJIX08 AF/SGF I5TF	240	50 %
2	; FWZ6 AF/SMGF DFTFvI5TFGL ; bIF VG[8SFJFZL NXFJT}SM8S	; FWZ6 AF/SMGL DFTF	120	50 %
		; FWZ6 AF/SMGF I5TF	120	50 %
3	IJIX08 AF/SMGF DFTFvI5TFGL ; bIF VG[8SFJFZL	IJIX08 AF/SMGL DFTF	120	50 %
		IJIX08 AF/SMGF I5TF	120	50 %
4	A[AF/SJF/F VG[A]YL JW]AF/S JF/F ; FWZ6 AF/SMGL DFTFGL ; bIF VG[8SFJFZL	A[AF/SJF/F ; FWZ6 AF/SMGL DFTF	75	62.5 %
		A]YL JW]AF/SJF/F ; FWZ6 AF/SMGL DFTF	45	37.5 %
5	A[AF/SJF/F VG[A]YL JW]AF/S JF/F IJIX08 AF/SMGL DFTFGL ; bIF VG[8SFJFZL	A[AF/SJF/F IJIX08 AF/SMGL DFTF	64	53.33 %
		A]YL JW]AF/SJF/F IJIX08 AF/SMGL DFTF	56	46.47 %
6	A[AF/SJF/F VG[A]YL JW]AF/S JF/F ; FWZ6 AF/SMGF I5TFGL ; bIF VG[8SFJFZL	A[AF/SJF/F ; FWZ6 AF/SM I5TF	75	62.5 %
		A]YL JW]AF/SJF/F ; FWZ6 AF/SMGF I5TF	45	37.5 %
7	A[AF/SJF/F VG[A]YL JW]AF/S JF/F IJIX08 AF/SMGF I5TFGL ; bIF VG[8SFJFZL	A[AF/SJF/F IJIX08 AF/SMGF I5TF	64	53.33 %
		A]YL JW]AF/SJF/F IJIX08 AF/SMGF I5TF	56	46.47 %

8	UfdI IJ:TFZ VG[XCZL IJ:TFZGF ; FWFZ6 AF/SMGL DFTFGL ; bIF VG[8SFJFZL	UfdI IJ:TFZGF ; FWFZ6 AF/SMGL DFTF	43	35.83 %
		XCZL IJ:TFZGF ; FWFZ6 AF/SMGL DFTF	77	64.17 %
9	UfdI IJ:TFZ VG[XCZL IJ:TFZGF IJIX08 AF/SMGL DFTFGL ; bIF VG[8SFJFZL	UfdI IJ:TFZGF IJIX08 AF/SMGL DFTF	60	50 %
		XCZL IJ:TFZGF IJIX08 AF/SMGL DFTF	60	50 %
10	UfdI IJ:TFZ VG[XCZL IJ:TFZGF ; FWFZ6 AF/SMGF I5TFGL ; bIF VG[8SFJFZL	UfdI IJ:TFZGF ; FWFZ6 AF/SMGF I5TF	43	35.83 %
		XCZL IJ:TFZGF ; FWFZ6 AF/SMGF I5TF	77	64.17 %
11	UfdI IJ:TFZ VG[XCZL IJ:TFZGF IJIX08 AF/SMGF I5TFGL ; bIF VG[8SFJFZL	UfdI IJ:TFZGF IJIX08 AF/SMGF I5TF	60	50 %
		XCZL IJ:TFZGF IJIX08 AF/SMGF I5TF	60	50 %
12	WMP12 VG[12 YL JW]VeIF; WZFJTL ; FWFZ6 AF/SMGL DFTFGL ; bIF VG[8SFJFZL	WMP12 ; JW] VeIF; WZFJTL ; FWFZ6 AF/SMGL DFTF	73	60.83%
		WMP12 YL JW] VeIF; WZFJTL ; FWFZ6 AF/SMGL DFTF	47	39.17%
13	WMP12 VG[12 YL JW]VeIF; WZFJTL IJIX08 AF/SMGL DFTFGL ; bIF VG[8SFJFZL	WMP12 ; JW] VeIF; WZFJTL IJIX08 AF/SMGL DFTF	97	80.83%
		WMP12 YL JW] VeIF; WZFJTL IJIX08 AF/SMGL DFTF	23	19.17%

14	WMP12 VG[12 YL JW]VeIF; WZFJTL ; FWZ6 AF/SMGF I5TFGL ; bIF VG[8SFJFZL	WMP12 ; JW]VeIF; WZFJTL ; FWZ6 AF/SMGF I5TF	60	50 %
		WMP12 YL JW]VeIF; WZFJTL ; FWZ6 AF/SMGF I5TF	60	50 %
15	WMP12 VG[12 YL JW]VeIF; WZFJTL IJIX08 AF/SMGF I5TFGL ; bIF VG[8SFJFZL	WMP12 ; JW]VeIF; WZFJTL IJIX08 AF/SMGF I5TF	87	72.5 %
		WMP12 YL JW]VeIF; WZFJTL IJIX08 AF/SMGF I5TF	33	27.5 %
16	; V]ST VG[IJEST SBJAGF ; FWZ6 AF/SMGL DFTFGL ; bIF VG[8SFJFZL	; V]ST SBJAGF ; FWZ6 AF/SMGL DFTF	57	47.5 %
		IJEST SBJAGF ; FWZ6 AF/SMGL DFTF	63	52.5 %
17	; V]ST VG[IJEST SBJAGF IJIX08 AF/SMGL DFTFGL ; bIF VG[8SFJFZL	; V]ST SBJAGF IJIX08 AF/SMGL DFTF	47	39.17%
		IJEST SBJAGF IJIX08 AF/SMGL DFTF	73	60.83%
18	; V]ST VG[IJEST SBJAGF ; FWZ6 AF/SMGF I5TFGL ; bIF VG[8SFJFZL	; V]ST SBJAGF ; FWZ6 AF/SMGF I5TF	59	49.17 %
		IJEST SBJAGF ; FWZ6 AF/SMGF I5TF	61	50.83 %
19	; V]ST VG[IJEST SBJAGF IJIX08 AF/SMGF I5TFGL ; bIF VG[8SFJFZL	; V]ST SBJAGF IJIX08 AF/SMGF I5TF	47	39.17%
		IJEST SBJAGF IJIX08 AF/SMGF I5TF	73	60.83%

20	35 JQF"; JWL VG[35 YL JW]pDZGF ; FWFZ6 AF/SMGL DFTFGL ; bIF VG[8SFJFZL	35 JQF"; JWLGF ; FWFZ6 AF/SMGL DFTF	60	50 %
		35 JQF"YL JW] ; FWFZ6 AF/SMGL DFTF	60	50 %
21	35 JQF"; JWL VG[35 YL JW]pDZGF IJIX08 AF/SMGL DFTFGL ; bIF VG[8SFJFZL	35 JQF"; JWLGF IJIX08 AF/SMGL DFTF	46	38.33%
		35 JQF"YL JW]IJIX08 AF/SMGL DFTF	74	61.67 %
22	35 JQF"; JWL VG[35 YL JW]pDZGF ; FWFZ6 AF/SMGF I5TFGL ; bIF VG[8SFJFZL	35 JQF"; JWLGF ; FWFZ6 AF/SMGF I5TF	45	37.5 %
		35 JQF"YL JW] ; FWFZ6 AF/SMGF I5TF	75	62.5 %
23	35 JQF"; JWL VG[35 YL JW]pDZGF IJIX08 AF/SMGF I5TFGF ; bIF VG[8SFJFZL	35 JQF"; JWLGF IJIX08 AF/SMGF I5TF	44	36.67 %
		35 JQF"YL JW]IJIX08 AF/ SMGF I5TF	76	63.33 %

; XMWSFV[p5ZMST IGNX'GL ; bIF4 8SFJFZL VG[UfO EFZF
ZHJ\FT SZ[, K[TG\ SFZ6 IJQFI GL :508TF4 J(7FIGSTF VG[RMP; TF
H/JF. ZC[TUMC[T] KP

VF p5ZFT 5MT[DNA]âGF AF/SMGL ; \YFDF\ ; JFVM VF5TL
CMJFYL IJIX08 AF/SMGF DFTFvI5TF IJXGF DGMU(7FIGS 5IZA/NDFYL
ccIJST IRTFcc4ccDFGI; S :JF:yI cc4 ccÛJG ; VMDFccG[VFWFZ[5]; T]T VeIF;
IJS; FJJF DF8[VCL\ ptS<5GFVM ZRJFDF\ VFJL KP VF ptS<5GFVMG[

5YD IJWFIS ptS<5GF TZLS[TPDH TGF J§I<5S :J~5G[wI FGDA , LWF
 5KL XqI ptS<5GFVMGL ZRGF SZ[L KP p5ZMST DGMU{7FIGS 5IZA/M
 IJX[; FWFZ6 AF/SMGF DFTFvI5TF VG[IJIXQ8 AF/SMGF DFTFvI5TF VD
 A[HYM 5FOLG[S; MBLGM p5I MU SZL sHo₁ to Ho₇₈f GLR[5DF6[; }+GM
 p5I MU SZL IGNXGL snf4 DwI S smf4 5DF6 IJR, G ssdf4 AG[HYGL
 5DF6 E} sR§fsSEM) TPDH ; V§T 5DF6E} sSEdfGF t-GF ; }+GF
 VFWFZ[t-GL ISDT D/J, K[VG[VY"38G SZ[KP Vß, [S[AG[HYGL
 ; FYSTF T5F; L KP VF DF8[tvGL H~ZL ISDT 0.05 S1FFV[XMWLG[
 5Iz6FDMTFZjIF K[VG[TFZ6MNXF"J], F KP H[GLR[IJUT[KP

VF TFZ6MG[VFWFZ[; XMWSFV[jI JCFIZS ; NXM 5ZM SZJFGM
 5|tG SIMK[S[HGFYL DFvAF5G[5MTFGL IJST IRVTFG\ 5DF6 38F0JFDF4
 DFGI; S :JF:yI IJS; FJJFDF\ TPDH ÒJG ; VMF JWFZJFDF\ VF VeIF;
 BJA H p5I MUL Y. XSX[TU\ VeIF; SG\GD[DFGJ\KP

4.4 t- S; MBL 5DF6[X]I ptS<5GFVMGL U6TZL 0

Ho, A[AF/SJF/F ; FWZ6 VG[IJIX08 AF/SMGF DTFGL IJST IRTFGF
Dwl SMJrR[; FYS TOFJT GYLP

SM8S GP 24

A[AF/SJF/F ; FWZ6 VG[IJIX08 AF/SMGF DTFGL IJST IRTFGF
5F%TFSMGF VFWFZ['t' S; MBL
(N=139)

SD	IJUT	IJST IRTFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM	SED		
1	; FWZ6 AF/SMGL DTF	75	36.61	16.89	1.95	2.25	2.39	KP
2	IJIX08 AF/SMGL DTF	64	41.98	9.08	1.13			

SM8SDF\ VF5[, DFICTL 5ZYL Ô[. XSFI K[S[A[AF/S JF/F
; FWZ6 VG[IJIX08 AF/SMGF DTFGF ; NEDF\ 't' S; MBL p5IMJDF\
, JFDF\VFJ[, KP HIFZ[137 GL :JFTÈ DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 2.39 KP H[SM8SGL
ISDT SZTF JW] KP T\YL TOFJT ; FYS YFI KP DF8[X]I ptS<5GF GAZ
v1 V:JLSFI"AG[KP

TFZ6 0 A[AF/SJF/F ; FWZ6 VG[IJIX08 AF/SMGF DTFGL IJST
IRTFDF\TOFJT KP

H₀₂ A[AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF DFGI; S
:JF:yI GF Dwl SMJrR[; FYS TOFJT GYLP

SM8S GP 25

A[AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF DFGI; S :JF:yI GF
5F%TFSMGF VFWFZ['t' S; MBL
(N= 139)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT ; FYSTF
		N	M	SD	SEM	SED	
1	; FWFZ6 AF/SMGL DFTF	75	25.73	6.38	0.74	1.00	9.12 Kp
2	IJIXQ8 AF/SMGL DFTF	64	16.61	5.42	.68		

SM8SDF\ VF5[, DFICTL 5ZYL Ô[. XSF1 K[S[A[AF/S JF/F
; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF ; NEDF\ 't' S; MBL p5IMJDF\
, [JFDF\ VFJ[, Kp HIFZ[137GL :JFTÈ DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 Kp VCL\U6[, 't' GL ISDT 9.12 Kp H[SM8SGL
ISDT SZTF JW] Kp T\YL TOFJT ; FYS YFI Kp DF8[Xg]I ptS<5GF GAZ
v2 V:JLSFI"AG[Kp

TFZ6 0 A[AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF DFGI; S
:JF:yI DFTOFJT Kp

H_{03} A[AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF ÒJG
; √MDF GF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 26

A[AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF

ÒJG ; √MDFGF 5F%TF5MGF VFWFZ['t' S; NBL

(N= 139)

SP	IJUT	ÒJG; √MDFGF 5F%TF5M				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	75	38.71	8.46	0.98	1.57	10.31	KP
2	IJIXQ8 AF/SMGL DFTF	45	22.53	7.02	1.23			

SM8S DF\ VF5[, DFICTL 5ZYL Ô[. XSFI K[S[A[AF/S JF/F
; FWFZ6 VG[IJIXQ8 AF/SMGF DFTF GF ; NEDF\ 't' S; NBL p5IMJ DF\
, [JFDF\ VFJ[, KP HIFZ[137 GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCL\ U6[, 't' GL ISDT 10.31 KP H[
SM8SGL ISDT SZTF JW] KP T\YL TOFJT ; FYS YFI KP DF8[XgI
ptS<5GF GAZ v3 V:JLSFI "AG[KP

TFZ60 A[AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF ÒJG
; √MDFDF\ TOFJT KP

HO₄ A[AF/SMJF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRVTFGF
Dwl SMJrR[; FYS TOFJT GYLP

SM8S GP27

A[AF/SMJF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGL
IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S; MBL

(N=139)

SD	IJUT	IJST IRVTFGF 5F%TFSM				5P6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWZ6 AF/SMG I5TF	75	31.51	18.05	2.08	2.24	5.60	KP
2	IJIX08 AF/SMGF I5TF	64	44.05	6.63	0.83			

SM8SDA\VF5[, DFICTL 5ZYL HM. XSFI K[S[A[AF/SJF/F ; FWZ6 VG[
IJIX08 AF/SMGF I5TFGF ; NEDA\ 't' S; MBL p5I MUDE\ , UJDE\ VFJ[, KP
HIFZ[137 GL :JFTÈ DF+(df) V[SM8SDA\ 't' GL H~ZL ISDT 0.05 S1FFV[
1.98 KP VCL\U6[, 't' GL ISDT 5.60 KP H[SM8SGL ISDT SZTF JW] KP
T[YL TOFJT ; FYS YFI KP DF8[X]I ptS<5GF GAZ v4 V:JLSFI "AG[KP

TFZ6 0 A[AF/SMJF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGL IJST
IRTFDA\TOFJT KP

H₀: A[AF/SMJF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGL DFGI; S
:JF:yI GF DwI SM JrR]; FYS TOFJT GYLP

SM8S GP28

A[AF/SMJF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGF
DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ[ct' S; MBL

(N=139)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM	SED		
1	; FWZ6 AF/SMGF I5TF	75	26.65	6.00	0.69	0.96	10.08	KP
2	IJIX08 AF/SMGF I5TF	64	16.97	5.35	0.67			

SM8SDF\ VF5], DFICTL 5ZYL HM XSFI K[S[A[AF/SJF/F
; FWZ6 VG[IJIX08 AF/SMGF I5TFGF ; NEDF\ 't' S; MBL p5 I MJDF\
, [JFDF\ VFJ], KP HI FZ[137 GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCL\ U6], 't' GL ISDT 10.08 KP H[
SM8SGL ISDT SZTF JW] KP T\YL TOFJT ; FYS YFI KP DF8[X]I
ptS<5GF GAZ v5 V:JLSFI "AG[KP

TFZ6 0 A[AF/SMJF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGL DFGI; S
:JF:yI DFTOFJT KP

HQ₆ A[AF/SMJF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGF ÒJG
; ∇MDFGF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP29

A[AF/SMJF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGF

ÒJG; ∇MDFGF VFWZ['t' S; MBL

(N=139)

SD	IJUT	ÒJG; ∇MDFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWZ6 AF/SMGF I5TF	75	38.13	7.43	0.68	1.28	10.61	KP
2	IJIX08 AF/SMGF I5TF	64	24.55	7.59	0.95			

SM8SDF\ VF5[, DFICTL 5ZYL HM XSFI K[S[A[AF/SJF/F
; FWZ6 VG[IJIX08 AF/SMGF I5TFGF ; NEDFA 't' S; MBL p5I MJDA
, [JFDF\ VFJ[, KP HIFZ[137 GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCL\ U6[, 't' GL ISDT 10.61 KP H[
SM8SGL ISDT SZTF JW] KP T[YL TOFJT ; FYS YFI KP DF8[X[
ptS<5GF GAZ v6 V:JLSFI "AG[KP

TFZ6 0 A[AF/SMJF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGF ÒJG
; ∇MDFDF\ TOFJT KP

Ho₇ AYL JW] AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGL IJST
IRTFDA; FYS TOEJT HMJF D/TM GYLP

SM8S GP 30

AYL JW] AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGL

IJST IRTFGL 5F%TFSMGF VFWFZ['t' S; MBL
(N=101)

SD	IJUT	IJST IRTFGL 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM	SED		
1	; FWFZ6 AF/SMGL DFTF	45	40.82	18.38	2.74	2.97	1.37	GYL
2	IJIXQ8 AF/SMGL DFTF	56	44.89	8.60	1.15			

SM8S DAVF5], DFICTL 5ZYL Ô]. XSFI K[S[A[JW] AF/S JF/F
; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL ; NEDFA 't' S; MBL p5IMJDA
, JFDFA VFJ], KP HIFZ[99 GL :JFT È DF+(df) V[SM8SDFA 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCL\U6], 't' GL ISDT 1.37 KP H[SM8SGL
ISDT SZTF VMKL KP TYL TOEJT ; FYS YT[GYL DF8[X]I ptS<5GF
GAZ v7 :JLSFI "AG[KP

TFZ60 AYL JW] AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL IJST
IRTFDA TOEJT GYLP

H_0 : $\mu_{AF/SJF/F} = \mu_{FWFZ6\ VG[IJIX08\ AF/SMGL\ DFTFGL\ DFGI]}; S$
 $\sigma^2_{AF/SJF/F} = \sigma^2_{FWFZ6\ VG[IJIX08\ AF/SMGL\ DFTFGL\ DFGI]}$

SM8S GP 31

$\mu_{AF/SJF/F} = \mu_{FWFZ6\ VG[IJIX08\ AF/SMGF\ DFTFGL\ DFGI]}; S$
 $\sigma^2_{AF/SJF/F} = \sigma^2_{FWFZ6\ VG[IJIX08\ AF/SMGF\ DFTFGL\ DFGI]}$

(N=101)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E} SED	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	45	25.44	4.96	0.74	1.08	6.97	K
2	IJIX08 AF/SMGL DFTF	56	17.91	5.94	0.79			

SM8S DA VF5, DFICTL 5ZYL Ô. XSFI K[S[A[JW] AF/S JF/F
; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF ; NEDA ' S; NBL p5IMJDF
, DFDA VFJ, KP HIFZ[99 GL :JFT È DF+(df) V[SM8SDA ' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCL\U6, ' GL ISDT 6.97 KP H[SM8SGL
ISDT SZTF JW]KP TYL TOFJT ; FYS YFI K# DF8[X]I ptS<5GF GAZ 8
V:JLSFI "AG[KP

TFZ6 0 AYL JW] AF/SJF/F ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF
DFGI; S :JF:yI DA TOFJT KP

H_0 : AYL JW]AF/SJF/F ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF ÒJG
; √TMFGF Dwl SMJrR[; FYS TOFJT HMUF D/TM GYLP

SM8S GP 32

AYL JW]AF/SJF/F ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF

ÒJG ; √TMFGF 5F%TFFSMGF VFWFZ['t' S; NBL

(N=101)

SD	IJUT	ÒJG; √TMFGF 5F%TFFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	45	39.93	7.45	1.11	1.66	7.92	K[
2	IJIX08 AF/SMGL DFTF	56	25.79	9.19	1.23			

SM8S DFL VF5[DFICTL 5ZYL Ô[XSFI K[S[A[JW]AF/SJF/F
; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF ; NEDFL 't' S; NBL p5IMJDFL
, µFDFL VFJ[KP HIFZ[99 GL :JFT È DF+(df) V[SM8SDFL 't' GL H-ZL
ISDT 0.05 S1FFV[1.98 KP VCL\U6['t' GL ISDT 7.92 KP H[SM8SGL
ISDT SZTF VMKL KP TYL TOFJT ; FYS YFI K[DF8[Xg] ptS<5GF GAZ
9 V:JLSFI "AG[KP

TFZ6 0 AYL JW]AF/SJF/F ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL ÒJG
; √TMFGF Dwl SMDFL TOFJT HMUF D/[KP

Ho₁₀ AYL JW] AF/SJF/F ; FWZ6 VG[IJX08 AF/SMGF I5TFGL IJST
IRTFGF DWI SMJR[; FYS TOFJT GYLP

SM8S GP 33

AYL JW] AF/SJF/F ; FWZ6 VG[IJX08 AF/SMGF I5TFGL
IJST IRTFGE 5%TFSMGF VFWZ[' S ; MBL

(N=101)

SD	IJUT	IJST IRTFGE 5%TFSM				5DF6 E}	t ISDT	; FYSTF GYL
		N	M	SD	SEM			
1	; FWZ6 AF/SMGF I5TF	45	38.18	18.58	2.77	2.94	1.35	GYL
2	IJX08 AF/SMGF I5TF	56	24.16	7.34	0.98			

SM8S DAVF5], DFICTL 5ZYL Ô]. XSFI K[A[S[A[YL JW] AF/S
JF/F ; FWZ6 VG[IJX08 AF/SMGF I5TFGF ; NEDFA ' S ; MBL p5I MJDA
, JFDA VFJ], KP HIFZ[99 GL :JFT È DF+(df) V[SM8SDFA ' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCL\ U6], ' GL ISDT 1.35 KP H[
SM8SGL ISDT SZTF VMKL KP TYL TOFJT ; FYS YTM GYL DF8[X]I
ptS<5GF GAZ 10 :JLSFI "AG[KP

TFZ60 AYL JW] AF/SJF/F IJX08 AF/SMGF I5TFGL IJST IRTFDA
TOFJT ÔJF D/TMGYLP

H_{011} AYL JW] AF/S JF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF
DFGI; S :JF:yI GF Dwl SMJrR[; FYS TOFJT GYLP

SM8S GP 34

AYL JW] AF/SJF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL
DFGI; S :JF:yI GF 5F%TF\$MGF VFWFZ['t S; NBL

(N=101)

SD	IJUT	DFGI; S :JF:yI GF 5F%TF\$M				5pF6 E}	t ISDT	; FYSTF
		N	SED	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	45	26.29	4.71	0.70	0.96	7.67	K
2	IJIX08 AF/SMGF I5TF	56	18.93	4.88	0.65			

SM8SDA\VF5], DFICTL 5ZYL Ô]. XSFI K[S[AYL JW]AF/S JF/F
; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF ; NEDA 't S; NBL p5IMJDA
, [JFDA\VFJ], KP HIFZ[99 GL :JFT È DF+(df) V[SM8SDA 't GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VC\U6], 't GL ISDT 7.67 KP H[SM8SGL
ISDT SZTF JW] KP T\YL TOFJT ; FYS YFI K# DF8[X#I ptS<5GF GAZ
11 V:JLSFI "AG[KP

TFZ60 AYL JW] AF/SJF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL
DFGI; S :JF:yI D\TOFJT KP

Ho₁₂ A[YL JW] AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL ÒJG
; ∇MDFGF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 35

A[YL JW] AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL

ÒJG ; ∇MDFGF 5F%TFSMGF VFWFZ['t' S; MBL
(N=101)

SD	IJUT	ÒJG; ∇MDFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	45	41.07	6.64	0.99	1.68	8.29	K
2	IJIXQ8 AF/SMGF I5TF	56	27.14	10.06	1.36			

SM8SDF\VF5[, DFICTL 5ZYL Ô[. XSFI K[S[A[YL JW] AF/S JF/F
; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ; NE'DF\ 't' S; MBL p5IMU DF\
, [JFDF\VFJ[, KP HIFZ[99 GL :JFT È DF+(df) V[SM8SDF\ 't' GL H-ZL
ISDT 0.05 S1FFV[1.98 KP VC\U6[, 't' GL ISDT 8.29 KP H[SM8SGL
ISDT SZTF VMKL KP T[YL TOFJT ; FYS YFI K[DF8[X]I ptS<5GF GAZ
12 V:JLSFI "AG[KP

TFZ60 A[AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ÒJG
; ∇MDFGF TOFJT KP

Ho₁₃ UfdI IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL IJST
IRVTFGF Dwl SMJrR[; FYS TOFJT GYLP

SM8S GP 36

UfdI IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL

IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S; MBL
(N=103)

SD	IJUT	IJST IRVTFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL I5TF	43	37.51	16.21	2.47	2.76	2.03	K[
2	IJIX08 AF/SMGL DFTF	60	43.10	9.53	1.23			

SM8SDFA VF5[, DFICTL 5ZYL Ô[. XSFI K[S[UfdI IJ:TFZGF
; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF ; NEDFA 't' S; MBL p5IMJDA
, [JFDA VFJ[, KP HIFZ[101GL :JFT È DF+(df) V[SM8SDFA 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCL\ U6[, 't' GL ISDT 2.03 KP H[
SM8SGL ISDT SZTF VMKL KP T\YL TOFJT ; FYS YFI K# DF8[XgI
ptS<5GF GAZ 13 V:JLSFI "AG[KP

TFZ6 0 UfdI IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL IJST
IRVTFDA TOFJT KP

Ho₁₄ UfdI IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF DFGI; S
:JF:yI GF DwI SMJrR]; FYS TOFJT GYLP

SM8S GP 37

UfdI IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF

DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t S; NBL

(N=103)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	43	25.84	5.26	0.80	1.10	7.11	K[
2	IJIXQ8 AF/SMGL DFTF	60	5.81	9.53	0.75			

SM8SDFA VF5[, DFICTL 5ZYL Ô[. XSFI K[S[UfdI IJ:TFZGF
; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF ; NEDFA 't S; NBL p5IMJDF\,
, [JFDF\ VFJ[, KP HIFZ[101GL :JFT È DF+(df) V[SM8SDFA 't GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VC\U6[, 't GL ISDT 7.11 KP H[SM8SGL
ISDT SZTF VMKL KP T[YL TOFJT ; FYS YFI K[DF8[X]I ptS<5GF GAZ
14 V:JLSFI "AG[KP

TFZ6 0 UfdI IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF DFGI; S
:JF:yI DFA TOFJT KP

Ho₁₅ UfdI IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF ÒJG
; ∇MDFGF Dwl SM JrR[; FYS TOFJT GYLP

SM8S GP 38

UfdI IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF
ÒJG; ∇MDFGF 5F%TFFSMGF VFWFZ['t' S; NBL

(N=103)

SD	IJUT	ÒJG; ∇MDFGF 5F%TFFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	43	40.91	6.83	1.04	1.54	10.69	K[
2	IJIXQ8 AF/SMGL DFTF	60	24.45	8.75	1.13			

SM8SDFA VF5[, DFICTL 5ZYL Ô[. XSFI K[S[UfdI IJ:TFZGF
; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF ; NEDFA 't' S; NBL p5IMJDF\ ,
pJFDF\ VFJ[, KP HIFZ[101GL :JFT È DF+(df) V[SM8SDFA 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCL\ U6[, 't' GL ISDT 10.69 KP H[
SM8SGL ISDT SZTF VMKL KP T\YL TOFJT ; FYS YFI K\ DF8[X\I
ptS<5GF GAZ 15 V:JLSFI "AG[KP

TFZ6 0 A[AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF ÒJG
; ∇MDFDA TOFJT KP

Ho₁₆ UfdI IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL IJST
IRVTFGF Dwl SM JrR[; FY'S TOFJT GYLP

SM8S GP39

UfdI IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL

IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S; MBL
(N=103)

SD	IJUT	IJST IRVTFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	43	36.26	21.97	3.35	3.46	1.96	GYL
2	IJIXQ8 AF/SMGF I5TF	60	43.05	6.77	0.87			

SM8SDF\ VF5[, DFICTL 5ZYL Ô[. XSFI K[S[UfdI IJ:TFZGF
; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ; NEDFA 't' S; MBL p5I MJDF\
, [JFDF\ VFJ[, KP HIFZ[101GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCL\ U6[, 't' GL ISDT 1.96 KP H[
SM8SGL ISDT SZTF VMKL KP TÿL TOFJT ; FY'S YTM GYL DF8[XgI
ptS<5GF GAZ 16 :JLSFI "AG[KP

TFZ6 0 UfdI IJ:TFZGF VG[IJIXQ8 AF/SMGF I5TFGL IJST IRVTFDF\
TOFJT GYLP

Ho₁₇ UfdI IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL DFGI; S
:JF:yI GF Dwl SM JrR]; FYS TOFJT GYLP

SM8S GP 40

UfdI IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL
DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ[‘t S; NBL
(N=103)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	43	26.93	5.62	0.86	1.03	8.69	K[
2	IJIXQ8 AF/SMGF I5TF	60	17.98	4.34	0.56			

SM8SDF\ VF5[, DFICTL 5ZYL Ô[. XSFI K[S[UfdI IJ:TFZGF
; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ; NEDF\ ‘t S; NBL p5I MJDF\
, ðFDF\ VFJ[, KP HIFZ[101GL :JFT È DF+(df) V[SM8SDF\ ‘t GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VC\U6[, ‘t GL ISDT 8.69 KP H[SM8SGL
ISDT SZTF VMKL KP T\YL TOFJT ; FYS YFI K[DF8[X]I ptS<5GF GAZ
17 V:JLSFI "AG[KP

TFZ6 0 UfdI IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL DFGI; S
:JF:yI DFTOFJT KP

Ho₁₈ UfdI IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL ÒJG
; √MDFGF Dwl SM JrR[; FY'S TOFJT GYLP

SM8S GP 41

UfdI IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL

ÒJG ; √MDFGF 5F%TFSMGF VFWFZ['t' S; MBL
(N=103)

SD	IJUT	ÒJG; √MDFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	43	38.44	7.14	1.09	1.59	7.93	K[
2	IJIXQ8 AF/SMGF I5TF	60	25.83	8.96	1.16			

SM8SDF\ VF5[, DFICTL 5ZYL Ô[. XSFI K[S[UfdI IJ:TFZGF
; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ; NEDFA 't' S; MBL p5I MJDF\
, [JFDF\ VFJ[, KP HI FZ[SM8S N=103GL DF+F sdf 101 KP SM8SDF\ 't'
GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 7.93 KP H[
SM8SGL ISDT SZTF JW] KP T[YL TOFJT ; FY'S KP DF8[X[ptS<5GF
GAZ 18 V:JLSFI "AG[KP

TFZ6 0 UfdI IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ÒJG
; √MDFGF TOFJT KP

Ho₁₉ XCZL IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL IJST
IRTFGF Dwl SM JrR[; FYS TOFJ GYLP

SM8S GP 42

XCZL IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL

IJST IRTF6F 5F%TF6SMGF VFWFZ\ 't' S; MBL

(N=137)

SD	IJUT	IJST IRTF6F 5F%TF6SM				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	77	37.71	18.00	2.05	2.32	2.47	K[
2	IJIXQ8 AF/SMGL DFTF	60	43.45	8.41	1.09			

SM8SDFA VF5[, DFICTL 5ZYL HM. XSFI K[S[XCZL IJ:TFZGF
; FWFZ6 VG[IJIXQ8 AF/SMGL DFTF6F ; NE DFA \ 't' S; MBL p5 I MJ DFA
, [F DFA VFJ[, KP HIFZ[135GL :JFT È DF+(df) V[SM8SDFA 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 2.47 KP H[SM8SGL
ISDT SZTF JW] KP TYL TOFJT ; FYS K[DF8[Xq] ptS<5GF GAZ 18
V:JLSFI "AG[KP

TFZ6 0 XCZL IJ:TFZGF ; FWFZ6 VG[AF/SMGL IJIXQ8 DFTFGL IJST
IRTFDFA TOFJT KP

Ho₂₀ XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGL DFGI; S
:JF:yI GF Dwl SM JrR[; FYS TOFJ GYLP

SM8S GP 43

XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL
DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t' S; NBL
(N=137)

SP	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	77	25.87	6.05	0.69	0.99	9.55	K[
2	IJIX08 AF/SMGL DFTF	60	16.42	5.49	0.71			

SM8SDF\ VF5[, DFICTL 5ZYL HM XSFI K[S[XCZL IJ:TFZGF
; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF ; NEDFA S; NBL p5I MUDFA , [JFDA
VFJ[, KP HIFZ[135GL :JFTÈ DF+(df) V[SM8SDF\ 't' GL H~ZL ISDT
0.05 SIFFV[1.98 KP VCL\U6[, 't' GL ISDT 9.55 KP H[SM8SGL ISDT
SZTF JW] KP T\YL TOFJT ; FYS K[DF8[X]I ptS<5GF GAZ 20
V:JLSFI "AG[KP

TFZ6 0 XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF DFGI; S
:JF:yI DATOFJT KP

Ho₂₁ XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL ÒJG
; √MDFGF DwI SM JrR[; FY'S TOFJ GYLP

SM8S GP 44

XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL

ÒJG ; √MDFGF 5F%TFSMGF VFWFZ['t' S; MBL
(N=137)

SD	IJUT	ÒJG ; √MDFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	77	39.10	7.58	0.86	1.32	11.70	K[
2	IJIX08 AF/SMGL DFTF	60	23.65	7.73	1.00			

SM8SDF\ VF5[, DFICTL 5ZYL HM XSFI K[S[XCZL IJ:TFZGF
; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL ; NE'DF\ \ 't' S; MBL p5I MJDF\
, DFDF\ VFJ[, KP HIFZ[135GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCL\ U6[, 't' GL ISDT 11.70 KP H[
SM8SGL ISDT SZTF JW[KP T[YL TOFJT ; FY'S K[DF8[X[gl ptS<5GF
GAZ 21 V:JLSFI "AG[KP

TFZ6 0 XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGL ÒJG
; √MDFDF\ TOFJT KP

Ho₂₂ XCZL IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGL I5TFGL IJST
IRVTFGF Dwl SM JrR[; FYS TOFJ GYLP

SM8S GP 45

XCZL IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL

IJST IRVTFGF 5F%TFFSMGF VFWFZ\ 't' S; MBL
(N=137)

SP	IJUT	IJST IRVTFGF 5F%TFFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	77	33.97	17.10	1.95	2.16	4.31	K[
2	IJIXQ8 AF/SMGL DFTF	60	43.22	7.26	.94			

SM8SDF\ VF5[, DFICTL 5ZYL HM XSFI K[S[XCZL IJ:TFZGF
; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ; NEDF\ \ 't' S; MBL p5I MJDF\
, [JFDF\ VFJ[, KP HIFZ[135GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 4.31 KP H[SM8SGL
ISDT SZTF JW] KP T\YL TOFJT ; FYS K# DF8[X]I ptS<5GF GAZ 22
V:JLSFI "AG[KP

TFZ6 0 XCZL IJ:TFZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL IJST
IRTFDF\TOFJT KP

Ho₂₃ XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL DFGI; S
:JF:yI GF Dwl SMJrRl; FYS TOFJ GYLP

SM8S GR46

XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL
DFGI; S :JF:yI GF 5F%TFSMGF VFWFZl 't' S; MBL
(N=137)

SP	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	77	25.96	5.65	0.64	1.00	8.2	Kl
2	IJIX08 AF/SMGF I5TF	60	17.78	5.99	0.77			

SM8SDF\ VF5l, DFICTL 5ZYL HM XSFI Kl Sl XCZL IJ:TFZGF
; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF ; NEDF\ 't' S; MBL p5IMJDF\
, JFDF\ VFJl, KP HIFZl 135GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCl\U6l, 't' GL ISDT 8.20 KP H[SM8SGL
ISDT SZTF JWl KP Tyl TOFJT ; FYS K# DF8l Xjl ptS<5GF GAZ 23
V:JLSFI "AGl KP

TFZ6 0 XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL DFGI; S
:JF:yI DFTOFJT KP

Ho₂₄ XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL ÒJG
; √MDFGF DwI SM JrR[; FYS TOFJT GYLP

SM8S GP47

XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL

ÒJG ; √MDFGF 5F%TFSMGF VFWFZ['t' S; MBL
(N=137)

SP	IJUT	ÒJG; √MDFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	77	39,48	7.22	0.82	1.42	9.86	K[
2	IJIX08 AF/SMGF I5TF	60	25.68	8.99	1.16			

SM8SDF\ VF5[, DFICTL 5ZYL HM XSFI K[S[A[AF/SJF/F
; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF ; NEDF\ 't' S; MBL p5IMJDF\
, [JFDF\VFJ[, KP HIFZ[135 GL :JFTÈ DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCI\U6[, 't' GL ISDT 9.86 KP H[SM8SGL
ISDT SZTF JW] KP T\YL TOFJT ; FYS K# DF8[X]I ptS<5GF GAZ 24
V:JLSFI "AG[KP

TFZ6 0 XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF
ÒJG; √MDFDF\ TOFJT KP

Ho₂₅ WMP₁₂ p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF
IJST IRVTFGF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 48

WMP 12 p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGL
DFTFGF IJST IRVTFGF 5F%TFSMGF VFWFZ\ 't' S; MBL

(N=70)

SD	IJUT	IJST IRVTFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	47	39.85	18.48	2.70	3.02	2.54	K[
2	IJIX08 AF/SMGL DFTF	23	44.52	6.54	1.36			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[WMP₁₂ p5ZGF
; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF IJST IRVTFGF ; NEDF\ 't' S; MBL
p5IMUDA, [JFDF\VFJ[, KP HIFZ[68 GL :JFT È DF+(df) V[SM8SDF\ 't'
GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 2.14 KP H[
SM8SGL ISDT SZTF JW] KP TYL TOFJT ; FYS K[DF8[X]I ptS<5GF
GAZ 25 V:JLSFI "AG[KP

TFZ6 0 WMP 12 p5ZGF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF IJST
IRVTFDF\TOFJT KP

Ho₂₆ WMP 12 p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF
DFGI; S :JF:yI GF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 49

WMP 12 p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGL
DFTFGF 5F%TF\$MGF VFWFZ[\t' S; NBL
(N= 70)

SP	IJUT	DFGI; S :JF:yI GF 5F%TF\$M				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	47	25.06	5.72	0.83	1.36	6.24	K[
2	IJIX08 AF/SMGL DFTF	23	16.57	5.18	1.08			

SM8SDF\ VF5[, DFICTL 5ZYL HM XSFI K[S[WMP₁₂ p5ZGF
; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF DFGI; S :JF:yI GF ; NE'DF\ \t'
S; NBL p5I MJDF\ , [JFDF\ VFJ[, KP HIFZ[68 GL :JFTÈ DF+(df) V[
SM8SDF\t' GL H~ZL ISDT 0.05 SIFFV[1.98 KP VCL\U6[, \t' GL ISDT
6.24 KP H[SM8SGL ISDT SZTF JW] KP T\YL TOFJT ; FYS K# DF8[X]I
ptS<5GF GAZ 26 V:JLSFI "AG[KP

TFZ6 0 WMP₁₂ p5ZGF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF DFGI; S
:JF:yI DF\TOFJT KP

Ho₂₇ WMP₁₂ p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF
 ÖJG; ¶MDFGF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 50

WMP₁₂ p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGL

DFTFGF ÖJG ; ¶MDFGF 5F%TFFSMGF VFWFZ[¶t S; MBL

(N=70)

SD	IJUT	ÖJG; ¶MDFGF 5F%TFFSM				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	47	38.81	8.31	1.21	2.04	7.77	K[
2	IJIX08 AF/SMGL DFTF	23	22.96	7.87	1.64			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[WMP₁₂ p5ZGF
 ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF ÖJG ; ¶MDFGF ; NEDFA\¶t S; MBL
 p5IMJDA, ¶JFDA\VFJ[, KP HIFZ[68 GL :JFT È DF+(df) V[SM8SDF\¶t
 GL H~ZL ISDT 0.05 S1FFV[1.98 KP VC\U6[, ¶t GL ISDT 7.77 KP H[
 SM8SGL ISDT SZTF JW] KP T¶YL TOFJT ; FYS K¶ DF8[X¶I ptS<5GF
 GAZ 27 V:JLSFI "AG[KP

TFZ6 0 WMP₁₂ p5ZGF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF ÖJG
 ; ¶MDFDA\TOFJT KP

Ho₂₈ WMP 12 p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF
I5TFGL IJST IRVTFGF DwI SMJrR[; FY'S TOFJT GYLP

SM8S GP 51

WMP12 p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL

IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S; MBL

(N= 93)

SD	IJUT	IJST IRVTFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	60	33.80	19.58	2.53	2.79	3.16	K[
2	IJIX08 AF/SMGL DFTF	33	42.61	6.71	1.17			

SM8SDFA VF5[, DFICTL 5ZYL HM. XSFI K[S[WMP12 p5ZGF
; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRVTFGF ; NEDFA\ 't' S; MBL
p5I MUDFA , [FDF\ VFJ[, KP HI FZ[91GL :JFT È DF+(df) V[SM8SDFA 't'
GL H~ZL ISDT 0.05 S1FFV[1.98 KP VC\U6[, 't' GL ISDT 3.16 KP H[
SM8SGL ISDT SZTF JW] KP T[YL TOFJT ; FY'S K[DF8[X[ptS<5GF
GAZ 28 V:JLSFI "AG[KP

TFZ6 0 WMP12 p5ZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL IJST
IRTFDA\TOFJT KP

Ho₂₉ WMP₁₂ p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF
DFGI; S :JF:yI GF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 52

WMP₁₂ p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF
DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t' S; MBL

(N=93)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	60	26.77	5.49	0.71	1.33	7.68	K[
2	IJIX08 AF/SMGF I5TF	33	16.55	6.41	1.12			

SM8SDF\ VF5[, DFICTL 5ZYL HM XSFI K[S[WMP₁₂ p5ZGF
; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF DFGI; S :JF:yI GF ; NEDFA\ 't'
S; MBL p5IMJDA\ , JFDA\ VFJ[, KP HIFZ[91GL :JFTÈ DF+(df) V[
SM8SDF\ 't' GL H~ZL ISDT 0.05 SIFV[1.98 KP VCL\U6[, 't' GL ISDT
7.68 KP H[SM8SGL ISDT SZTF JW] KP TYL TOFJT ; FYS K# DF8[X]I
ptS<5GF GAZ 29 V:JLSFI "AG[KP

TFZ6 0 WMP₁₂ p5ZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF DFGI; S
:JF:yI DFTOFJT KP

Ho₃₀ WMP₁₂ p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF
 ÖJG; √TMDFGF DwI SMJrR[]; FYS TOFJT GYLP

SM8S GP 53

WMP₁₂ p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF

I5TFGF ÖJG ; √TMDFGF 5F%TFFSMGF VFWFZ[]'t S; MBL

(N=93)

SD	IJUT	ÖJG; √TMDFGF 5F%TFFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	60	39.48	7.30	0.94	1.73	7.14	K[
2	IJIX08 AF/SMGF I5TF	33	27.12	8.32	1.45			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[WMP₁₂ p5ZGF
 ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF ÖJG; √TMDFGF ; NEDFA\ 't S; MBL
 p5IMJDA, [JFDA\VFJ[, KP HIFZ[91 GL :JFT È DF+(df) V[SM8SDF\ 't
 GL H~ZL ISDT 0.05 S1FFV[1.98 KP VC\U6[, 't GL ISDT 7.14 KP H[
 SM8SGL ISDT SZTF JW] KP T[YL TOFJT ; FYS K[DF8[X[] ptS<5GF
 GAZ 30 V:JLSFI "AG[KP

TFZ60 WMP₁₂ p5ZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF ÖJG
 ; √TMDFD\TOFJT KP

Ho₃₁ WMP₁₂ ; WLGf Vef; Jf/f ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL
IJST IRTTFGF Dwl SMJrR[; FYS TOFJT GYLP

SM8S GP 54

WMP₁₂ ; WLGf Vef; Jf/f ; FWFZ6 VG[IJIX08 AF/SMGF

DFTFGL IJST IRTTFGF 5f%TFSMGF VFWFZ['t' S; MBL

(N=170)

SD	IJUT	DFGI; S IJST IRTTFGF 5f%TFSM				5Df6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	73	38.95	16.65	1.95	2.17	1.86	GYL
2	IJIX08 AF/SMGL DFTF	97	42.98	9.45	0.96			

SM8SDf\ VF5[, DFICTL 5ZYL HM. XSFI K[S[WMP₁₂ GLR[GF
; FWFZ6 VG[IJIX08 AF/SMGL DFTFGf IJST IRTTFGF ; NEDf\ 't' S; MBL
p5I MUDf, [fDf\ VFJ[, KP HIFZ[168 GL :JFT È Df+(df) V[SM8SDf\
't' GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 1.86 KP
H[SM8SGL ISDT SZTF VMKL KP TYL TOFJT ; FYS YTM GYL4 DF8[XgI
ptS<5GF GAZ 31 :JLSFI "AG[KP

TFZ6 0 WMP₁₂ ; WLGf ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL IJST
IRTFDf\TOFJT GYLP

Ho₃₂ WMP₁₂ ; MLGF VeIF; JF/F ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF
DFGI; S :JF:yI GF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 55

WMP 12 ; MLGF VeIF; JF/F ; FWFZ6 VG[IJIXQ8 AF/SMGL
DFTFGF DFGI; S :JF:yI GF 5F%TF5MGF VFWFZ\ 't' S; MBL
(N=170)

SD	IJUT	DFGI; S :JF:yI GF 5F%TF5M				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	73	26.21	5.70	0.67	0.89	9.93	K[
2	IJIXQ8 AF/SMGL DFTF	97	17.37	5.82	0.59			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[WMP 12 ; MLGF
; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF DFGI; S :JF:yI GF ; NE'DF\ \ 't'
S; MBL p5I MJDF\ , [JFDF\ VFJ[, KP HIFZ[168 GL :JFV È DF+(df) V[
SM8SDF\ 't' GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT
9.93 KP H[SM8SGL ISDT SZTF JW] KP TYL TOFJT ; FYS K[DF8[X]I
ptS<5GF GAZ 32 V:JLSFI "AG[KP

TFZ60 WMP₁₂ ; MLGF ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF DFGI; S
:JF:yI DF\TOFJT KP

Ho₃₃ WMP₁₂ ; JMLGF VeIF; JF/F ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF
 ÖJG ; VMDFGF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 56

WMP 12 ; JMLGF VeIF; JF/F ; FWFZ6 VG[IJIXQ8 AF/SMGL

DFTFGF ÖJG ; VMDFGF 5F%TFFSMGF VFWFZ['t S; NBL

(N=170)

SD	IJUT	ÖJG; VMDFGF 5F%TFFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	73	39.21	7.63	0.89	1.23	12.11	K[
2	IJIXQ8 AF/SMGL DFTF	97	24.31	8.33	0.85			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[WMP 12 ; JMLGF
 ; FWFZ6 VG[IJIXQ8 AF/SMGF AF/SMGL DFTFGF ÖJG ; VMDFGF ; NE'DF\ \
 't S; NBL p5I MUDF\, [JFDF\ VFJ[, KP HI FZ[168 GL : JFT È DF+(df) V[
 SM8SDF\ 't GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't GL ISDT
 12.11 KP H[SM8SGL ISDT SZTF JW] KP T\ML TOFJT ; FYS K[DF8[X]I
 ptS<5GF GAZ 33 V:JLSFI "AG[KP

TFZ60 WMP₁₂ ; JMLGF ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF ÖJG
 ; VMDFDF\ TOFJT KP

Ho₃₄ WMP₁₂ ; WLGf VeIf; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL
IJST IRTFGF Dwl SMJrR[; FYS TOFJT GYLP

SM8S GP 57

WMP₁₂ ; WLGf VeIf; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF

I5TFGL IJST IRTFGF 5F%TFSMGF VFWFZ['t' S; MBL

(N=147)

SD	IJUT	IJST IRTFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	60	35.18	18.05	2.33	2.45	3.35	K[
2	IJIX08 AF/SMGF I5TF	87	43.38	7.15	0.77			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[WMP₁₂ ; WLGf
VeIf; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF ; NEDFA\ 't' S; MBL
p5I MUDFA , [FDF\ VFJ[, KP HIFZ[145 GL :JFT È DF+(df) V[SM8SDF\
't' GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 3.35 KP
H[SM8SGL ISDT SZTF JW] KP T[YL TOFJT ; FYS K[DF8[X]I ptS<5GF
GAZ 34 V:JLSFI "AG[KP

TFZ60 WMP₁₂ ; WLGf VeIf; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL

IJST IRTFDATOFJT KP

Ho₃₅ WMP12 ; WLGf VeIF; JF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGF
DFGI; S :JF:yI GF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 58

WMP 12 ; WLGf VeIF; JF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGF

DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ\ 't S; MBL

(N=147)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWZ6 AF/SMGF I5TF	60	36.08	5.66	0.73	0.88	20.10	K[
2	IJIX08 AF/SMGF I5TF	87	18.39	4.63	0.50			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[WMP12 GLR[GF
VeIF; JF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGF ; NEDFA\ 't S; MBL
p5I MUDFA , [FDF\ VFJ[, KP HIFZ[145 GL :JFT È DF+(df) V[SM8SDF\
't GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\ U6[, 't GL ISDT 20.10
KP H[SM8SGL ISDT SZTF JW] KP TYL TOFJT ; FYS K[DF8[X[
ptS<5GF GAZ 35 V:JLSFI "AG[KP

TFZ60 WMP12 ; WLGf VeIF; JF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGF

DFGI; S :JF:yI DFTOFJT KP

Ho₃₆ WMP₁₂ ; WLGf VeIf; Jf/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF
 ÖJG; TMEFGF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 59

WMP₁₂ ; WLGf VeIf; Jf/F ; FWFZ6 VG[IJIX08 AF/SMGF
 I5TFGF ÖJG ; TMEFGF 5F%TFFSMGF VFWFZ['t S; MBL
 (N=147)

SP	IJUT	ÖJG; TMEFGF 5F%TFFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	60	38.77	7.11	0.92	1.34	10.09	K[
2	IJIX08 AF/SMGF I5TF	87	25.24	9.15	0.98			

SM8SDFA VF5[, DFICTL 5ZYL HM XSFI K[S[WMP₁₂ ; WLGf
 VeIf; Jf/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF ; NEDFA\ 't S; MBL
 p5I MJDA, [JFDA VFJ[, KP HIFZ[145 GL :JFT È DF+(df) V[SM8SDFA
 't GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\ U6[, 't GL ISDT 10.09
 KP H[SM8SGL ISDT SZTF JW] KP TML TOFJT ; FYS K[DF8[XgI
 ptS<5GF GAZ 36 V:JLSFI "AG[KP

TFZ60 WMP₁₂ ; WLGf VeIf; Jf/F ; FWFZ6 VG[IJIX08 AF/SMGF
 I5TFGF ÖJG ; TMEFDA\ TOFJT KP

Ho₃₇ ; V JST SBJAGF ; FWZ6 VG[IJIX08 AF/SMGL DFTFGL IJST IRVTFGF
Dwl SM JrR[; FYS TOFJT GYLP

SM8S GP 60

; V JST SBJAGF ; FWZ6 VG[IJIX08 AF/SMGL DFTFGL

IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S; MBL

(N=104)

SD	IJUT	IJST IRVTFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWZ6 AF/SMGL DFTF	57	38.95	17.68	2.34	2.74	2.10	K[
2	IJIX08 AF/SMGL DFTF	47	44.70	9.73	1.42			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[; V JST SBJAGF
; FWZ6 VG[IJIX08 AF/SMGL DFTFGL ; NE'DF\ \ 't' S; MBL p5IMJDF\
, JFDF\ VFJ[, KP HIFZ[102 GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCI\U6[, 't' GL ISDT 2.10 KP H[SM8SGL
ISDT SZTF JW] KP TYL TOFJT ; FYS K[DF8[X]I ptS<5GF GAZ 37
V:JLSFI "AG[KP

TFZ6 0 ; V JST SBJAGF ; FWZ6 VG[IJIX08 AF/SMGL DFTFGL IJST
IRTFDA\TOFJT KP

Ho₃₈ ; VJST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF DFGI; S
:JF:yI GF DwI SM JrR[; FYS TOFJT GYLP

SM8S GP 61

; VJST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF
DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t S; MBL
(N=104)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	57	25.82	5.99	.79	1.09	9.17	K[
2	IJIX08 AF/SMGL DFTF	47	15.83	5.17	0.75			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[; VJST SBJAGF
; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF ; NE'DF\ \ 't S; MBL p5I MJDF\
, JFDF\ VFJ[, KP HIFZ[102 GL :JFT È DF+(df) V[SM8SDF\ 't GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't GL ISDT 9.17 KP H[SM8SGL
ISDT SZTF JW] KP TYL TOFJT ; FYS K# DF8[X]I ptS<5GF GAZ 38
V:JLSFI "AG[KP

TFZ6 0 ; VJST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGL DFGI; S
:JF:yI DF\TOFJT KP

H_{039} ; $\sqrt{S^2}$ SBAGF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF ÖJG
; \sqrt{MDFGF} DWI SMJrR[; FYS TOFJT GYLP

SM8S GP 62

; $\sqrt{S^2}$ SBAGF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF

ÖJG ; \sqrt{MDFGF} 5F%TFSMGF VFWFZ['t' S; MBL
(N=104)

SP	IJUT	ÖJG; \sqrt{MDFGF} 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	57	38.53	7.26	.96	1.60	8.86	K[
2	IJIX08 AF/SMGL DFTF	47	24.36	8.80	1.28			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[; $\sqrt{S^2}$ SBAGF
; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF ; NEDF\ 't' S; MBL p5I MJDF\
, \sqrt{MDFGF} VFJ[, KP HI FZ[102 GL : JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCI\U6[, 't' GL ISDT 8.86 KP H[SM8SGL
ISDT SZTF JW] KP TYL TOFJT ; FYS K# DF8[X]I ptS<5GF GAZ 39
V:JLSFI "AG[KP

TFZ6 0 ; $\sqrt{S^2}$ SBAGF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF ÖJG
; \sqrt{MDFGF} TOFJT KP

Ho₄₀ ; V JST SBJAGF ; FWZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRVTFGF
Dwl SM JrR[; FYS TOFJT GYLP

SM8S GP 63

; V JST SBJAGF ; FWZ6 VG[IJIX08 AF/SMGF I5TFGL

IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S; MBL

(N=104)

SD	IJUT	IJST IRVTFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWZ6 AF/SMGF I5TF	57	34.65	18.51	2.45	2.64	3.21	K[
2	IJIX08 AF/SMGL I5TF	47	43.13	6.73	0.98			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[; V JST SBJAGF
; FWZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRVTFGF ; NEDFA\ 't' S; MBL
p5I MUDFA, [JFDF\ VFJ[, KP HIFZ[102 GL :JFT È DF+(df) V[SM8SDF\
't' GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 3.21 KP
H[SM8SGL ISDT SZTF JW] KP T\YL TOFJT ; FYS K[DF8[X]I ptS<5GF
GAZ 40 V:JLSFI "AG[KP

TFZ6 0 ; V JST SBJAGF ; FWZ6 VG[IJIX08 AF/SMGF I5TFGL IJST
IRTFD\TOFJT KP

Ho₄₁ ; V]ST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL DFGI; S
:JF:yI GF DwI SM JrR[; FYS TOFJT GYLP

SM8S GP 64

; V]ST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL

DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t S; MBL

(N=104)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	57	26.12	5.80	0.77	1.10	8.77	K[
2	IJIX08 AF/SMGF I5TF	47	16.47	5.36	0.78			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[; V]ST SBJAGF
; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL DFGI; S :JF:yI GF ; NE'DFA\ 't
S; MBL p5I MJDA\ , [JFDA\ VFJ[, KP HIFZ[102 GL :JFV È DF+(df) V[
SM8SDF\ 't GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't GL ISDT
8.77 KP H[SM8SGL ISDT SZTF JW] KP T[YL TOFJT ; FYS K[DF8[X]I
ptS<5GF GAZ 41 V:JLSFI "AG[KP

TFZ6 0 ; V]ST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL DFGI; S
:JF:yI DFTOFJT KP

Ho₄₂ ; V]ST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF ÒJG
; VMDFGF Dwl SM JrR[; FYS TOFJT GYLP

SM8S GP 65

; V]ST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF

ÒJG ; VMDFGF 5F%TF5MGF VFWFZ['t' S; MBL

(N=104)

SD	IJUT	ÒJG; VMDFGF 5F%TF5M				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	57	39.72	6.76	0.90	1.65	7.27	K[
2	IJIX08 AF/SMGF I5TF	47	27.49	9.48	1.38			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[; V]ST SBJAGF
; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF ÒJG ; VMDFGF ; NEDFA\ 't' S; MBL
p5I MUDFA, [FDF\ VFJ[, KP HIFZ[102 GL :JFT È DF+(df) V[SM8SDF\
't' GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 7.27 KP
H[SM8SGL ISDT SZTF JW] KP T\YL TOFJT ; FYS K[DF8[X]I ptS<5GF
GAZ 42 V:JLSFI "AG[KP

TFZ6 0 ; V]ST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF ÒJG
; VMDFDF\ TOFJT KP

Ho₄₃ IJEST SBJAGF ; FWZ6 VG[IJIX08 AF/SMGF DFTFGL IJST
IRTFGF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 66

IJEST SBJAGF ; FWZ6 VG[IJIX08 AF/SMGF DFTFGL

IJST IRTFGL 5F%TFSMGF VFWZ['t' S; MBL

(N= 136)

SD	IJUT	IJST IRTFGL DwI SM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWZ6 AF/SMGL DFTF	63	38.05	17.43	2.20	2.46	1.92	GYL
2	IJIX08 AF/SMGL DFTF	73	42.77	9.39	1.10			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[IJEST SBJAGF
; FWZ6 VG[IJIX08 AF/SMGF DFTFGL IJST IRTFGL ; NEDFA\ 't' S; MBL
p5I MUDFA , [FDF\ VFJ[, KP HIFZ[134 GL :JFT È DF+(df) V[SM8SDF\
't' GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 1.92 KP
HI SM8SGL ISDT SZTF VMKL KP T[YL TOFJT ; FYS GYL4 DF8[X[
ptS<5GF GAZ 43 :JLSFI "AG[KP

TFZ6 0 IJEST SBJAGF ; FWZ6 VG[IJIX08 AF/SMGF DFTFGL IJST
IRTFDF\TOFJT GYLP

Ho₄₄ IJEST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF DFGI; S
:JF:yI GF Dwl SM JrR[; FYS TOFJT GYLP

SM8S GP 67

IJEST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF

DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ\ 't S; MBL

(N=136)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	63	25.95	5.98	0.75	1.01	7.76	K[
2	IJIX08 AF/SMGL DFTF	73	18.11	5.85	0.68			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[IJEST SBJAGF
; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF DFGI; S :JF:yI GF ; NE'DF\ \ 't
S; MBL p5I MJDF\ , [JFDF\ VFJ[, KP HIFZ[134 GL :JFV È DF+(df) V[
SM8SDF\ 't GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't GL ISDT
7.76 KP H[SM8SGL ISDT SZTF JW] KP T\YL TOFJT ; FYS YFI K[DF8[
XgI ptS<5GF GAZ 44 V:JLSFI "AG[KP

TFZ6 0 IJEST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF DFGI; S

:JF:yI DFTOFJT KP

Ho₄₅ IJEST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF ÒJG
; √MDFGF DwI SM JrR[; FYS TOFJT GYLP

SM8S GP 68

IJEST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF
ÒJG ; √MDFGF 5F%TFSMGF VFWFZ['t' S; MBL
(N=136)

SD	IJUT	ÒJG; √MDFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	63	38.53	7.26	.96	1.60	8.86	K[
2	IJIX08 AF/SMGL DFTF	73	24.36	8.80	1.28			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[IJEST SBJAGF
; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF ; NE'DF\ \ 't' S; MBL p5I MJDF\
, [FDF\ VFJ[, KP HIFZ[134 GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 8.86 KP H[SM8SGL
ISDT SZTF JW] KP TYL TOFJT ; FYS K# DF8[X]I ptS<5GF GAZ 45
V:JLSFI "AG[KP

TFZ6 0 IJEST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF ÒJG
; √MDFGF TOFJT KP

Ho₄₆ IJEST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL IJST
IRTFGF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 69

IJEST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL

IJST IRTFVG 5F%TFSMGF VFWFZ['t' S; MBL

(N=136)

SD	IJUT	IJST IRTFVG 5F%TFSM				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	63	33.87	18.48	2.33	2.48	3.76	K[
2	IJIX08 AF/SMGL I5TF	73	43.19	7.22	0.85			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[IJEST SBJAGF
; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF ; NEDFA 't' S; MBL p5IMJDF\
, [JFDF\ VFJ[, KP HIFZ[134 GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 3.76 KP H[SM8SGL
ISDT SZTF JW] KP TYL TOFJT ; FYS K[DF8[X[] ptS<5GF GAZ 46
V:JLSFI "AG[KP

TFZ6 0 IJEST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL IJST
IRTFDF\TOFJT KP

Ho₄₇ IJEST SBJAGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL DFGI; S
:JF:yI GF DwI SM JrR[; FYS TOFJT GYLP

SM8S GP 70

IJEST SBJAGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF

DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t S; MBL

(N=136)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	63	26.35	5.39	0.68	0.89	8.49	K[
2	IJIXQ8 AF/SMGF I5TF	73	18.79	4.96	058			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[IJEST SBJAGF
; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF DFGI; S :JF:yI GF ; NE'DFA\ 't
S; MBL p5I MJDA, [JFDA VFJ[, KP HIFZ[134GL :JFT È DF+(df) V[
SM8SDF\ 't GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't GL ISDT
8.49 KP H[SM8SGL ISDT SZTF JW] KP T[YL TOFJT ; FYS K[DF8[X]I
ptS<5GF GAZ 47 V:JLSFI "AG[KP

TFZ6 0 IJEST SBJAGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF DFGI; S
:JF:yI DFTOFJT KP

Ho₄₈ IJEST SBJAGF ; FWZ6 VG[IJIX08 AF/SMGF I5TFGF ÒJG
; TMEFGF Dwl SM JrR[; FYS TOFJT GYLP

SM8S GP 71

IJEST SBJAGF ; FWZ6 VG[IJIX08 AF/SMGF I5TFGF

ÒJG ; TMEFGF 5F%TF5MGF VFWFZ['t' S; MBL

(N=136)

SD	IJUT	ÒJG; TMEFGF 5F%TF5M				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWZ6 AF/SMGF I5TF	63	38.65	7.68	0.97	1.44	9.53	K[
2	IJIX08 AF/SMGF I5TF	73	24.92	9.08	1.06			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[IJEST SBJAGF
; FWZ6 VG[IJIX08 AF/SMGF I5TFGF ; NEDF\ 't' S; MBL p5IMJDF\
, JFDF\ VFJ[, KP HIFZ[134 GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCI\U6[, 't' GL ISDT 9.53 KP H[SM8SGL
ISDT SZTF JW] KP TYL TOFJT ; FYS K[DF8[Xq] ptS<5GF GAZ 48
V:JLSFI "AG[KP

TFZ6 0 IJEST SBJAGF ; FWZ6 VG[IJIX08 AF/SMGF I5TFGF ÒJG
; TMEFDF\TOFJT KP

Ho₄₉ 35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL IJST
IRTFGF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 72

35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL

IJST IRTFGL 5F%TFSMGF VFWFZ['t' S; MBL

(N=134)

SD	IJUT	IJST IRTFGL 5F%TFSM				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF DFTF	60	38.03	19.05	2.46	2.64	2.59	K[
2	IJIXQ8 AF/SMGL DFTF	74	44.88	8.26	0.96			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSF1 K[S[35 JQFYL p5ZGF
; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL ; NE'DF\ 't' S; MBL p5I MJDF\
, [JFDF\ VFJ[, KP HIFZ[132 GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCI\U6[, 't' GL ISDT 2.59 KP H[SM8SGL
ISDT SZTF JW] KP TYL TOFJT ; FYS K[DF8[X[] ptS<5GF GAZ 49
V:JLSFI "AG[KP

TFZ6 0 35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL IJST
IRTFDF\TOFJT KP

Ho₅₀ 35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF DFGI; S
:JF:yI GF DwI SM JrR]; FYS TOFJT GYLP

SM8S GP 73

35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF

DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ\ 't' S; MBL

(N=134)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF DFTF	60	26.23	5.63	0.73	1.02	8.96	K[
2	IJIXQ8 AF/SMGF DFTF	74	17.09	6.09	0.71			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[35 JQFYL p5ZGF
; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF ; NE'DF\ \ 't' S; MBL p5IMJDF\
, [JFDF\ VFJ[, KP HI FZ[132 GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCI\U6[, 't' GL ISDT 8.96 KP H[SM8SGL
ISDT SZTF JW] KP TYL TOFJT ; FYS K[DF8[Xq] ptS<5GF GAZ 50
V:JLSFI "AG[KP

TFZ6 0 35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF DFGI; S
:JF:yI DFTOFJT KP

Ho₅₁ 35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL ÒJG
; √MDFGF DwI SM JrR[; FY'S TOFJT GYLP

SM8S GP 74

35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL

ÒJG ; √MDFGF 5F%TFMGM VFWFZ['t' S; MBL

(N=134)

SD	IJUT	ÒJG; √MDFGF 5F%TFMGM				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF DFTF	60	38.55	8.06	1.04	1.44	10.58	K[
2	IJIXQ8 AF/SMGF DFTF	74	23.31	8.48	0.99			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[35 JQFYL p5ZGF
; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF ; NEDFA 't' S; MBL p5IMJDF\
, [JFDF\ VFJ[, KP HIFZ[132 GL : JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VC\ U6[, 't' GL ISDT 10.58 KP H[
SM8SGL ISDT SZTF JW] KP T[YL TOFJT ; FY'S K[DF8[X[ptS<5GF
GAZ 51 V:JLSFI "AG[KP

TFZ6 0 35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF ÒJG
; √MDFGF TOFJT KP

Ho₅₂ 35 JQFYL p5ZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL IJST
IRTFGF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 75

35 JQFYL p5ZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL

IJST IRTFVG 5F%TFSMGF VFWFZ['t' S; MBL

(N=151)

SD	IJUT	IJST IRTFVG 5F%TFSM				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	75	32.49	18.05	2.08	2.23	4.58	K[
2	IJIX08 AF/SMGL I5TF	76	42.71	7.07	0.81			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSF1 K[S[35 JQFYL p5ZGF
; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF ; NEDF\ 't' S; MBL p5I MJDF\
, [JFDF\ VFJ[, KP HIFZ[149 GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCI\U6[, 't' GL ISDT 4.58 KP H[SM8SGL
ISDT SZTF JW] KP TYL TOFJT ; FYS K[DF8[X[] ptS<5GF GAZ 52
V:JLSFI "AG[KP

TFZ6 0 35 JQFYL p5ZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL IJST
IRTFDFATOFJT KP

Ho₅₃ 35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL DFGI; S
:JF:yI GF DwI SM JrR[; FYS TOFJT GYLP

SM8S GP 76

35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL

DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t S; MBL

(N=151)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	75	27.09	5.45	0.64	0.86	10.15	K[
2	IJIXQ8 AF/SMGF I5TF	76	18.36	4.96	0.57			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[35 JQFYL p5ZGF
; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ; NEDF\ 't S; MBL p5IMJDF\
, [JFDF\ VFJ[, KP HIFZ[149 GL :JFT È DF+(df) V[SM8SDF 't GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VC\ U6[, 't GL ISDT 10.15 KP H[
SM8SGL ISDT SZTF JW] KP TYL TOFJT ; FYS K[DF8[X]I ptS<5GF
GAZ 53 V:JLSFI "AG[KP

TFZ6 0 35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF DFGI; S
:JF:yI DFTOFJT KP

Ho₅₄ 35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ÒJG
; √TMDFGF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 77

35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF

ÒJG ; √TMDFGF 5F%TFSMGF VFWFZ['t' S; MBL

(N=151)

SD	IJUT	ÒJG; √TMDFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	75	39.36	6.42	0.74	1.33	9.89	K[
2	IJIXQ8 AF/SMGF I5TF	76	26.21	9.67	1.11			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[35 JQFYL p5ZGF
; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ; NEDFA 't' S; MBL p5IMJDF\
, [JFDF\ VFJ[, KP HIFZ[149 GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 9.89 KP H[SM8SGL
ISDT SZTF JW] KP TYL TOFJT ; FYS K[DF8[X[ptS<5GF GAZ 54
V:JLSFI "AG[KP

TFZ6 0 35 JQFYL p5ZGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ÒJG
; √TMDFGF TOFJT KP

Ho₅₅ 35 JQFYL ; WLGf ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL IJST
IRTFGF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 78

35 JQFYL ; WLGf ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGL

IJST IRTFVG 5F%TFSMGF VFWFZ['t' S; MBL

(N=106)

SD	IJUT	IJST IRTFVG 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF DFTF	60	38.17	16.11	2.08	2.51	1.07	GYL
2	IJIXQ8 AF/SMGL DFTF	46	40.70	9.50	1.40			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSF1 K[S[35 JQFYL ; WLGf
; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL ; NEDF\ 't' S; MBL p51 MJDF\
, [JFDF\ VFJ[, KP HI FZ[102 GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCI\U6[, 't' GL ISDT 9.86 KP H[SM8SGL
ISDT SZTF JW] KP T[YL TOFJT ; FYS GYL4 DF8[X]I ptS<5GF GAZ 55
:JLSFI "AG[KP

TFZ6 0 35 JQFYL ; WLGf ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGL IJST
IRTFDF\TOFJT GYLP

Ho₅₆ 35 JQF" ; WLGf ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF DFGI; S
:JF:yI GF DwI SM JrR[; FYS TOFJT GYLP

SM8S GP 79

35 JQF" ; WLGf ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF

DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t' S; MBL

(N=106)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF DFTF	60	25.30	6.05	0.78	1.07	7.41	K[
2	IJIXQ8 AF/SMGF DFTF	46	17.37	4.97	0.73			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[35 JQF" ; WLGf
; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF ; NEDF\ \ 't' S; MBL p5I MJDF\
, [JFDF\ VFJ[, KP HIFZ[104 GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCI\U6[, 't' GL ISDT 7.41 KP H[SM8SGL
ISDT SZTF JW] KP TYL TOFJT ; FYS K[DF8[Xq] ptS<5GF GAZ 56
V:JLSFI "AG[KP

TFZ6 0 35JQF" ; WLGf ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF DFGI; S
:JF:yI DF\TOFJT KP

Ho₅₇ 35 JQF" ; WLGf ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF ÒJG
; VTMDFG DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 80

35 JQF" ; WLGf ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF

ÒJG ; VTMDFG 5F%TFSMGF VFWFZ['t' S; MBL
(N=134)

SP	IJUT	ÒJG; VTMDFG 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF DFTF	60	38.88	4.87	1.09	1.58	9.03	K[
2	IJIX08 AF/SMGF DFTF	74	25.24	7.75	1.14			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[35 JQF" ; WLGf
; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF ; NEDFA 't' S; MBL p5IMJDF\
, JFDF\ VFJ[, KP HIFZ[132 GL :JFTÈ DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 9.03 KP H[SM8SGL
ISDT SZTF JW] KP TYL TOFJT ; FYS K# DF8[Xj]I ptS<5GF GAZ 57
V:JLSFI "AG[KP

TFZ6 0 35 JQF" ; WLGf ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF ÒJG
; VTMDFFA TOFJT KP

Ho₅₈ 35 JQF" ; JMLGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL IJST IRVTFGF
Dwl SM JrR[; FYS TOFJT GYLP

SM8S GP 81

35 JQF" ; JMLGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF

IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S ; MBL

(N=89)

SD	IJUT	IJST IRVTFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	45	33.71	18.76	2.80	2.99	3.42	K[
2	IJIXQ8 AF/SMGL I5TF	44	43.95	6.90	1.04			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[35 JQF" ; JMLGF
; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ; NEDF\ 't' S ; MBL p5IMJDF\
, JFDF\ VFJ[, KP HIFZ[87 GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCI\U6[, 't' GL ISDT 3.42 KP H[SM8SGL
ISDT SZTF JW] KP TYL TOFJT ; FYS K[DF8[Xq] ptS<5GF GAZ 58
V:JLSFI "AG[KP

TFZ6 0 35 JQF" ; JMLGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL IJST
IRVTFDA\TOFJT KP

Ho₅₉ 35 JQF" ; WLGf ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL DFGI; S
:JF:yI GF DwI SM JrR[; FYS TOFJT GYLP

SM8S GP 82

35 JQF" ; WLGf ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF
DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t S; MBL
(N=89)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	45	25.36	5.27	0.79	1.15	7.21	K[
2	IJIXQ8 AF/SMGF I5TF	44	17.07	5.59	0.84			

SM8SDF\ VF5[DFICTL 5ZYL HM. XSFI K[S[35 JQF" ; WLGf
; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ; NEDF\ \ 't S; MBL p5I MJDF\
, [FDF\ VFJ[KP HIFZ[87 GL :JFT È DF+(df) V[SM8SDF\ 't GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VCL\U6['t GL ISDT 7.21 KP H[SM8SGL
ISDT SZTF JW] KP TYL TOFJT ; FYS K# DF8[X]I ptS<5GF GAZ 59
V:JLSFI "AG[KP

TFZ6 0 35 JQF" ; WLGf ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL DFGI; S
:JF:yI DFTOFJT KP

Ho₆₀ 35 JQF" ; JMLGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL ÒJG
; ∇MDFGF DwI SM JrR[; FYS TOFJT GYLP

SM8S GP 83

35 JQF" ; JMLGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL

ÒJG ; ∇MDFGF 5F%TF SMGF VFWFZ['t' S; MBL

(N=89)

SD	IJUT	ÒJG; ∇MDFGF 5F%TF SM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	45	38.29	7.74	1.50	1.65	8.40	K[
2	IJIXQ8 AF/SMGF I5TF	44	24.43	7.90	1.19			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[35 JQF" ; JMLGF
; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ; NEDFA 't' S; MBL p5IMJDF\
, JFDF\ VFJ[, KP HIFZ[87 GL : JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL
ISDT 0.05 S1FFV[1.98 KP VC\U6[, 't' GL ISDT 8.40 KP H[SM8SGL
ISDT SZTF JW] KP TYL TOFJT ; FYS K[DF8[Xq] ptS<5GF GAZ 60
V:JLSFI "AG[KP

TFZ6 0 35 JQF" ; JMLGF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL ÒJG
; ∇MDFGF TOFJT KP

Ho₆₁ ; FWZ6 VG[IJIX08 AF/SMGF DFTFGL IJST IRVTFGF DwI SM JrR[
; FYS TOFJT GYLP

SM8S GP 84

; FWZ6 VG[IJIX08 AF/SMGL DFTFGL IJST IRVTFGF

5F%TFSMGF VFWFZ\ 't' S; MBL

(N=240)

SD	IJUT	IJST IRVTFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWZ6 AF/SMGL DFTF	120	38.23	18.02	1.65	1.84	2.74	K[
2	IJIX08 AF/SMGL DFTF	120	43.28	8.99	0.82			

SM8SDF\VF5[, DFICTL 5ZYL HM. XSFI K[S[; FWZ6 VG[IJIX08
AF/SMGF DFTFGL IJST IRVTFGF ; NE'DF\ 't' S; MBL p5I MUJDF\ , [JFDF\
VFJ[, KP HIFZ[238 GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL ISDT
0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 2.74 KP H[SM8SGL ISDT
SZTF JW] KP T\YL TOFJT ; FYS K# DF8[X#I ptS<5GF GAZ 61
V:JLSFI "AG[KP

TFZ6 0 ; FWZ6 VG[IJIX08 AF/SMGF DFTFGL IJST IRVDF\TOFJT KP

Ho₆₂ ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF DFGI; S :JF:yI GF Dwl SM JrR[; FYS TOFJT GYLP

SM8S GP 85

; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF DFGI; S :JF:yI GF

5F%TFSMGF VFWFZ\ 't' S; MBL
(N=240)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	120	25.69	5.84	0.53	0.74	11.45	K[
2	IJIXQ8 AF/SMGL DFTF	120	17.22	5.70	0.52			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[A[AF/SJF/F ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF DFGI; S :JF:yI GF ; NE'DF\ \ 't' S; MBL p5I MJDF\ , [JFDF\ VFJ[, KP HIFZ[238 GL :JFV È DF+(df) V[SM8SDF\ 't' GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 11.45 KP H[SM8SGL ISDT SZTF JW] KP T[YL TOFJT ; FYS K[DF8[XgI ptS<5GF GAZ 62 V:JLSFI "AG[KP

TFZ6 0 ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF DFGI; S :JF:yI FDF\TOFJT KP

Ho₆₃ ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF ÒJG ; ¶MDFGF DwI SM JrR[
; FYS TOFJT GYLP

SM8S GP86

; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF ÒJG ; ¶MDFGF

5F%TFSMGF VFWFZ['t' S; MBL
(N=240)

SD	IJUT	ÒJG; ¶MDFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	120	38.93	8.00	0.73	1.06	14.13	K[
2	IJIXQ8 AF/SMGL DFTF	120	23.95	8.47	0.77			

SM8SDF\ VF5[, DFICTL 5ZYL HM XSFI K[S[A[AF/SJF/F
; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF ÒJG; ¶MDFGF ; NEDFA\ 't' S; MBL
p5IMJDA , ¶FDA\ VFJ[, KP HIFZ[238 GL :JFT È DF+(df) V[SM8SDF\
't' GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 14.13
KP H[SM8SGL ISDT SZTF JW] KP TYL TOFJT ; FYS K[DF8[X]I
ptS<5GF GAZ 63 V:JLSFI "AG[KP

TFZ6 0 ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL ÒJG ; ¶MDFDA\TOFJT KP

Ho₆₄ ; FWZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRTFGF DwI SM JrR[
; FYS TOFJT GYLP

SM8S GP 87

; FWZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRTFGF

5F%TFSMGF VFWFZ['t' S; NBL

(N=240)

SD	IJUT	ÖJG; VTMFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWZ6 AF/SMGL DFTF	120	33.99	18.46	1.68	1.80	5.1	K[
2	IJIX08 AF/SMGL DFTF	120	43.17	7.03	0.64			

SM8SDF\VF5[, DFICTL 5ZYL HM. XSFI K[S[; FWZ6 VG[IJIX08
AF/SMGF I5TFGL IJST IRTFGF ; NEDFA\ 't' S; NBL p5I MUJDA\ , [JFDA
VFJ[, KP HIFZ[238 GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL ISDT
0.05 SIFFV[1.98 KP VCL\U6[, 't' GL ISDT 5.1 KP H[SM8SGL ISDT
SZTF JW] KP TYL TOFJT ; FYS K[DF8[X[ptS<5GF GAZ 64
V:JLSFI "AG[KP

TFZ6 0 ; FWZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRTFDATOFJT KP

Ho₆₅ ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF DFGI; S :JF:yI GF DwI SM
JrR[; FYS TOFJT GYLP

SM8S GP 88

; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF DFGI; S :JF:yI GF

5F%TFSMGF VFWFZ\ 't' S; MBL

(N=240)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL I5TF	120	26.29	5.56	0.51	0.70	12.01	K[
2	IJIX08 AF/SMGL I5TF	120	17.88	5.23	0.48			

SM8SDF\VF5[, DFICTL 5ZYL HM. XSFI K[S[; FWFZ6 VG[IJIX08
AF/SMGF I5TFGF DFGI; S :JF:yI GF ; NE'DF\ 't' S; MBL p5I MUDF\, [JDF\
VFJ[, KP HIFZ[238 GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL ISDT
0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 12.01 KP H[SM8SGL
ISDT SZTF JW] KP TYL TOFJT ; FYS K# DF8[X]I ptS<5GF GAZ 65
V:JLSFI "AG[KP

TFZ6 0 ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF DFGI; S :JF:yI D\TOFJT

KP

Ho₆₆ ; FWZ6 VG[IJIX08 AF/SMGF I5TFGF ÒJG; √TMFGF DwI SM JrR[
; FYS TOFJT GYLP

SM8S GP 89

; FWZ6 VG[IJIX08 AF/SMGF I5TFGF ÒJG ; √TMFGF

5F%TFFSMGF VFWFZ['t' S; MBL
(N=240)

SD	IJUT	ÒJG; √TMFGF 5F%TFFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWZ6 AF/SMGF I5TF	120	39.13	7.25	0.66	1.05	12.73	K[
2	IJIX08 AF/SMGF I5TF	120	25.76	8.97	0.82			

SM8SDF\VF5[, DFICTL 5ZYL HM. XSFI K[S[; FWZ6 VG[IJIX08
AF/SMGF I5TFGF ÒJG ; √TMFGF ; NEDFA\ 't' S; MBL p5I MJDA\ , [JFDA\
VFJ[, KP HIFZ[238 GL :JFT È DF+(df) V[SM8SDF\ 't' GL H~ZL ISDT
0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 12.73 KP H[SM8SGL
ISDT SZTF JW] KP TYL TOFJT ; FYS K[DF8[X[ptS<5GF GAZ 66
V:JLSFI "AG[KP

TFZ6 0 ; FWZ6 VG[IJIX08 AF/SMGF I5TFGF ÒJG ; √TMFGF\TOFJT KP

H_{067} DFGI; S XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL IJST
IRTFGF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 90

DFGI; S XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGE

IJST IRTFGE 5%TFSMGF VFWFZ['t' S; MBL

(N=126)

SD	IJUT	IJST IRTFGE 5%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	60	39.30	17.97	2.32	2.55	1.60	GYL
2	IJIXQ8 AF/SMGL DFTF	66	43.39	8.67	1.07			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[DFGI; S XMB
WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGE ; NEDFA \ 't' S; MBL
p5IMUDFA , [FDF\ VFJ[, KP HIFZ[124 GL :JFT È DF+(df) V[SM8SDF\
't' GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 1.60 KP
HI SM8SGL ISDT SZTF VMKL KP T[YL TOFJT ; FYS GYL4 DF8[X[
ptS<5GF GAZ 67 :JLSFI "AG[KP

TFZ6 0 ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL IJST IRTFDF\ TOFJT
GYLP

Ho₆₈ DFGI; S XMB WZEFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL
 DFGI; S :JF:yI GF Dwl SMJrR[; FYS TOFJT GYLP

SM8S GP 91

DFGI; S XMB WZEFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGE

DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t' S; MBL
 (N=126)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	60	25.47	5.57	0.72	0.97	9.62	K[
2	IJIXQ8 AF/SMGL DFTF	66	16.14	5.27	0.65			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[DFGI; S XMB
 WZEFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGE ; NEDFA \ 't' S; MBL
 p5IMUDFA , [FDF\ VFJ[, KP HIFZ[124 GL :JFT È DF+(df) V[SM8SDF\
 't' GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 9.62 KP
 H[SM8SGL ISDT SZTF JW] KP T[YL TOFJT ; FYS K[DF8[X]I ptS<5GF
 GAZ 68 V:JLSFI "AG[KP

TFZ6 0 DFGI; S XMB WZEFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGE
 DFGI; S :JF:yI DFTOFJT KP

Ho₆₉ DFGI; S XMB WZFJTF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF
 ÖJG ; √MDFGF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 92

DFGI; S XMB WZFJTF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF

ÖJG ; √MDFGF 5F%TFSMGF VFWFZ['t' S; MBL
 (N=126)

SP	IJUT	ÖJG; √MDFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	60	39.25	7.49	0.97	1.28	13.59	K[
2	IJIX08 AF/SMGL DFTF	66	21.85	6.39	0.83			

SM8SDF\ VF5[, DFICTL 5ZYL HM XSFI K[S[DFGI; S XMB
 WZFJTF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF ; NEDFA \ 't' S; MBL
 p5I MJDA, [JFDA VFJ[, KP HIFZ[124 GL :JFT È DF+(df) V[SM8SDF\
 't' GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\ U6[, 't' GL ISDT 13.59
 KP H[SM8SGL ISDT SZTF JW] KP TML TOFJT ; FYS K[DF8[XgI
 ptS<5GF GAZ 69 V:JLSFI "AG[KP

TFZ6 0 DFGI; S XMB WZFJTF ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF
 ÖJG ; √MDFDA TOFJT KP

Ho₇₀ DFGI; S XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL IJST
IRVTFGF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 93

DFGI; S XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL

IJST IRVTFGF 5F%TFSMGF VFWFZ['t' S; NBL
(N=111)

SP	IJUT	IJST IRVTFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	60	34.07	17.02	2.20	2.41	4.03	GYL
2	IJIXQ8 AF/SMGL I5TF	51	43.80	6.97	0.98			

SM8SDF\ VF5[, DFICTL 5ZYL HM XSFI K[S[DFGI; S XMB
WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL IJST IRVTFGF ; MEDFA
't' S; NBL p5I MJDF\, [JFDF\ VFJ[, KP HIFZ[109 GL :JFT È DF+(df) V[
SM8SDF\ 't' GL H~ZL ISDT 0.05 SIFFV[1.98 KP VCL\U6[, 't' GL ISDT
4.03 KP H[SM8SGL ISDT SZTF JW] KP T\YL TOFJT ; FYS K# DF8[X#I
ptS<5GF GAZ 70 V:JLSFI "AG[KP

TFZ6 0 DFGI; S XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL
IJST IRVTFDA TOFJT KP

Ho₇₁ DFGI; S XMB WZEFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF
DFGI; S :JF:yI GF DwI SM JrR[; FYS TOFJT GYLP

SM8S GP 94

DFGI; S XMB WZEFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF

DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t' S; MBL

(N= 111)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	60	26.08	5.35	0.69	0.98	8.95	K[
2	IJIXQ8 AF/SMGF I5TF	51	17.31	4.91	0.68			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[DFGI; S XMB
WZEFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ; NEDFA \ 't' S; MBL
p5I MUDFA , [FDF\ VFJ[, KP HIFZ[109 GL :JFT È DF+(df) V[SM8SDF\
't' GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 8.95 KP
H[SM8SGL ISDT SZTF JW] KP T\YL TOFJT ; FYS K[DF8[X]I ptS<5GF
GAZ 71 V:JLSFI "AG[KP

TFZ6 0 DFGI; S XMB WZEFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF
DFGI; S :JF:yI DFTOFJT KP

Ho₇₂ DFGI; S XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF
 ÖJG ; √TMFGF Dwl SM JrR[; FYS TOFJT GYLP

SM8S GP 95

DFGI; S XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF

ÖJG ; √TMFGF 5F%TFSMGF VFWFZ['t' S; MBL
 (N=111)

SP	IJUT	ÖJG; √TMFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	60	40.30	5.95	0.77	1.31	11.44	K[
2	IJIXQ8 AF/SMGF I5TF	51	25.31	7.55	1.06			

SM8SDFA VF5[, DFICTL 5ZYL HM XSFI K[S[DFGI; S XMB
 WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ; NEDFA \ 't' S; MBL
 p5I MJDA, [JFDA VFJ[, KP HIFZ[109GL :JFT È Df+(df) V[SM8SDFA 't'
 GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCI\U6[, 't' GL ISDT 11.44 KP
 H[SM8SGL ISDT SZTF JW] KP T[YL TOFJT ; FYS K[DF8[X]I ptS<5GF
 GAZ 72 V:JLSFI "AG[KP

TFZ6 0 DFGI; S XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF
 ÖJG ; √TMFDFA TOFJT KP

Ho₇₃ XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL IJST
IRTFGF Dwl SMJrR[; FYS TOFJT GYLP

SM8S GP 96

XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL

IJST IRTFVG 5F%TFSMGF VFWFZ['t' S; MBL

(N=114)

SD	IJUT	IJST IRTFVG 5F%TFSM				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	60	36.58	16.08	2.08	2.44	2.68	K[
2	IJIXQ8 AF/SMGL DFTF	54	43.13	9.35	1.27			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[XFZLIZS XMB
WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFVG ; NEDFA 't' S; MBL
p5IMUDFA , [FDF\ VFJ[, KP HIFZ[112 GL :JFT È DF+(df) V[SM8SDF\
't' GL H~ZL ISDT 0.05 SIFV[1.98 KP VCL\U6[, 't' GL ISDT 2.68 KP
H[SM8SGL ISDT SZTF JW] KP T\YL TOFJT ; FYS K[DF8[X]I ptS<5GF
GAZ 73 V:JLSFI "AG[KP

TFZ6 0 XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGL
IJST IRTFDATOFJT KP

Ho₇₄ XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF
DFGI; S :JF:yI GF Dwl SMJrR[; FYS TOFJT GYLP

SM8S GP 97

XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF

DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t S; MBL

(N=114)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	60	25.82	6.0	0.78	1.12	6.5	K[
2	IJIXQ8 AF/SMGL DFTF	54	18.54	5.94	0.81			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[XFZLIZS XMB
WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF DFTFGF ; NEDFA 't S; MBL
p5I MUDFA, [FDF\ VFJ[, KP HIFZ[102 GL :JFT È DF+(df) V[SM8SDF\
't GL H~ZL ISDT 0.05 S1FFV[1.98 KP VC\U6[, 't GL ISDT 6.5 KP
H[SM8SGL ISDT SZTF JW] KP T\YL TOFJT ; FYS K[DF8[X]I ptS<5GF
GAZ 74 V:JLSFI "AG[KP

TFZ6 0 XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGL DFTFGF
DFGI; S :JF:yI DATOFJT KP

Ho₇₅ XFZLIZS XMB WZFJTf ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF
 ÖJG ; √MDFGF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 98

XFZLIZS XMB WZFJTf ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF

ÖJG ; √MDFGF 5F%TFMGE VFWFZ['t' S; MBL
 (N=114)

SP	IJUT	ÖJG; √MDFGF 5F%TFMGE				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGL DFTF	60	38.92	8.02	1.04	1.62	7.52	K[
2	IJIX08 AF/SMGL DFTF	54	26.74	9.12	1.24			

SM8SDF\ VF5[, DFICTL 5ZYL HM XSFI K[S[XFZLIZS XMB
 WZFJTf ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF ; NEDF\ 't' S; MBL
 p5I MUDF\, [JDF\ VFJ[, KP HIFZ[112 GL :JFT È DF+(df) V[SM8SDF\
 't' GL H~ZL ISDT 0.05 SIFFV[1.98 KP VCL\U6[, 't' GL ISDT 7.52 KP
 H[SM8SGL ISDT SZTF JW] KP T\YL TOFJT ; FYS K[DF8[X]I ptS<5GF
 GAZ 75 V:JLSFI "AG[KP

TFZ6 0 XFZLIZS XMB WZFJTf ; FWFZ6 VG[IJIX08 AF/SMGL DFTFGF
 ÖJG ; √MDFGF TOFJT KP

Ho₇₆ XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL IJST
IRTFGF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 99

XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL

IJST IRTTFGF 5F%TFSMGF VFWFZ['t' S; MBL

(N=129)

SD	IJUT	IJST IRTTFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	60	34.62	20.16	2.60	2.79	3.08	K[
2	IJIXQ8 AF/SMGF I5TF	69	43.22	8.31	1.00			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[XFZLIZS XMB
WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ; NEDFA 't' S; MBL
p5IMUDFA , [FDF\ VFJ[, KP HIFZ[127 GL :JFT È DF+(df) V[SM8SDF\
't' GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 3.08 KP
H[SM8SGL ISDT SZTF JW] KP T\YL TOFJT ; FYS K[DF8[X]I ptS<5GF
GAZ 76 V:JLSFI "AG[KP

TFZ6 0 XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL
IJST IRTFDATOFJT KP

Ho₇₇ XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL
DFGI; S :JF:yI GF DwI SM JrR[; FYS TOFJT GYLP

SM8S GP 100

XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL

DFGI; S :JF:yI GF 5F%TFSMGF VFWFZ['t S; MBL

(N=129)

SD	IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	60	26.37	5.85	0.75	0.99	8.15	K[
2	IJIXQ8 AF/SMGF I5TF	69	18.30	5.43	0.65			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[XFZLIZS XMB
WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ; NEDFA \ 't S; MBL
p5I MUDFA, [JFDF\VFJ[, KP HIFZ[127GL :JFT È DF+(df) V[SM8SDF\ 't
GL H~ZL ISDT 0.05 S1FFV[1.98 KP VC\U6[, 't GL ISDT 8.15 KP H[
SM8SGL ISDT SZTF JW] KP T[YL TOFJT ; FYS K[DF8[X[ptS<5GF
GAZ 77 V:JLSFI "AG[KP

TFZ6 0 XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL
DFGI; S :JF:yI DFTOFJT KP

Ho₇₈ XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL
 ÖJG ; √TMDFGF DwI SMJrR[; FYS TOFJT GYLP

SM8S GP 101

XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGL

ÖJG ; √TMDFGF 5F%TFSMGF VFWFZ['t' S; MBL

(N=129)

SD	IJUT	ÖJG; √TMDFGF 5F%TFSM				5DF6 E}	t ISDT	; FYSTF K[
		N	M	SD	SEM			
1	; FWFZ6 AF/SMGF I5TF	60	37.58	8.15	1.05	1.59	7.23	K[
2	IJIXQ8 AF/SMGF I5TF	69	26.09	9.88	1.19			

SM8SDF\ VF5[, DFICTL 5ZYL HM. XSFI K[S[XFZLIZS XMB
 WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF ; NEDFA \ 't' S; MBL
 p5I MUDFA, [FDF\ VFJ[, KP HIFZ[127 GL :JFT È DF+(df) V[SM8SDF\
 't' GL H~ZL ISDT 0.05 S1FFV[1.98 KP VCL\U6[, 't' GL ISDT 7.23 KP
 H[SM8SGL ISDT SZTF JW] KP T\YL TOFJT ; FYS K[DF8[X]I ptS<5GF
 GAZ 78 V:JLSFI "AG[KP

TFZ6 0 XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIXQ8 AF/SMGF I5TFGF
 ÖJG ; √TMDFGF TOFJT KP

4.5 r-S; MBL 5DF6[X]I ptS<5GFGL U6TZL 0

Ho₇₉ DFGI; S XMB WZFJTF ; FWFZ6 AF/SMJF/F I5TFGL IJST IRVF VG[
DFGI; S :JF:yI GF DwI SMJrR[SM ; ULG ; C; AW GYLP

SM8S GP102

DFGI; S XMB WZFJTF ; FWFZ6 AF/SMJF/F I5TFGL IJST IRVF VG[
DFGI; S :JF:yI GF DwI SMJrR[; C; AW NXF"JT]SM8SP

SPFS	IJUT	; bIF	:JFTV ; bIF	r ISDT	; FYSTF
1	I5TFGL IJST IRVF	60	58	0.65	KP
2	I5TFGM DFGI; S :JF:yI	60	58		

U6TZL 5DF6[VY"38G 0

VCL\ U6[F r-GL ISDT 0.65 KP Vβ, [S[; FWFZ6 3G ; C; AW
NXF"J[KP

SM8S 5DF6[VY"38G 0

p5ZGF SM8S 5DF6[df = 58GL SM8S ISDT 0.05 S1FFV[0.25 KP
βIFZ[VCL\ VFJ[F r GL ISDT 0.65 KP U6[F r-GL ISDT SM8S ISDT
SZTF JW]KP Vβ, [S[TOFJT ; FYS K[VG[X]I ptS<5GF V:JLSFI "AG[
KP

VFYL SCL XSFI S[DFGI; S XMB WZFJTF ; FWFZ6 AF/SMJF/F
I5TFGL IJST IRVF VG[DFGI; S :JF:yI GF DwI SMJrR[JW] ; C; AW KP

Ho₈₀ AYL JW] ; FWZ6 AF/SMJF/F I5TFGL IJST IRVF VG[ÒJG
; TMEGF DwI SMJrR[SM. ; ULG ; C; AW GYLP

SM8S GP103

AYL JW] ; FWZ6 AF/SMJF/F I5TFGL IJST IRVF VG[ÒJG ; TMEGF
DwI SMJrR[; C; AW NXFJT]SM8SP

SPFS	IJUT	; bIF	:JFTV̄ ; bIF	r ISDT	; FYSTF
1	I5TFGL IJST IRVF	45	43	-0.40	K[
2	I5TFGM ÒJG ; TMEF	45	43		

U6TZL 5DF6[VY*38G 0

VCL\ U6[F r-GL ISDT -0.40 KP VB, [S[VMKM k6 ; C; AW
NXFJ[KP

SM8S 5DF6[VY*38G 0

p5ZGF SM8S 5DF6[df = 43GL SM8S ISDT 0.05 S1FFV[28.75 KP
BIFZ[VCL\ U6[F r GL ISDT 0.40 KP U6[F r-GL ISDT SM8S ISDT
SZTF JW]KP VB, [S[TOFJT ; FYS K[VG[X]I ptS<5GF V:JLSFI"AG[
KP

VFYL SCL XSFI S[AYL JW] ; FWZ6 AF/SMJF/F I5TFGL IJST
IRVF VG[ÒJG ; TMEGF DwI SMJrR[VMKM ; C; AW KP

Ho₈₁ ; V]ST SBJADFAZC[TF ; FWFZ6 AF/SMGF I5TFGF DFGI; S :JF:yI
 VG[ÒJG ; VTMFGF DwI SM JrR[SM ; ULG ; C; AW GYLP

SM8S GP104

; V]ST SBJADFAZC[TF ; FWFZ6 AF/SMGF I5TFGF DFGI; S :JF:yI VG[
 ÒJG ; VTMFGF DwI SM JrR[; C; AW NXFJT]SM8SP

SPFS	IJUT	; bIF	:JFTVÉ ; bIF	r ISDT	; FYSTF
1	I5TFGF[DFGI; S :JF:yI	59	57	-0.32	K[
2	I5TFGM ÒJG ; VTMF	59	57		

U6TZL 5pF6[VY'38G 0

VCL\ U6[F r-GL ISDT -0.32 KP Vβ, [S[VMKM K6 ; C; AW
 NXFJ[KP

SM8S 5pF6[VY'38G 0

p5ZGF SM8S 5pF6[df = 57GL SM8S ISDT 0.05 S1FFV[6.25 KP
 BIFZ[VCL\ U6[F r- GL ISDT 0.32 KP U6[F r-GL ISDT SM8S ISDT
 SZTF VMKL KP Vβ, [S[TOFJT ; FYS K[VG[X]I ptS<5GF :JLSFI"AG[
 KP

VFYL SCL XSFI S[; V]ST SBJADFAZC[TF ; FWFZ6 AF/SMGF I5TFGF
 DFGI; S :JF:yI VG[ÒJG ; VTMFGF DwI SM JrR[VMKM ; C; AW KP

Ho₈₂ AYL JW] ; FWZ6 AF/SMJF/F I5TFGL DFGI; S :JF:yI VG[ÒJG
; TMEGF DwI SM JrR[SM. ; ULG ; C; AW GYLP

SM8S GP105

AYL JW] ; FWZ6 AF/SMJF/F I5TFGL DFGI; S :JF:yI VG[ÒJG
; TMEGF DwI SM JrR[; C; AW NXFJT\SM8SP

SPFS	IJUT	; bIF	:JFTV̄ ; bIF	r ISDT	; FYSTF
1	I5TFGF DFGI; S :JF:yI	45	43	0.77	K[
2	I5TFGF ÒJG ; TMEF	45	43		

U6TZL 5pF6[VY*38G 0

VCL\U6, F r-GL ISDT 0.77 KP VB, [S[VMKM 3G ; C; AW NXFJ[

KP

SM8S 5pF6[VY*38G 0

p5ZGF SM8S 5pF6[df = 43GL SM8S ISDT 0.05 S1FFV[0.29 KP

BI FZ[VCL\U6, F r GL ISDT 0.77 KP U6, F r-GL ISDT SM8S ISDT

SZTF JW]KP VB, [S[TOFJT ; FYS K[VG[X]I ptS<5GF V:JLSFI"AG[

KP

VFYL SCL XSFI S[AYL JW] ; FWZ6 AF/SMJF/F I5TFGL DFGI; S

:JF:yI VG[ÒJG ; TMEGF DwI SM JrR[JW] ; C; AW KP

Ho₈₃ A[YL JW] ; FWZ6 AF/SMJF/F I5TFGL IJST IRVF VG[DFGI; S
:JF:yI GF DwI SMJrR[SM. ; ULG ; C; AW GYLP

SM8S GP106

A[YL JW] ; FWZ6 AF/SMJF/F I5TFGL IJST IRVF VG[DFGI; S :JF:yI GF
DwI SMJrR[; C; AW NXFJT]SM8SP

SPFS	IJUT	; bIF	:JFTV ; bIF	r ISDT	; FYSTF
1	I5TFGL IJST IRVF	45	43	-0.63	K[
2	I5TFGMDFGI; S :JF:yI	45	43		

U6TZL 5DF6[VY'38G 0

VCL\ U6[F r-GL ISDT -0.63 KP VB, [S[; FWZ6 k6 ; C; AW
NXFJ[KP

SM8S 5DF6[VY'38G 0

p5ZGF SM8S 5DF6[df = 43GL SM8S ISDT 0.05 S1FFV[0.29 KP
BIFZ[VCL\ U6[F r GL ISDT 0.63 KP U6[F r-GL ISDT SM8S ISDT
SZTF JW] KP VB, [S[TOFJT ; FYS K[VG[X]I ptS<5GF V:JLSFI"AG[
KP

VFYL SCL XSFI S[A[YL JW] ; FWZ6 AF/SMJF/F I5TFGL IJST
IRVF VG[DFGI; S :JF:yI GF DwI SMJrR[JW]; C; AW KP

Ho₈₄ ; FWZ6 A[AF/SMJF/F I5TFGL IJST IRTF VG[ÒJG ; TMEGF
Dwl SM JrR[SM. ; ULG ; C; AW GYLP

SM8S GP107

; FWZ6 A[AF/SMJF/F I5TFGL IJST IRTF VG[ÒJG ; TMEGF Dwl SM
JrR[; C; AW NXFJT]SM8SP

SPFS	IJUT	; bIF	:JFTV ; bIF	r ISDT	; FYSTF
1	I5TFGL IJST IRTF	75	73	-0.33	K[
2	I5TFGM ÒJG ; TMEF	75	73		

U6TZL 5DF6[VY38G 0

VCL\ U6[F r-GL ISDT -0.33 KP VB, [S[VMKM k6 ; C; AW
NXFJ[KP

SM8S 5DF6[VY38G 0

p5ZGF SM8S 5DF6[df = 73GL SM8S ISDT 0.05 S1FFV[0.22 KP
BIFZ[VCL\ U6[F r GL ISDT 0.33 KP U6[F r-GL ISDT SM8S ISDT
SZTF JW]KP VB, [S[TOFJT ; FYS K[VG[X]I ptS<5GF V:JLSFI "AG[
KP

VFYL SCL XSFI S[; FWZ6 A[AF/SMJF/F I5TFGL IJST IRTF VG[
ÒJG ; TMEGF Dwl SM JrR[JW]; C; AW KP

Ho₈₅ ; FWFZ6 AF/SMJF/F WMP₁₂ ; WL VeIF; SZ, F I5TFGL IJST IRVF
VG[ÒJG ; VMFGF DwI SM JrR[SM ; ULG ; C; AW GYLP

SM8S GP₁₀₈

; FWFZ6 AF/SMJF/F WMP 12 ; WL VeIF; SZ, F I5TFGL IJST IRVF VG[
ÒJG ; VMFGF DwI SM JrR[; C; AW NXFJT]SM8SP

SPFS	IJUT	; bIF	:JFTVÉ ; bIF	r ISDT	; FYSTF
1	I5TFGL IJST IRVF	60	58	-0.31	K[
2	I5TFGM ÒJG ; VMFGF	60	58		

U6TZL 5PF6[VY³⁸G 0

VCL\ U6, F r-GL ISDT 0.31 KP VB, [S[VMKM K6 ; C; AW
NXFJ[KP

SM8S 5PF6[VY³⁸G 0

p5ZGF SM8S 5PF6[$df = 58$ GL SM8S ISDT 0.05 S1FFV[0.25 KP
BIFZ[VCL\ U6, F r GL ISDT 0.31 KP U6, F r-GL ISDT SM8S ISDT
SZTF JW]KP VB, [S[TOFJT ; FYS K[VG[X]I ptS<5GF V:JLSFI "AG[
KP

VFYL SCL XSFI S[; FWFZ6 A[AF/SMJF/F WMP₁₂ ; WL VeIF;
SZ, F I5TFGL IJST IRVF VG[ÒJG ; VMFGF DwI SM JrR[VMKM ; C; AW
KP

Ho₈₆ 35 JQFYL p5ZGF ; FWFZ6 AF/SMGF I5TFGL IJST IRVF VG[ÒJG
; VMFGF DwI SM JrR[SM ; ULG ; C; AW GYLP

SM8S GP109

35 JQFYL p5ZGF ; FWFZ6 AF/SMGF I5TFGL IJST IRVF VG[ÒJG
; VMFGF DwI SM JrR[; C; AW NXFJT\SM8SP

SPFS	IJUT	; bIF	:JFTV ; bIF	r ISDT	; FYSTF
1	I5TFGL IJST IRVF	75	73	-0.18	GYL
2	I5TFGMÒJG ; VMF	75	73		

U6TZL 5pF6[VY*38G 0

VCL\U6[F r-GL ISDT v0.18 KP VB, [S[VMKM GICJT ; C; AW
NXFJ[KP

SM8S 5pF6[VY*38G 0

p5ZGF SM8S 5pF6[af = 73GL SM8S ISDT 0.05 S1FFV[0.22 KP
BIFZ[VCL\U6[F r GL ISDT 0.18 KP U6[F r-GL ISDT SM8S ISDT
SZTF VMKL KP VB, [S[TOFJT ; FYS GYL VG[XgI ptS<5GF :JLSFI"
AG[KP

VFYL SCL XSFI S[35 JQFYL p5ZGF ; FWFZ6 AF/SMGF I5TFGL
IJST IRVF VG[ÒJG ; VMFGF DwI SM JrR[VMKM ; C; AW KP

Ho₈₇ ; FWZ6 A[AF/SMJF/F I5TFGL IJST IRTF VG[ÒJG ; TMEGF
Dwl SM JrR[SM. ; ULG ; C; AW GYLP

SM8S GP110

; FWZ6 A[AF/SMJF/F I5TFGL IJST IRTF VG[ÒJG ; TMEGF Dwl SM
JrR[; C; AW NXFJT]SM8SP

SPFS	IJUT	; bIF	:JFTVÉ ; bIF	r ISDT	; FYSTF
1	I5TFGL IJST IRTF	60	58	-0.28	K[
2	I5TFGM ÒJG ; TMEF	60	58		

U6TZL 5pF6[VY*38G 0

VCL\ U6[F r-GL ISDT v0.28 KP Vβ, [S[VMKM k6 ; C; AW
NXFJ[KP

SM8S 5pF6[VY*38G 0

p5ZGF SM8S 5pF6[df = 58GL SM8S ISDT 0.05 S1FFV[0.25 KP
BIFZ[VCL\ U6[F r GL ISDT 0.28 KP U6[F r-GL ISDT SM8S ISDT
SZTF JW]KP Vβ, [S[TOFJT ; FYS K[VG[X]I ptS<5GF V:JLSFI "AG[
KP

VFYL SCL XSFI S[; FWZ6 A[AF/SMJF/F I5TFGL IJST IRTF VG[
ÒJG ; TMEGF Dwl SM JrR[JW]; C; AW GYLP

Ho₈₈ ; FWFZ6 AF/SMGF 35 JQFYL GLRGL pDZGF I5TFGL IJST IRVF VG[
 ÒJG ; VMFGF DwI SMJrR[SM ; ULG ; C; AW GYLP

SM8S GP111

; FWFZ6 AF/SGF 35 JQFYL GLRGL pDZGF I5TFGL IJST IRVF VG[
 ÒJG ; VMFGF DwI SMJrR[; C; AW NXFJT]SM8SP

SPFS	IJUT	; bIF	:JFTV ; bIF	r ISDT	; FYSTF
1	I5TFGL IJST IRVF	45	43	-0.31	K[
2	I5TFGM ÒJG ; VMF	45	43		

U6TZL 5DF6[VY"38G 0

VCL\ U6[F r-GL ISDT v0.31 KP Vß, [S[VMKM k6 ; C; AW
 NXFJ]KP

SM8S 5DF6[VY"38G 0

p5ZGF SM8S 5DF6[df = 43GL SM8S ISDT 0.05 S1FFV[0.29 KP
 BIFZ[VCL\ U6[F r GL ISDT 0.31 KP U6[F r-GL ISDT SM8S ISDT
 SZTF JW] KP Vß, [S[TOFJT ; FY'S K[VG[Xg]I ptS<5GF V:JLSFI "AG[
 KP

VFYL SCL XSFI S[; FWFZ6 AF/SGF 35JQFYL GLRGL pDZGF
 I5TFGL IJST IRVF VG[ÒJG ; VMFGF DwI SMJrR[JW] ; C; AW GYLP

p5Z 5DF6[r- S; MBLGL S], Xg]I ptS<5GFVM
 10 KP HDFYL 9 ; FY'S K[VG[1 ; FY'S GYLP

4.6 F-S; MBL 5DF6[X]I ptS<5GFVMGL U6TZL 0

; XMWSFV[; FWFZ6 AF/SM VG[IJIX08 AF/SMGF DFTFvI5TFGF
 :JT\+ 5IZJtIMGF +6 5ZT\+ 5IZJtIM JrR[; AW XMWJF DF8[:JT\+
 5IZJtIMGF +6 H\YM 5F0LG[TGL VFTZJTL"V; Z XMWJF DF8[F-S; MBLGM
 p5IMU SIM KP H\DA IEpf IEpf VFJSGF +6 5SFZ4 IEpf IEpf
 jIJ; FI GF +6 5SFZ4 IEpf IEpf 7FITGF +6 5SFZGL VFTZJTL"TPH
 ; V\ST V; Z T5F; JF DF8[GLR[5DF6[F-S; MBLGM p5IMU SZLG[
 5IZ6FDMG\JWFZ[:508 VG[J7FIGS ZLT[; DHFJJFGM GD|5|I F; SIMKP
 H[GLR[IJUT[KP

VCL\F- S; MBL EFZF I5TFGL IJST IR\TF VFJSGF ; NED\AT5F; JF
 DF8[Ho₈₉ KP

DFGI; S :JF:yI VG[VFJSGL V; Z T5F; JF DF8[F-S; MBL EFZF
 Ho₉₀ KP

ÒJG ; \TMF VG[VFJS VFTZJTL"V; Z T5F; JF Ho₉₁ KP

jIJ; FI GF ; NED\A p5Z 5DF6[Ho_{92, 93, 94}EFZF VG\SD[IJST
 IR\TF4 DFGI; S :JF:yI VG[ÒJG ; \TMF ; FY[jIJ; FI 38SGL VFTZJTL"
 V; Z T5F; L KP

; FWFZ6 AF/SMGF IEpf IEpf 7FITGF I5TFGF ; NED\A p5Z 5DF6[
 Ho_{95, 96, 97} EFZF VG\SD[IJST IR\TF4 DFGI; S :JF:yI VG[ÒJG ; \TMF
 ; FY[jIJ; FI 38SGL VFTZJTL"V; Z T5F; L KP

IJIXQ8 AF/SMGF IEpf IEpf 7FITGF I5TFGF ; NEDFA\p5Z 5DF6[
 Ho_{98, 99, 100} EFZF VGSD[IJST IRVF4 DFGI; S :JF:yI VG[ÖJG ; TME
 ; FYIjI J; FI 38SGL VFTZJTL"V; Z T5F; L KP

Ho₈₉ IEpf VFJSJF/F ; FWFZ6 AF/SGF I5TFGL DI; S VFJS s~FP3000
 YL VMKL4~FP 3,000 YL ~FP5,000 JrR# ~FP 5,000YL JWf WZFJTF
 IJST IRVF4GF 5f%TF\$M JrR[SM. ; \ uGTF HMF D/TL GYLP

SM8S GP112

IEpf VFJSJF/F ; FWFZ6 AF/SGF I5TFGL DFI; S VFJS s~FP3000 YL
 VMKL4~FP3,000 YL ~FP5,000 JrR# ~FP 5,000YL JWfWZFJTF
 IJST IRVF4GF 5f%TF\$M\ V\$DFULI IJRZ6 5YBZ6P
 ; FYSTFGL S1FF 0.05

IJRZ6 DkI	IJRZ6GF JUGM ; ZJF/M	:JFTVGL DF+F	IJRZ6GL DF+F	F ISDT	; FYS
BSS	269.21	2	134.61		
WSS	41585.38	117	355.43	0.38	GYL
TSS	418554.59	119			

VY38G 0

SM8S GP112 p5ZYL HM. XSFI K[S[I5TFGL DFI; S VFJSGF
 ; NEDFA\SZ[L U6TZL 5DF6[F-GL ISDT 0.38 KP BI FZ[:JFTVGL DF+F
 2 VG[117 CMI tIFZ[0.05 S1FFV[F- GL ISDT 3.07 KPVCL\ 5f%T
 YI[F-GL ISDT TGFYL VMKL KP T\YL 0.05 S1FFV[TOFJT ; FYS GYLP
 VFYL ptS<5GFGM :JLSFZ SZJFDF\VFJ[KP

TFZ60

IEpf VFJSJF/F ; FWFZ6 AF/SGF I5TFGL DFI; S VFJSS~FP3000
 YL VMKL4~FP3,000YL ~FP5,000JrR#~FP5,000YL JWfWZFJTF IJST IRVF4GF
 5f%TF\$MGL JrR[SM. ; \ uGTF HMF D/TL GYL4 T\YL ptS<5GFP VFYL
 TFZ6 SF-JFDF\VFJ[K[S[VFJSGL V; Z IJST IRVF p5Z YTL GYLP KP

Ho90 IEpf VFJSJF/F ; FWZ6 AF/SGF I5TFGL DFI; S VFJS s~FP3000
 YL VMKL4 ~FP3,000 YL ~FP5,000 JrR¶ ~FP 5,000YL JWf WZFJTF
 DFGI; S :JF:yI GF 5F%TFSM JrR[SM. ; \ uGTF HMJF D/TL GYLP

SM8S GP113

IEpf VFJSJF/F ; FWZ6 AF/SGF I5TFGL DFI; S VFJS s~FP3000 YL
 VMKL4~FP3,000 YL ~FP5,000 JrR¶ ~FP 5,000YL JWfWZFJTF
 DFGI; S :JF:yI GF 5F%TFSMG\ V\$DFUL' IJRZ6 5YpZ6P
 ; FYSTFGL S1FF 0.05

IJRZ6 D¶I	IJRZ6GF JUGM ; ZJF/M	:JFTÈ GL DF+F	IJRZ6GL DF+F	F ISDT	; FYS
BSS	50.36	2	25.18		
WSS	3727.61	117	31.86	0.79	GYL
TSS	3777.97	119			

VY38G 0

SM8S GP113 p5ZYL HM. XSFI K[S[I5TFGL DFI; S VFJS GF
 ; NEDF\SZ, L U6TZL 5DF6[F-GL ISDT 0.79 KP BI FZ[:JFTÈ GL DF+F
 2 VG[117 CMI tIFZ[0.05 S1FFV[F- GL ISDT 3.07 KP VCL\ 5F%T
 YI[, F-GL ISDT TGFYL VMKL KP T¶YL 0.05 S1FFV[TOFJT ; FYS GYLP
 VFYL ptS<5GFGM :JLSFZ SZJFDF\VFJ[KP

TFZ60

IEpf VFJSJF/F ; FWZ6 AF/SGF I5TFGL DFI; S VFJS s~FP3000
 YL VMKL4~FP3,000 YL ~FP5,000 JrR¶ ~FP 5,000YL JWfWZFJTF DFGI; S
 :JF:yI GF 5F%TFSMGL JrR[SM. ; \ uGTF HMJF D/TL GYL4 VFYL TFZ6
 SF-JFDF\VFJ[K[S[VFJSGL V; Z DFGI; S :JF:yI 5Z YTL GYLP

Ho91 IEþf VFJSJF/F ; FWFZ6 AF/SGF I5TFGL DFI; S VFJS s~FP3000 YL VMKL4 ~FP3,000 YL ~FP5,000 JrR¶ ~FP 5,000YL JWf WZFJTf ÒJG ; VMDFGF 5F%TFSM JrR[SM. ; \ uGTF HMJF D/TL GYLP

SM8S GR114

IEþf VFJSJF/F ; FWFZ6 AF/SGF I5TFGL DFI; S VFJS s~FP3000 YL VMKL4~FP3,000 YL ~FP5,000 JrR¶ ~FP 5,000YL JWfWZFJTf ÒJG ; VMDFGF 5F%TFSMG\VSDFUL' IJRZ6 5YÐZ6P ; FYSTFGL S1FF 0.05

IJRZ6 D¶I	IJRZ6GF JUGM ; ZJF/M	:JFTÈ GL DF+F	IJRZ6GL DF+F	F ISDT	; FYS
BSS	47.92	2	23.96		
WSS	6078.45	117	51.95	0.46	GYL
TSS	6126.37	119			

VY38G 0

SM8S GR114 p5ZYL HM. XSFI K[S[I5TFGL DFI; S VFJSGF ; NEDF\SZ[L U6TZL 5DF6[F-GL ISDT 0.46 KP BI FZ[:JFTÈ GL DF+F 2 VG[117CM tIFZ[0.05 S1FFV[F- GL ISDT 3.07 KP VCL\5F%T YI [F-GL ISDT TGFYL VMKL KP T¶YL 0.05 S1FFV[TOFJT ; FYS ; FYS GYLP VFYL ptS<5GFGM :JLSFZ SZJFDF\VFJ[KP

TFZ60

IEþf VFJSJF/F ; FWFZ6 AF/SGF I5TFGL DFI; S VFJS s~FP3000 YL VMKL4~FP3,000 YL ~FP5,000 JrR¶ ~FP5,000YL JWfWZFJTf ÒJG ; VMDFGF 5F%TFSMGL JrR[SM. ; \ uGTF HMJF D/TL GYL4 VFYL TFZ6 SF-JFDF\VFJ[K[S[VFJSGL V; Z ÒJG ; VMDF 5Z YTL GYLP

Ho92 IEpF jIFJ; FI JF/F ; FWFZ6 AF/SGF I5TFGL IJST IRVTFGF
5F%TFSM JrR[SM ; \ uGTF HMUF D/TL GYLP

SM8S GP115

IEpF jIFJ; FI SZTF ; FWFZ6 AF/SGF I5TFGL IJST IRVTFGF 5F%TFSMG\
V\$DFUL' IJRZ6 5YDZ6P
; FYSTFGL S1FF 0.05

IJRZ6 DđI	IJRZ6GF JUGM ; ZJF/M	:JFTĚGL DF+F	IJRZ6GL DF+F	F ISDT	; FYS
BSS	302.63	2	151.32		
WSS	48395.29	117	415.34	0.36	GYL
TSS	48897.92	119			

VY38G 0

SM8S GP115 p5ZYL HM. XSFI K[S[I5TFGL jIFJ; FI GF ; NEDFA
SZ[L U6TZL 5DF6[F-GL ISDT 0.36 KP BIFZ[:JFTĚGL DF+F 2 VG[
117 CMI tIFZ[0.05 S1FFV[F- GL ISDT 3.07 KP VCL\5F%T YI[, F-GL
ISDT TGFYL VMKL KP TŸL 0.05 S1FFV[TOFJT ; FYS GYLP VFYL
ptS<5GFGM :JLSFZ SZJFDA\VFJ[KP

TFZ60

IEpF jIFJ; FI SZTF ; FWFZ6 AF/SGF I5TFGL IJST IRVTFGF
5F%TFSMGL JrR[SM ; \ uGTF HMUF D/TL GYL4 VFYL TFZ6 SF-JFDA\
VFJ[K[S]I J; FI GL V; Z IJST IRVTF 5Z YTL GYLP

Ho93 IEpf jIFJ; FI JF/F ; FWFZ6 AF/SGF I5TFGF DFGI; S :JF:yl GF
 5F%TF\$M JrR[SM ; \ uGTF HMJF D/TL GYLP

SM8S GP116

IEpf jIFJ; FI SZTF ; FWFZ6 AF/SGF I5TFGF DFGI; S :JF:yl GF
 5F%TF\$MGL V\$DFULI IJRZ6 5YDZ6P
 ; FY\$TFGL S1FF 0.05

IJRZ6 DkI	IJRZ6GF JUGM ; ZJF/M	:JFTV`GL DF+F	IJRZ6GL DF+F	F ISDT	; FYS
BSS	36.49	2	18.25		
WSS	4810.83	117	41.12	0.44	GYL
TSS	4847.32	119			

VY38G 0

SM8S GP116 p5ZYL HM XSFI K[S[I5TFGF DFGI; S :JF:yl GF
 ; NEDFASZ[L U6TZL 5DF6[F-GL ISDT 0.44 KP BI FZ[:JFTV`GL DF+F
 2 VG[117 CMI tIFZ[0.05 S1FFV[F- GL ISDT 3.07 KP VCL\ 5F%T
 YI[F-GL ISDT TGFYL VMKL KP T\YL 0.05 S1FFV[TOFJT ; FYS GYLP
 VFYL ptS<5GFGM :JLSFZ SZJFDF\VFJ[KP

TFZ60

IEpf jIFJ; FI SZTF ; FWFZ6 AF/SGF I5TFGF DFGI; S :JF:yl GF
 5F%TF\$MGL JrR[SM ; \ uGTF HMJF D/TL GYL4 VFYL TFZ6 SF-JFDF\
 VFJ[K[S]I J; FI GL V; Z DFGI; S :JF:yl 5Z YTL GYLP

Ho94 IEpF jIFJ; FI JF/F ; FWFZ6 AF/SGF I5TFGF ÒJG ; ¶MFGF
5F%TFSM JrR[SM. ; \ uGTF HMUF D/TL GYLP

SM8S GP117

IEpF jIFJ; FI SZTF ; FWFZ6 AF/SGF I5TFGF ÒJG ; ¶MFGF 5F%TFSMG\
V\$DFUL' IJRZ6 5YÐZ6P
; FYSTFGL S1FF 0.05

IJRZ6 DkI	IJRZ6GF JUGM ; ZJF/M	:JFTÈ GL DF+F	IJRZ6GL DF+F	F ISDT	; FYS
BSS	26.77	2	13.39		
WSS	6219.22	117	53.16	0.25	GYL
TSS	6245.99	119			

VY38G 0

SM8S GP117 p5ZYL HM. XSFI K[S[I5TFGF ÒJG ; ¶MFGF
; NEDF\SZ[L U6TZL 5DF6[F-GL ISDT 0.25 KP BI FZ[:JFTÈ GL DF+F
2 VG[117 CMI tIFZ[0.05 S1FFV[F- GL ISDT 3.07 KP VCL\ 5F%T
YI[F-GL ISDT TGFYL VMKL KP TYL 0.05 S1FFV[TOFJT ; FYS GYLP
VFYL ptS<5GFGM :JLSFZ SZJFDA\ VFJ[KP

TFZ60

IEpF jIFJ; FI SZTF ; FWFZ6 AF/SGF I5TFGF ÒJG ; ¶MFGF
5F%TFSMGL JrR[SM. ; \ uGTF HMUF D/TL GYL4 VFYL TFZ6 SF-JFDA\
VFJ[K[S]I J; FI GL V; Z ÒJG ; ¶MF p5Z YTL GYLP

Ho95|Epf 7FITGFs General, BC. SC.f ; FWZ6 AF/SMGF I5TFGL IJST
 IRVTFGF 5F%TFSM JrR[SM. ; \ uGTF HMUF D/TL GYLP

SM8S GP118

IEpf 7FITGFs General, BC. SC.f ; FWZ6 AF/SMGF I5TFGL IJST
 IRVTFGF 5F%TFSMGL V\$DFUL' IJRZ6 5YpZ6P
 ; FYSTFGL S1FF 0.05

IJRZ6 Dxi	IJRZ6GF JUGM ; ZJF/M	:JFTVGL DF+F	IJRZ6GL DF+F	F ISDT	; FYS
BSS	107.93	2	53.97		
WSS	35539.24	117	303.75	0.18	GYL
TSS	35647.17	119			

VY38G 0

SM8S GP118 p5ZYL HM. XSFI K[S[; FWZ6 AF/SMGF I5TFGF
 7FITGF ; NEDF\ SZ[L U6TZL 5Df6[F-GL ISDT 0.18 KP BIFZ[
 :JFTVGL DF+F 2 VG[117 CMI tIFZ[0.05 S1FFV[F- GL ISDT 3.07
 KP VCL\ 5F%T YI[F-GL ISDT TGFYL VMKL KP TYL 0.05 S1FFV[
 TOFJT ; FYS GYLP VFYL ptS<5GFGM:JLSEZ SZJFDF\VFJ[KP

TFZ60

IEpf 7FITGF 7FITGFsGeneral, BC. SC.f ; FWZ6 AF/SMGF
 I5TFGL IJST IRVTFGF 5F%TFSMGL JrR[SM. ; \ uGTF HMUF D/TL GYL4
 VFYL TFZ6 SF-JFDF\VFJ[K[S[7FITGL IJST IRVF 5Z V; Z YTL GYLP

Ho96 IEpF 7FITGF ; FWFZ6 AF/SMGF I5TFGF DFGI; S :JF:yI GF 5f%TFFSM
 JrR[SM. ; \ uGTF HMUF D/TL GYLP

SM8S GP119

IEpF 7FITGF ; FWFZ6 AF/SMGF I5TFGF DFGI; S :JF:yI GF 5f%TFFSMG\
 V\$DFUL' IJRZ6 5YpZ6P
 ; FYSTFGL S1FF 0.05

IJRZ6 Dxi	IJRZ6GF JUGM ; ZJF/M	:JFTV`GL DF+F	IJRZ6GL DF+F	F ISDT	; FYS
BSS	20.45	2	10.23		
WSS	3597.87	117	30.75	0.33	GYL
TSS	3618.32	119			

VY38G 0

SM8S GP119 p5ZYL HM. XSFI K[S[; FWFZ6 AF/SMGF I5TFGF
 DFGI; S :JF:yI GF ; NEDF\ SZ[L U6TZL 5pF6[F-GL ISDT 0.33 KP
 BIFZ[:JFTV`GL DF+F 2 VG[117 CM tIFZ[0.05 S1FFV[F- GL ISDT
 3.07 KP VCL\5f%T YI[F-GL ISDT TGfYL VMKL KP T\YL 0.05 S1FFV[
 TOFJT ; FYS GYLP VFYL ptS<5GFGM:JLSEZ SZJFDF\VFJ[KP

TFZ60

IEpF 7FITGF ; FWFZ6 AF/SMGF I5TFGF DFGI; S :JF:yI GF
 5f%TFFSMGL JrR[SM. ; \ uGTF HMUF D/TL GYL4 VFYL TFZ6 SF-JFDF\
 VFJ[K[S[7FITGL V; Z DFGI; S :JF:yI 5Z YTLGYLP

H097 IEpf 7FITGFs General, BC. SC.f; FWFZ6 AF/SMGF I5TFGF ÒJG
; VMFEGF 5F%TFFSM JrR[SM. ; \ uGTF HMJF D/TL GYLP

SM8S GP120

IEpf 7FITGFs General, BC. SC.f ; FWFZ6 AF/SMGF I5TFGF ÒJG
; VMFEGF 5F%TFFSMG\ V\$DFUL' IJRZ6 5YÐZ6P
; FYSTFGL S1FF 0.05

IJRZ6 DđI	IJRZ6GF JUGM ; ZJF/M	:JFTVÈGL DF+F	IJRZ6GL DF+F	F ISDT	; FYS
BSS	162.41	2	81.21		
WSS	7050.71	117	60.26	1.35	GYL
TSS	7213.12	119			

VY38G 0

SM8S GP120 p5ZYL HM. XSFI K[S[; FWFZ6 AF/SMGF I5TFGL
7FITGF ; NEDFA SZ[L U6TZL 5Ðf6[F-GL ISDT 1.35 KP BIFZ[
:JFTVÈGL DF+F 2 VG[117 CMI tIFZ[0.05 S1FFV[F- GL ISDT 3.07
KP VC\ 5F%T YI[F-GL ISDT TGFYL VMKL KP TYL 0.05 S1FFV[
TOFJT ; FYS GYLP VFYL ptS<5GFGM: JLSFZ SZJFDF\ VFJ[KP

TFZ60

IEpf 7FITGF sGeneral, BC. SC.f; FWFZ6 AF/SMGF I5TFGF ÒJG
; VMFEGF 5F%TFFSMGL JrR[SM. ; \ uGTF HMJF D/TL GYL4 VFYL TFZ6
SF-JFDF\ VFJ[K[S[7FITGL V; Z ÒJG ; VMF 5Z YTL GYLP

Ho98 IEpf 7FITGFs General, BC. SC.f IJIX08 AF/SMGF DFTFGL IJST
IRTFGF 5F%TFSM JrR[SM ; \ uGTF HMUF D/TL GYLP

SM8S GP121

IEpf 7FITGFs General, BC. SC.f IJIX08 AF/SMGF DFTFGL IJST
IRTFGF 5F%TFSMG\ VSDFUL' IJRZ6 5YDZ6P
; FYSTFGL S1FF 0.05

IJRZ6 D\I	IJRZ6GF JUGM ; ZJF/M	:JFTVE GL DF+F	IJRZ6GL DF+F	F ISDT	; FYS
BSS	639.77	2	346.89		
WSS	41450.82	117	354.28	0.98	GYL
TSS	42144.59	119			

VY38G 0

SM8S GP121 p5ZYL HM. XSFI K[S[DFTFGF 7FITGF ; MEDF\
SZ[, L U6TZL 5DF6[F-GL ISDT 0.98 KP BIFZ[:JFTVE GL DF+F 2 VG[
117 CMI tIFZ[0.05 S1FFV[F- GL ISDT 3.07 KP VCL\5F%T YI[, F-GL
ISDT TGFYL VMKL KP T\YL 0.05 S1FFV[TOFJT ; FYS GYLP VFYL
ptS<5GFGM :JLSFZ SZJFDF\VFJ[KP

TFZ60

IEpf 7FITGF 7FITGFs General, BC. SC.f IJIX08 AF/SMGF
DFTFGL IJST IRTFGF 5F%TFSMGL JrR[SM ; \ uGTF HMUF D/TL GYL4
VFYL TFZ6 SF-JFDF\VFJ[K[S[7FITGL V; Z IJST IRTF 5Z 50TL GYLP

Ho99 IEþf 7FITGF IJIX08 AF/SMGF DFTFGF DFGI; S :Jf:yl GF 5f%TFfSM
 JrR[SM. ; \ uGTF HMUF D/TL GYLP

SM8S GP122

IEþf 7FITGF IJIX08 AF/SMGF DFTFGF DFGI; S :Jf:yl GF 5f%TFfSMG\
 V\$DFUL' IJRZ6 5YÞZ6P
 ; FYSTFGL S1FF 0.05

IJRZ6 DþI	IJRZ6GF JUGM ; ZJF/M	:JFTÈ GL DF+F	IJRZ6GL DF+F	F ISDT	; FYS
BSS	58.81	2	29.41		
WSS	3830.19	117	32.74	0.90	GYL
TSS	3889.00	119			

VY38G 0

SM8S GP 122 p5ZYL HM. XSFI K[S[IJIX08 AF/SMGF DFTFGF
 DFGI; S :Jf:yl GF ; NEDF\ SZ[L U6TZL 5ÞF6[F-GL ISDT 0.90 KP
 BIFZ[:JFTÈ GL DF+F 2 VG[117 CM tIFZ[0.05 S1FFV[F- GL ISDT
 3.07 KP VCL\5f%T YI[F-GL ISDT TGfYL VMKL KP TþYL 0.05 S1FFV[
 TOFJT ; FYS GYLP VFYL ptS<5GFGM:JLSFZ SZJFDF\VFJ[KP

TFZ60

IEþf 7FITGF IJIX08 AF/SMGF DFTFGF DFGI; S :Jf:yl GF
 5f%TFfSMGL JrR[SM. ; \ uGTF HMUF D/TL GYL4 VFYL TFZ6 SF-JFDF\
 VFJ[K[S[7FITGL V; Z DFGI; S :Jf:yl 5Z YTL GYLP

Ho100 IEpf 7FITGFs General, BC. sc.fIJIX08 AF/SMGF DFTFGF ÒJG
 ; VMDFGF 5F%TFSM JrR[SM. ; \ uGTF HMUF D/TL GYLP

SM8S GP123

IEpf 7FITGFs General, BC. sc.fIJIX08 AF/SMGF DFTFGF ÒJG
 ; VMDFGF 5F%TFSMG\ V\$DFUL" IJRZ6 5YÐZ6P
 ; FYSTFGL S1FF 0.05

IJRZ6 D}I	IJRZ6GF JUGM ; ZJF/M	:JFTÈ GL DF+F	IJRZ6GL DF+F	F ISDT	; FYS
BSS	211.96	2	105.98		
WSS	6877.34	117	58.78	1.80	GYL
TSS	7089.30	119			

VY38G 0

SM8S GP 123 p5ZYL HM. XSFI K[S[IJIX08 AF/SMGF DFTFGL
 7FITGF ; NEDF\ SZ[L U6TZL 5DF6[F-GL ISDT 1.80 KP BIFZ[
 :JFTÈ GL DF+F 2 VG[117 CMI tIFZ[0.05 S1FFV[F- GL ISDT 3.07
 KP VCL\ 5F%T YI[F-GL ISDT TGFYL VMKL KP TYL 0.05 S1FFV[
 TOFJT ; FYS GYLP VFYL ptS<5GFGM :JLSFZ SZJDF\ VFJ[KP

TFZ60

IEpf 7FITGF sGeneral, BC. sc.fIJIX08 AF/SMGF DFTFGF ÒJG
 ; VMDFGF 5F%TFSMGL JrR[SM. ; \ uGTF HMUF D/TL GYL4 VFYL TFZ6
 SF-JFDF\ VFJ[K[S[7FITGL V; Z ÒJG ; VMDF 5Z 50TL GYLP

VF ZLT[5\$Z6v 4DF\ 5YÐZ64 VY38G VG[5IZ6FD RRF" SIF"
 AFN CJ[5KL 5\$Z6 VFI MHGDF\XFJ] I F 5DF6[5\$Z6v 5DF\RRF"SZL KP

5§Z6_{v5}

; XMWGGF TFZ6MVG[; RGM

5§Z6v5

; XMMG; FZFX4 TFZ6M VG[; RGM

5.0 5]:TFJGF 0

; XMMG STF"; XMMGSFI 5b"SZ[K[tI FZ[5F%l DFICTLGF JULSZ6GF
 VFWFZ[5MTFGF ; XMMGGF TFZ6M VITD 5§Z6DFAZH}MFT SZ[KP ; XMMG
 SZJ} T[HB, } H DCÀJG} K[TPDH TGF\ VCUF, 4 , BGDFA NZ§ 5§Z6G}
 TPDG} V§ VFUJ} DCÀJ CMI KP KTF; XMMGGM DpI C[T] VDS 5ÆENG
 p¿ZM D/JL J7FIGS 5âIT EFZF S}L ZLT[VwI I G YFI VG[36L AWL
 DCGT VG[VYFU 5|F; YL D/, } 5IZ6FD KP ; DU| ; XMMGGM IRTFZ
 JFRSG[V§ H GHZDA; FZFX EFZF :508 YFI KP ; FZFX , BTL JBT[
 B}A H SF/Ò ZFBJL 50[KP GFGDFA GFGL AFATG[; XMS[B}A H
 ; 1F%TDA VwI I G CFY WZJFGM ; XMS[GD| 5|F; SIM KP ; FZFX ; DU|
 VwI I GG}JCUFJ, MSG SZFJ[KP

VF ZLT[5]:TJT VwI I GGM DpI C[T] ccHGFU- IHDFGF ; FWFZ6 VG[
 IJIX08 AF/SM sDNA}âfGF DFTFvI5TFGL IJST IRTF4 DFGI; S :Jf:yI
 VG[ÒJG; TMFGM DGMJ7FIGS VeIF; SZJFGM CTM VG[; DFHG[
 ; XMMG S}L ZLT[p5I MJL YFI TYF TFZ6M ; RGM ; DFH ; WL 5CMRTF
 SZJFGMCTMP VFD ; DU| ; XMMGGM ; FZ GLR[5pF6[KP

5.1 ; XMMGGM ; FZ 0

5]:TJT ; XMMGDA ; XMMWSFG[D.S.E. M.R. CMJFYL IJIX08 AF/S
 VG[TGF DFTFvI5TF ; FY[; 5SDFA ZC}FG} AGT} Zæ} K[TPDH IJQFI G[
 VG}-5 5MTFGF OLU} NZdI FGGM DGMJ7FGDFA D/J, F GYL TPDH ; TT
 DGG4 IRTG VG[JFRG EFZF ZMHAZMHGL 38GFVMYL JFSP YFI K[VG[

; FWFZ6 VG[IJIX08 AF/SMGF DFTFvI5TFGF ; 5SDFA; TT VFJTF CMJFYL
 TGL ; FY[YTL D], FSFT4 JFTRLT EFZF TG[; DFHDA[S]L D]S], LVM 50[K]P
 TGF DGDA[S]F IJRFZM p;EJ[K[VG[Sæ] K[S[æ]RTF V[IR;Fcc ; DFG
 KP TDF\56 IRTFG\IJS8 :J~5 IJST IRTF KP jIISTGF DGDA ; TT
 IRTF CMI TM TGF DFGI; S :JF:yI TDPH TGF ÒJG 5Z VB, [S]
 ÒJG; VMF 5Z X]V; Z YFI K[T[HF6JF DF8GM VCL\GD] 5]F; SZJFDA
 VFJ[KP VF DF8[GLR[D]HAGL ; XMWG ; D:IF ,]FDAVFJL KP

-HGFU- IH<, FGF ; FWFZ6 VG[IJIX08sDNA]âf AF/SMGF

DFTFv I5TFGL IJST IRTF4 DFGI; S :JF:yI VG[

ÒJG ; VMFGMDGMJ{7FIGS VeIF; P-

5;TJT ; XMWGDA HGFU- IHDFGF ; FWFZ6 VG[IJIX08 AF/SM
 sDNA]âfGF DFTFvI5TF ; DI08 TZLS[5; N SZL TDFYL IGNX" DFTFv
 I5TFGL I 1rK IGNX" 5âIT EFZF 5; N SZJFDA VFJ], VG[VF ; XMWGDA
 GLR[D]HAGL 5ÆEJI, GMJ{7FIGS ; FWG TZLS[p5IMJ SZ], KP

s1f jIISTUT DFICTL5+S

s2f IJST IRTF ; XMWIGSF OFP VP SP5LP I; CF VG[V], VGP S]
 ZIRT

s3f IJIX08 AF/SMGF DFTFvI5TFGL :JZIRT 5DFI6T SZ], V, U
 5ÆEJI, P

s4f DFGI; S :JF:yI ; XMWIGSF OFP OLP HP EÎ VG[OF]ÒP VFZP
 ULOF ZIRTP

s5f ÒJG; VMF ; XMWIGSF OFP VF, D VG[zLJF:TJ ZIRTP

p5ZMST S; MBL EFZF DFICTL 5F%T SZL TG| D|I |M, D|HA U|6FSG
 SZL4 VFSOFXF:+LI 5âIT D|HA ctc S; MBL4SF, 15I ; G crc 5|I |ST4 IJRZ6
 5YÐZ6 cFc S; MBL EFZF ; FWFZ6 VG| IJIX08 AF/SMGF DFTFvI5TFGL
 IJST IRVTF4 DFGI; S :JF:yI VG| ÒJG; VTMF JrR| ; C; XW XMWJFDF\
 VFjI MCTMP DwI SMGL ; FYSTFDF\TOEJT XMWJFDF\VFjI F CTF VG| VTFDF\
 5F%T YI|, TFZ6MGL ZH|VFT SZJFDF\VFJL4 VY'38G SZJFDF\VFjI |CTP

5.2 ; XMWGGF VFWFZ[D/|, F TFZ6M0

; XMWGGF VITD ; M5FGDF\ ; XMWIGSF 5F%T DFICTLGF VFWFZ|
 5IZ6FDMG| VFWFZ| IGQSO" 0I, T SZ| K| VG| TFZ6M ZH} SZ| KP 5|:TJT
 VwI I GDF\ H|GFU- IHDFGF ; FWFZ6 VG| IJIX08 AF/SM sDNA|âfGF
 DFTFvI5TFVMGL IJST IRVTF4 DFGI; S :JF:yI 4 ÒJG; VTMFGM VG|
 5DFI6T S; MBL EFZF DGMU(7FIGS VeIF; SZJFDF\ VFjI M VG| 5F%T
 DFICTLGF VFWFZ| VFSOFXF:+LI U6TZL SZL TG| 5ZYL VFJ|, F
 5IZ6FDMGL RRF'4 VY'38G4 5YÐZ6 GLR[D|HA SZJFDF\VFJ|, KP

VFSOFXF:+LI S; MBLGF VFWFZ| D|/J|, F ; DU| TFZ6MGM ; FZP
 5|:TJT 5\$Z6DF\GLR| 5P6|NXF"JJFDF\VFjI M KP H|DF\5YD t- S; MBLGF
 TFZ6M 5KL r- S; MBLGF TFZ6MVG|tI FZAFN F- S; MBLGF TFZ6M D\$JFDF\
 VFjI F KP VF ; FZFX~5L 5\$Z6DF\ TFZ6MGL ; FY| JWFZ| IJST IRVTFGF
 SFZ6M IJST IRVTF VMKL SZJFGF ; RGM GA/ DFGI; S :JF:yI GF
 SFZ6M DFGI; S:JF:yI JWFZJFGF ; RGMGA/F ÒJG ; VTMFGF SFZ6M
 ÒJG ; VTMF JWFZJFGF ; RGM T|PH 5|:TJT ; XMWGL VUti TF4
 DI FNFVG| K|, [; XMWGGF VFWFZ| E, FD64 ; RGMVG| EFiJ ; RGM ZH}
 SZ|, F KP

5.3 t_{vS} ; MBL 5P6E; DU|XgI ptS<5GFVMGF TFZ6M₀

Ho₁ A[AF/SJF/F ; FWZ6 VG[IJIX08 AF/SMGF DFTFGL IJST IRVTFGF Dwl SM JrR]; FYS TOFJT GYLP

IJUT	IJST IRVTFGF 5F%TFSM				5P6E}	't' ISDT	; FYSTF
	N	M	SD	SEM	SED		
; FWZ6 AF/SMGL DFTF	75	36.61	16.89	1.95	2.25	2.39	K
IJIX08 AF/SMGL DFTF	64	41.98	9.08	1.13			

Ho₂ A[AF/SJF/F ; FWZ6 VG[IJIX08 AF/SMGF DFTFDFGI; S :JF:yI GF Dwl SM JrR]; FYS TOFJT GYLP

	DFGI; S :JF:yI GF 5F%TFSM						
; FWZ6 AF/SMGL DFTF	75	25.73	6.38	0.74	1.00	9.12	K
IJIX08 AF/SMGL DFTF	64	16.61	5.42	0.68			

Ho₃ A[AF/SJF/F ; FWZ6 VG[IJIX08 AF/SMGF DFTFDFG; VTMDFGF Dwl SM JrR]; FYS TOFJT GYLP

	DYG; VTMDFGF 5F%TFSM						
; FWZ6 AF/SMGL DFTF	75	38.71	8.46	0.98	1.57	10.31	K
IJIX08 AF/SMGL DFTF	64	22.53	7.02	1.23			

Ho₄ A[AF/SJF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRVTFGF Dwl SM JrR]; FYS TOFJT GYLP

	IJST IRVTFGF 5F%TFSM						
; FWZ6 AF/SMGF I5TF	75	31.51	18.05	2.08	2.24	5.60	K
IJIX08 AF/SMGF I5TF	64	44.05	6.63	0.83			

Ho₅ A[AF/SJF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFDFGI; S :JF:yI GF Dwl SM JrR]; FYS TOFJT GYLP

	DFGI; S :JF:yI GF 5F%TFSM						
; FWZ6 AF/SMGF I5TF	75	26.65	6.00	0.69	0.96	10.08	K
IJIX08 AF/SMGF I5TF	64	16.97	5.35	0.67			

Ho₆ A[AF/SJF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGF ÖJG ; √MDFG Dwl SMJrR[; FYS TOFJT GYLP

IJUT	ÖJG ; √MDFG 5F%TFSM				5DF6E}	't' ISDT	; FYSTF
	N	M	SD	SEM	SED		
; FWZ6 AF/SMGF I5TF	75	38.13	7.43	0.68	1.28	10.61	K[
IJIX08 AF/SMGF I5TF	64	24.53	7.59	0.95			

Ho₇ A[YL JW]AF/SJF/F ; FWZ6 VG[IJIX08 AF/SMGF DFTFGL IJST IRVTFG Dwl SMJrR[; FYS TOFJT GYLP

	IJST IRVTFG 5F%TFSM						
; FWZ6 AF/SMGL DFTF	45	40.82	18.38	2.74	2.97	1.37	GYL
IJIX08 AF/SMGL DFTF	56	44.89	8.60	1.15			

Ho₈ A[YL JW]AF/SJF/F ; FWZ6 VG[IJIX08 AF/SMGL DFTFGL DFGI; S :JF:yI GF Dwl SMJrR[; FYS TOFJT GYLP

	DFGI; S :JF:yI GF 5F%TFSM						
; FWZ6 AF/SMGL DFTF	45	25.44	4.96	0.74	1.08	6.97	K[
IJIX08 AF/SMGL DFTF	56	17.91	5.94	0.79			

Ho₉ A[YL JW]AF/SJF/F ; FWZ6 VG[IJIX08 AF/SMGL DFTFGL ÖJG ; √MDFG Dwl SMJrR[; FYS TOFJT GYLP

	ÖJG; √MDFG 5F%TFSM						
; FWZ6 AF/SMGL DFTF	45	39.93	7.45	1.11	1.66	7.92	K[
IJIX08 AF/SMGL DFTF	56	25.79	9.19	1.23			

Ho₁₀ A[YL JW]AF/SJF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRVTFG Dwl SMJrR[; FYS TOFJT GYLP

	IJST IRVTFG 5F%TFSM						
; FWZ6 AF/SMGF I5TF	45	38.18	18.58	2.77	2.94	1.35	GYL
IJIX08 AF/SMGF I5TF	56	24.16	7.34	0.98			

Ho₁₁ AYL JW]AF/SJF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGF DFGI; S :JF:yI GF DwI SMJrR[; FYS TOFJT GYLP

IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6E}	't' ISDT	; FYSTF
	N	M	SD	SEM	SED		
; FWZ6 AF/SMGF I5TF	45	26.29	4.71	0.70	0.96	7.67	K[
IJIX08 AF/SMGF I5TF	56	18.93	4.88	0.65			

Ho₁₂ AYL JW]AF/SJF/F ; FWZ6 VG[IJIX08 AF/SMGF I5TFGF ÒJG ; √MDFG DwI SMJrR[; FYS TOFJT GYLP

	ÒJG ; √MDFG 5F%TFSM						
; FWZ6 AF/SMGF I5TF	45	41.07	6.64	0.68	1.68	8.29	K[
IJIX08 AF/SMGF I5TF	56	27.14	10.16	0.95			

Ho₁₃ UfdI IJ:TFZGF ; FWZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRVTFG DwI SMJrR[; FYS TOFJT GYLP

	IJST IRVTFG 5F%TFSM						
; FWZ6 AF/SMGF I5TF	43	37.51	16.21	2.47	2.76	2.03	K[
IJIX08 AF/SMGF I5TF	60	43.10	9.53	1.23			

Ho₁₄ UfdI IJ:TFZGF ; FWZ6 VG[IJIX08 AF/SMGF DFTFG DFGI; S :JF:yI GF DwI SMJrR[; FYS TOFJT GYLP

	DFGI; S :JF:yI GF 5F%TFSM						
; FWZ6 AF/SMGL DFTF	43	25.84	5.26	0.80	1.10	7.11	K[
IJIX08 AF/SMGL DFTF	60	5.81	9.53	0.75			

Ho₁₅ UfdI IJ:TFZGF ; FWZ6 VG[IJIX08 AF/SMGF DFTFG ÒJG ; √MDFG DwI SMJrR[; FYS TOFJT GYLP

	ÒJG; √MDFG 5F%TFSM						
; FWZ6 AF/SMGL DFTF	43	40.91	6.83	1.04	1.54	10.69	K[
IJIX08 AF/SMGL DFTF	60	24.45	8.75	1.13			

Ho₁₆ Ufdl IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRVTFGF Dwl SMJrR[; FYS TOFJT GYLP

IJUT	IJST IRVTFGF 5F%TFSM				5Df6E,	't' ISDT	; FYSTF
	N	M	SD	SEM	SED		
; FWFZ6 AF/SMGF I5TF	43	36.26	21.97	3.35	3.46	1.96	GYL
IJIX08 AF/SMGF I5TF	60	43.05	6.77	0.87			

Ho₁₇ Ufdl IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF DFGI; S :JF:yI GF Dwl SMJrR[; FYS TOFJT GYLP

	DFGI; S :JF:yI GF 5F%TFSM						
; FWFZ6 AF/SMGF I5TF	43	26.93	5.62	0.86	1.03	8.69	K[
IJIX08 AF/SMGF I5TF	60	17.98	4.34	0.56			

Ho₁₈ Ufdl IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF ÖJG ; VTMDFGF Dwl SMJrR[; FYS TOFJT GYLP

	ÖJG ; VTMDFGF 5F%TFSM						
; FWFZ6 AF/SMGF I5TF	43	38.44	7.14	1.09	1.59	7.93	K[
IJIX08 AF/SMGF I5TF	60	25.83	8.96	1.16			

Ho₁₉ XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF IJST IRVTFGF Dwl SMJrR[; FYS TOFJT GYLP

	IJST IRVTFGF 5F%TFSM						
; FWFZ6 AF/SMGL DFTF	77	37.71	18.00	2.05	2.32	2.47	K[
IJIX08 AF/SMGL DFTF	60	43.45	8.41	1.09			

Ho₂₀ XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF DFGI; S :JF:yI GF Dwl SMJrR[; FYS TOFJT GYLP

	DFGI; S :JF:yI GF 5F%TFSM						
; FWFZ6 AF/SMGL DFTF	77	25.84	6.05	0.69	0.99	9.55	K[
IJIX08 AF/SMGL DFTF	60	16.42	5.49	0.71			

Ho₂₁ XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF ÖJG ; √MDFGF Dwl SM JrR[; FYS TOFJT GYLP

IJUT	ÖJG ; √MDFGF 5F%TFSM				5DF6E}	't' ISDT	; FYSTF
	N	M	SD	SEM	SED		
; FWFZ6 AF/SMGF DFTF	77	39.10	7.58	0.86	1.32	11.70	K[
IJIX08 AF/SMGF DFTF	60	23.65	7.73	1.00			

Ho₂₂ XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF IJST IRTFGF Dwl SM JrR[; FYS TOFJT GYLP

	IJST IRTFGF 5F%TFSM						
	N	M	SD	SEM			
; FWFZ6 AF/SMGF I5TF	77	33.97	17.10	1.95	2.16	4.31	K[
IJIX08 AF/SMGF I5TF	60	43.22	7.26	0.94			

Ho₂₃ XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF DFGI; S :Jf:yI GF Dwl SM JrR[; FYS TOFJT GYLP

	DFGI; S :Jf:yI GF 5F%TFSM						
	N	M	SD	SEM			
; FWFZ6 AF/SMGF I5TF	77	25.96	5.65	0.64	1.00	8.2	K[
IJIX08 AF/SMGF I5TF	60	17.78	5.99	0.77			

Ho₂₄ XCZL IJ:TFZGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF ÖJG ; √MDFGF Dwl SM JrR[; FYS TOFJT GYLP

	ÖJG ; √MDFGF 5F%TFSM						
	N	M	SD	SEM			
; FWFZ6 AF/SMGF I5TF	77	39.48	7.22	0.82	1.42	9.86	K[
IJIX08 AF/SMGF I5TF	60	25.68	8.99	1.16			

Ho₂₅ WMZ6v12 p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF IJST IRTFGF Dwl SM JrR[; FYS TOFJT GYLP

	IJST IRTFGF 5F%TFSM						
	N	M	SD	SEM			
; FWFZ6 AF/SMGL DFTF	47	39.85	18.48	2.70	3.02	2.54	K[
IJIX08 AF/SMGL DFTF	23	44.52	6.54	1.36			

Ho₂₆ WMZ6v12 p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF DFGI; S :JF:yI GF DwI SMJrR[; FYS TOFJT GYLP

IJUT	DFGI; S :JF:yI GF 5F%TFSM				5Df6E}	't' ISDT	; FYSTF
	N	M	SD	SEM	SED		
; FWFZ6 AF/SMGL DFTF	47	25.06	5.72	0.83	1.36	6.24	K[
IJIX08 AF/SMGL DFTF	23	16.57	5.18	1.08			

Ho₂₇ WMZ6v12 p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF ÒJG ; TMMFGF DwI SMJrR[; FYS TOFJT GYLP

	ÒJG ; TMMFGF 5F%TFSM						
; FWFZ6 AF/SMGF DFTF	47	38.81	8.31	1.21	2.04	7.77	K[
IJIX08 AF/SMGF DFTF	23	2.96	7.87	1.64			

Ho₂₈ WMZ6v12 p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TTFGF IJST IRITFGF DwI SMJrR[; FYS TOFJT GYLP

	IJST IRITFGF 5F%TFSM						
; FWFZ6 AF/SMGF I5TTF	60	33.80	19.58	2.53	2.79	3.16	K[
IJIX08 AF/SMGF I5TF	33	42.61	6.71	1.17			

Ho₂₉ WMZ6v12 p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF DFGI; S :JF:yI GF DwI SMJrR[; FYS TOFJT GYLP

	DFGI; S :JF:yI GF 5F%TFSM						
; FWFZ6 AF/SMGF I5TTF	60	26.77	5.49	0.71	1.33	7.68	K[
IJIX08 AF/SMGF I5TF	33	16.55	6.41	1.12			

Ho₃₀ WMZ6v12 p5ZGF VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL ÒJG ; TMMFGF DwI SMJrR[; FYS TOFJT GYLP

	ÒJG ; TMMFGF 5F%TFSM						
; FWFZ6 AF/SMGF I5TTF	60	39.48	7.30	0.94	1.73	7.14	K[
IJIX08 AF/SMGF I5TF	33	27.12	8.32	1.45			

Ho₃₁ WMZ6v12 ; WLGf VelF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF IJST IRVTFGF Dwl SM JrR]; FYS TOFJT GYLP

IJUT	IJST IRVTFGF 5F%TFSM				5Df6E}	't' ISDT	; FYSTF
	N	M	SD	SEM	SED		
; FWFZ6 AF/SMGL DFTF	73	38.95	16.65	1.95	2.17	1.86	GYL
IJIX08 AF/SMGL DFTF	97	42.98	9.45	0.96			

Ho₃₂ WMZ6v12 ; WLGf VelF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF DFGI; S :Jf:yI GF Dwl SM JrR]; FYS TOFJT GYLP

	DFGI; S :Jf:yI GF 5F%TFSM						
; FWFZ6 AF/SMGL DFTF	73	26.21	5.70	0.67	0.89	9.93	K[
IJIX08 AF/SMGL DFTF	97	17.37	5.82	0.59			

Ho₃₃ WMZ6v12 ; WLGf VelF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF ÖJG ; VMDFGF Dwl SM JrR]; FYS TOFJT GYLP

	ÖJG ; VMDFGF 5F%TFSM						
; FWFZ6 AF/SMGF DFTF	73	39.21	7.63	0.89	1.23	12.11	K[
IJIX08 AF/SMGF DFTF	97	24.31	8.33	0.85			

Ho₃₄ WMZ6v12 ; WLGf VelF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF IJST IRVTFGF Dwl SM JrR]; FYS TOFJT GYLP

	IJST IRVTFGF 5F%TFSM						
; FWFZ6 AF/SMGF I5TF	60	35.18	18.05	2.33	2.45	3.35	K[
IJIX08 AF/SMGF I5TF	87	43.38	7.15	0.77			

Ho₃₅ WMZ6v12 ; WLGf VelF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF DFGI; S :Jf:yI GF Dwl SM JrR]; FYS TOFJT GYLP

	DFGI; S :Jf:yI GF 5F%TFSM						
; FWFZ6 AF/SMGF I5TF	60	36.08	5.66	0.73	0.88	20.10	K[
IJIX08 AF/SMGF I5TF	87	18.39	4.63	0.50			

Ho₃₆ WMZ6v12 ; WLGf VeIF; JF/F ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL ÖJG ; TMOFGF Dwl SMJrR[; FYS TOFJT GYLP

IJUT	ÖJG ; TMOFGF 5F%TFSM				5DF6E}	't' ISDT	; FYSTF
	N	M	SD	SEM	SED		
; FWFZ6 AF/SMGF I5TF	60	38.77	7.11	0.92	1.34	10.09	K[
IJIX08 AF/SMGF I5TF	87	25.24	9.15	0.98			

Ho₃₇ ; V }ST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF IJST IRVTFGF Dwl SMJrR[; FYS TOFJT GYLP

	IJST IRVTFGF 5F%TFSM						
; FWFZ6 AF/SMGL DFTF	57	38.95	17.68	2.34	2.74	2.10	K[
IJIX08 AF/SMGL DFTF	47	44.70	9.73	1.42			

Ho₃₈ ; V }ST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF DFGI; S :JF:yI GF Dwl SMJrR[; FYS TOFJT GYLP

	DFGI; S :JF:yI GF 5F%TFSM						
; FWFZ6 AF/SMGL DFTF	57	25.82	5.99	0.79	1.09	9.17	K[
IJIX08 AF/SMGL DFTF	47	15.83	5.17	0.75			

Ho₃₉ ; V }ST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGF ÖJG ; TMOFGF Dwl SMJrR[; FYS TOFJT GYLP

	ÖJG ; TMOFGF 5F%TFSM						
; FWFZ6 AF/SMGF DFTF	57	38.53	7.26	0.96	1.60	8.86	K[
IJIX08 AF/SMGF DFTF	47	24.36	8.80	1.28			

Ho₄₀ ; V }ST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRVTFGF Dwl SMJrR[; FYS TOFJT GYLP

	IJST IRVTFGF 5F%TFSM						
; FWFZ6 AF/SMGF I5TF	57	34.65	18.51	2.45	2.64	3.21	K[
IJIX08 AF/SMGF I5TF	47	43.13	6.73	0.98			

Ho₄₁ ; V JST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGF DFGI; S :JF:yI GF DwI SM JrR[; FYS TOFJT GYLP

IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6E}	't' ISDT	; FYSTF
	N	M	SD	SEM	SED		
; FWFZ6 AF/SMGF I5TF	57	26.12	5.80	0.77	1.10	8.77	K[
IJIX08 AF/SMGF I5TF	47	16.47	5.36	0.78			

Ho₄₂ ; V JST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL ÖJG ; VTMDFGF DwI SM JrR[; FYS TOFJT GYLP

	ÖJG ; VTMDFGF 5F%TFSM						
; FWFZ6 AF/SMGF I5TF	57	39.72	6.76	0.90	1.65	7.27	K[
IJIX08 AF/SMGF I5TF	47	27.49	9.48	1.38			

Ho₄₃ IJEST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL IJST IRVTFGF DwI SM JrR[; FYS TOFJT GYLP

	IJST IRVTFGF 5F%TFSM						
; FWFZ6 AF/SMGL DFTF	63	38.05	17.43	2.20	2.46	1.92	GYL
IJIX08 AF/SMGL DFTF	73	42.77	9.39	1.10			

Ho₄₄ IJEST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFDF DFGI; S :JF:yI GF DwI SM JrR[; FYS TOFJT GYLP

	DFGI; S :JF:yI GF 5F%TFSM						
; FWFZ6 AF/SMGL DFTF	63	25.95	5.98	0.75	1.01	7.76	K[
IJIX08 AF/SMGL DFTF	73	18.11	5.83	0.68			

Ho₄₅ IJEST SBJAGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL ÖJG ; VTMDFGF DwI SM JrR[; FYS TOFJT GYLP

	ÖJG ; VTMDFGF 5F%TFSM						
; FWFZ6 AF/SMGF DFTF	63	38.53	7.26	0.96	1.60	8.86	K[
IJIX08 AF/SMGF DFTF	73	24.36	8.80	1.28			

Ho₄₆ IJEST SBJAGF ; FWZ6 VG(IJIX08 AF/SMGF I5TFGL IJST IRVTFGF Dwl SMJrR[; FYS TOFJT GYLP

IJUT	IJST IRVTFGF 5F%TFSM				5P6E,	't' ISDT	; FYSTF
	N	M	SD	SEM	SED		
; FWZ6 AF/SMGF I5TF	63	33.87	18.48	2.33	2.48	3.76	K[
IJIX08 AF/SMGF I5TF	73	43.19	7.22	0.85			

Ho₄₇ IJEST SBJAGF ; FWZ6 VG(IJIX08 AF/SMGF I5TFGF DFGI; S :JF:yI GF Dwl SMJrR[; FYS TOFJT GYLP

	DFGI; S :JF:yI GF 5F%TFSM						
; FWZ6 AF/SMGF I5TF	63	26.35	5.39	0.68	0.89	8.49	K[
IJIX08 AF/SMGF I5TF	73	18.79	4.96	0.58			

Ho₄₈ IJEST SBJAGF ; FWZ6 VG(IJIX08 AF/SMGF I5TFGL OJG ; VMDFGF Dwl SMJrR[; FYS TOFJT GYLP

	OJG ; VMDFGF 5F%TFSM						
; FWZ6 AF/SMGF I5TF	63	38.65	7.68	0.97	1.44	9.53	K[
IJIX08 AF/SMGF I5TF	73	24.92	9.08	1.08			

Ho₄₉ 35 JQFYL p5ZGF ; FWZ6 VG(IJIX08 AF/SMGF DFTFGF IJST IRVTFGF Dwl SMJrR[; FYS TOFJT GYLP

	IJST IRVTFGF 5F%TFSM						
; FWZ6 AF/SMGL DFTF	60	38.03	19.05	2.46	2.64	2.59	K[
IJIX08 AF/SMGL DFTF	74	44.88	8.26	.96			

Ho₅₀ 35 JQFYL p5ZGF ; FWZ6 VG(IJIX08 AF/SMGF DFTFGF DFGI; S :JF:yI GF Dwl SMJrR[; FYS TOFJT GYLP

	DFGI; S :JF:yI GF 5F%TFSM						
; FWZ6 AF/SMGL DFTF	60	26.23	5.63	0.73	1.02	8.96	K[
IJIX08 AF/SMGL DFTF	74	17.09	6.09	0.71			

Ho₅₁ 35 JQFYL p5ZGF ; FWZ6 VG[IJIX08 AF/SMGL DFTFGF ÖJG ; TMOFGF Dwl SM JrR[; FYS TOFJT GYLP

IJUT	ÖJG ; TMOFGF 5F%TFSM				5DF6E}	't' ISDT	; FYSTF
	N	M	SD	SEM	SED		
; FWZ6 AF/SMGF DFTF	60	38.55	8.06	1.04	1.44	10.58	K[
IJIX08 AF/SMGF DFTF	74	23.31	8.48	0.99			

Ho₅₂ 35 JQFYL p5ZGF ; FWZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRTFGF Dwl SM JrR[; FYS TOFJT GYLP

	IJST IRTFGF 5F%TFSM						
; FWZ6 AF/SMGF I5TF	75	32.49	18.05	2.08	2.23	4.58	K[
IJIX08 AF/SMGF I5TF	76	72.71	7.07	0.81			

Ho₅₃ 35 JQFYL p5ZGF ; FWZ6 VG[IJIX08 AF/SMGF I5TFGF DFGI; S :JF:yI GF Dwl SM JrR[; FYS TOFJT GYLP

	DFGI; S :JF:yI GF 5F%TFSM						
; FWZ6 AF/SMGF I5TF	75	27.09	5.49	0.64	0.86	10.15	K[
IJIX08 AF/SMGF I5TF	76	18.36	4.96	0.57			

Ho₅₄ 35 JQFYL p5ZGF ; FWZ6 VG[IJIX08 AF/SMGF I5TFGL ÖJG ; TMOFGF Dwl SM JrR[; FYS TOFJT GYLP

	ÖJG ; TMOFGF 5F%TFSM						
; FWZ6 AF/SMGF I5TF	75	39.36	6.42	9.74	1.33	9.89	K[
IJIX08 AF/SMGF I5TF	76	26.21	9.67	1.11			

Ho₅₅ 35 JQF"; WLGf ; FWZ6 VG[IJIX08 AF/SMGL DFTFGF IJST IRTFGF Dwl SM JrR[; FYS TOFJT GYLP

	IJST IRTFGF 5F%TFSM						
; FWZ6 AF/SMGL DFTF	60	38.17	16.11	2.08	2.51	1.07	K[
IJIX08 AF/SMGL DFTF	46	40.70	1.40	1.40			

Ho₅₆ 35 JQF"; WLGf ; FWFZ6 VG(IJIX08 AF/SMGF DFTFGF DFGI; S :JF:yI GF DwI SMJrR[; FYS TOFJT GYLP

IJUT	DFGI; S :JF:yI GF 5F%TFSM				5Df6E}	't' ISDT	; FYSTF
	N	M	SD	SEM	SED		
; FWFZ6 AF/SMGL DFTF	60	25.30	6.05	0.78	1.07	7.41	K[
IJIX08 AF/SMGL DFTF	46	17.37	4.97	0.73			

Ho₅₇ 35 JQF"; WLGf ; FWFZ6 VG(IJIX08 AF/SMGF DFTFGF ÖJG ; VMDFGF DwI SMJrR[; FYS TOFJT GYLP

	ÖJG ; VMDFGF 5F%TFSM						
; FWFZ6 AF/SMGF DFTF	60	38.88	4.87	1.09	1.58	9.03	K[
IJIX08 AF/SMGF DFTF	74	25.24	7.75	1.14			

Ho₅₈ 35 JQF"; WLGf ; FWFZ6 VG(IJIX08 AF/SMGF I5TFGL IJST IRVTFGF DwI SMJrR[; FYS TOFJT GYLP

	IJST IRVTFGF 5F%TFSM						
; FWFZ6 AF/SMGF I5TF	45	33.71	18.76	2.80	2.99	3.42	K[
IJIX08 AF/SMGF I5TF	44	43.95	6.90	1.04			

Ho₅₉ 35 JQF"; WLGf ; FWFZ6 VG(IJIX08 AF/SMGF I5TFGF DFGI; S :JF:yI GF DwI SMJrR[; FYS TOFJT GYLP

	DFGI; S :JF:yI GF 5F%TFSM						
; FWFZ6 AF/SMGF I5TF	45	25.36	5.27	0.79	1.15	7.21	K[
IJIX08 AF/SMGF I5TF	44	17.07	5.59	0.84			

Ho₆₀ 35 JQF"; WLGf ; FWFZ6 VG(IJIX08 AF/SMGF I5TFGL ÖJG ; VMDFGF DwI SMJrR[; FYS TOFJT GYLP

	ÖJG ; VMDFGF 5F%TFSM						
; FWFZ6 AF/SMGF I5TF	45	38.29	7.74	1.50	1.65	8.40	K[
IJIX08 AF/SMGF I5TF	44	24.43	7.90	1.19			

Ho₆₁ ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL IJST IRVTFGF Dwl SM JrR[; FYS TOFJT GYLP

IJUT	IJST IRVTFGF 5F%TFSM				5Df6E}, SED	't' ISDT	; FYSTF
	N	M	SD	SEM			
; FWFZ6 AF/SMGF DFTF	120	38.23	18.02	1.65	1.84	2.74	K[
IJIX08 AF/SMGF DFTF	120	43.28	8.99	0.82			

Ho₆₂ ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL DFGI; S :JF:yI GF Dwl SM JrR[; FYS TOFJT GYLP

IJUT	DFGI; S :JF:yI GF 5F%TFSM				5Df6E},	't'	; FYSTF
	N	M	SD	SEM			
; FWFZ6 AF/SMGF DFTF	120	25.69	5.84	0.53	0.74	11.45	K[
IJIX08 AF/SMGF DFTF	120	17.22	5.70	0.52			

Ho₆₃ 35 JQFYL p5ZGF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL OJG ; VTMFGF Dwl SM JrR[; FYS TOFJT GYLP

IJUT	OJG ; VTMFGF 5F%TFSM				5Df6E},	't'	; FYSTF
	N	M	SD	SEM			
; FWFZ6 AF/SMGF DFTF	120	38.93	8.00	0.73	1.06	14.13	K[
IJIX08 AF/SMGF DFTF	120	23.95	8.47	0.77			

Ho₆₄ ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRVTFGF Dwl SM JrR[; FYS TOFJT GYLP

IJUT	IJST IRVTFGF 5F%TFSM				5Df6E},	't'	; FYSTF
	N	M	SD	SEM			
; FWFZ6 AF/SMGF I5TF	120	33.99	18.46	1.68	1.80	5.1	K[
IJIX08 AF/SMGF I5TF	120	43.17	7.03	0.64			

Ho₆₅ ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL DFGI; S :JF:yI GF Dwl SM JrR[; FYS TOFJT GYLP

IJUT	DFGI; S :JF:yI GF 5F%TFSM				5Df6E},	't'	; FYSTF
	N	M	SD	SEM			
; FWFZ6 AF/SMGF I5TF	120	26.29	5.56	0.51	0.70	12.01	K[
IJIX08 AF/SMGF I5TF	120	17.88	5.23	0.48			

Ho₆₆ ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL ÒJG ; √TMDFGF DwI SM JrR[; FY5 TOFJT GYLP

IJUT	ÒJG ; √TMDFGF 5F%TF5M				5Df6E,	't' ISDT	; FY5TF
	N	M	SD	SEM	SED		
; FWFZ6 AF/SMGF I5TF	120	39.13	7.25	0.66	1.05	12.73	K[
IJIX08 AF/SMGF I5TF	120	25.76	8.97	0.82			

Ho₆₇ DFGI; S XMB WZFJTF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL IJST IR√TFGF DwI SM JrR[; FY5 TOFJT GYLP

IJUT	IJST IR√TFGF 5F%TF5M				2.55	1.60	GYL
; FWFZ6 AF/SMGF DFTF	60	39.30	17.97	2.32			
IJIX08 AF/SMGF DFTF	60	43.39	8.67	1.07			

Ho₆₈ DFGI; S XMB WZFJTF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL DFGI; S :JF:yI GF DwI SM JrR[; FY5 TOFJT GYLP

	DFGI; S :JF:yI GF 5F%TF5M				0.97	9.62	K[
; FWFZ6 AF/SMGF DFTF	60	25.47	5.57	0.72			
IJIX08 AF/SMGF DFTF	60	16.14	5.27	0.65			

Ho₆₉ DFGI; S XMB WZFJTF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL ÒJG ; √TMDFGF DwI SM JrR[; FY5 TOFJT GYLP

	ÒJG ; √TMDFGF 5F%TF5M				1.28	13.59	K[
; FWFZ6 AF/SMGF DFTF	60	39.25	7.49	0.97			
IJIX08 AF/SMGF DFTF	60	21.85	6.39	0.83			

Ho₇₀ DFGI; S XMB WZFJTF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IR√TFGF DwI SM JrR[; FY5 TOFJT GYLP

	IJST IR√TFGF 5F%TF5M				2.41	4.03	K[
; FWFZ6 AF/SMGF I5TF	60	34.07	17.02	2.32			
IJIX08 AF/SMGF I5TF	51	43.80	8.67	6.97			

Ho₇₁ DFGI; S XMB WZFJTF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL DFGI; S :JF:yI GF Dwl SMJrR[; FY5 TOFJT GYLP

IJUT	DFGI; S :JF:yI GF 5F%TF5M				5Df6E}	't' ISDT	; FYSTF
	N	M	SD	SEM	SED		
; FWFZ6 AF/SMGF I5TF	60	26.08	5.35	0.69	0.98	8.95	K[
IJIX08 AF/SMGF I5TF	51	17.31	4.91	0.68			

Ho₇₂ DFGI; S XMB WZFJTF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL ÖJG ; ¶MDFGF Dwl SMJrR[; FY5 TOFJT GYLP

	ÖJG ; ¶MDFGF 5F%TF5M						
; FWFZ6 AF/SMGF I5TF	60	40.30	5.95	0.77	1.31	11.41	K[
IJIX08 AF/SMGF I5TF	51	25.31	7.55	1.06			

Ho₇₃ XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL IJST IR¶TFGF Dwl SMJrR[; FY5 TOFJT GYLP

IJUT	IJST IR¶TFGF 5F%TF5M				2.44	2.68	K[
; FWFZ6 AF/SMGF DFTF	60	36.58	16.08	2.08			
IJIX08 AF/SMGF DFTF	54	43.13	9.35	1.27			

Ho₇₄ XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL DFGI; S :JF:yI GF Dwl SMJrR[; FY5 TOFJT GYLP

IJUT	DFGI; S :JF:yI GF 5F%TF5M				1.12	6.5	K[
; FWFZ6 AF/SMGF DFTF	60	25.82	6.0	0.78			
IJIX08 AF/SMGF DFTF	54	18.54	5.94	0.81			

Ho₇₅ XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIX08 AF/SMGF DFTFGL ÖJG ; ¶MDFGF Dwl SMJrR[; FY5 TOFJT GYLP

	ÖJG ; ¶MDFGF 5F%TF5M				1.62	7.52	K[
; FWFZ6 AF/SMGF DFTF	60	38.92	8.02	1.04			
IJIX08 AF/SMGF DFTF	54	26.74	9.12	1.24			

Ho76 XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL IJST IRTFGF Dwl SMJrR[; FYS TOFJT GYLP

IJUT	OJG ; VMDFG 5F%TFSM				5DF6E}	't'	; FYSTF
	N	M	SD	SEM	SED	ISDT	
; FWFZ6 AF/SMGF I5TF	60	34.62	20.16	2.60	2.79	3.08	K[
IJIX08 AF/SMGF I5TF	69	43.22	8.13	1.06			

Ho77 XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL DFGI; S :JF:yI GF Dwl SMJrR[; FYS TOFJT GYLP

IJUT	DFGI; S :JF:yI GF 5F%TFSM				5DF6E}		
	N	M	SD	SEM	SED	ISDT	
; FWFZ6 AF/SMGF I5TF	60	26.37	5.85	0.75	0.99	8.15	K[
IJIX08 AF/SMGF I5TF	69	18.30	5.43	0.65			

Ho78 XFZLIZS XMB WZFJTF ; FWFZ6 VG[IJIX08 AF/SMGF I5TFGL OJG ; VMDFG Dwl SMJrR[; FYS TOFJT GYLP

IJUT	OJG ; VMDFG 5F%TFSM				5DF6E}		
	N	M	SD	SEM	SED	ISDT	
; FWFZ6 AF/SMGF I5TF	60	37.58	8.15	1.05	1.59	7.23	K[
IJIX08 AF/SMGF I5TF	69	26.08	9.88	1.19			

p5Z 5DF6['t' S; MBLGL S], 78 Xgl ptS<5GFVM ZRJDFA VFDJ
 CTLP HDPYL 71 ptS<5GFVM ; FYS K[VG[07 ptS<5GFVM ; FYS
 GYLP H[; FYS GYL T[Ho TOFJT NXFJTL GYLP TGF SFZ6MDF
 SF8]AS 5IZI:YIT4 AF/SGL 5IZI:YIT TPDH Vgl :JT+
 5IZJti MGL VFTZJTL"V; ZMYFI KP

5.4 ; DU|t- S; MBLGF 5ZT+ 5IZJtI "5DF6[TFZ6M0

IJST IRTF t- S; MBLGF ; FYS TFZ6M	
Ho. 1, 4, 13, 19, 22, 25, 28, 34, 37, 40, 46, 49, 52, 58, 61,64, 70, 73,76	19
IJST IRTF t- S; MBLGF V; FYS TFZ6M	
Ho. 7, 10, 16, 31, 43, 55, 67	07
DFGI; S :JF:yI t- S; MBLGF ; FYS TFZ6M	
Ho. 2,5, 8, 11, 14, 17, 20, 23, 24, 29,32, 35, 38, 41, 44, 47, 50, 53, 56, 59, 62, 65, 68, 71, 74, 77	26
DFGI; S :JF:yI t- S; MBLGF V; FYS TFZ6M	00
ÒJG ; √MF t- S; MBLGF ; FYS TFZ6M	
Ho.3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63, 66, 69, 72, 75,78.	26
ÒJG ; √MF t- S; MBLGF V; FYS TFZ6M	00

5.4 ; DU|t- S; MBLGF 5ZT+ 5IZJtI "5DF6[TFZ6M₀

IJST IRTF t- S; MBLGF ; FY'S TFZ6M

S], ptS<5GFVM	
Ho. 1, 4, 13, 19, 22, 25, 28, 34, 37, 40, 46, 49, 52, 58, 61,64, 70, 73,76	19
IJST IRTF t- S; MBLGF V; FY'S TFZ6M	
Ho. 7, 10, 16, 31, 43, 55, 67	07
DFGI; S :JF:yI t- S; MBLGF ; FY'S TFZ6M	
Ho. 2,5, 8, 11, 14, 17, 20, 23, 24, 29,32, 35, 38, 41, 44, 47, 50, 53, 56, 59, 62, 65, 68, 71, 74, 77	26
ÒJG ; √TME t- S; MBLGF ; FY'S TFZ6M	
Ho.3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63, 66, 69, 72, 75,78.	26

5.5 r – S; MBLGF TFZ6M0

Ho₇₉ DFGI; S XMB WZFJTF ; FWFZ6 AF/SMJF/F I5TFGL IJST IRVF VG[DFGI; S :Jf:yI GF DwI SM JrR[SM. ; ULG ; C; AW GYLP

SPFS	IJUT	; bIF	:JFTVÉ ; bIF	r-ISDT	; FYSTF
1	I5TFGL IJST IRVF	60	58	0.65	KP
2	I5TFGM DFGI; S :Jf:yI	60	58		

Ho₈₀ AYL JW] ; FWFZ6 AF/SMJF/F I5TFGL IJST IRVF VG[ÖJG ; VMDFGF DwI SM JrR[SM. ; ULG ; C; AW GYLP

1	I5TFGL IJST IRVF	45	43	-0.40	K[
2	I5TFGM ÖJG ; VMDF	45	43		

Ho₈₁ ; V]ST SB]ADFZC[TF ; FWFZ6 AF/SMGF I5TFGL IJST IRVF VG[ÖJG ; VMDFGF DwI SM JrR[SM. ; ULG ; C; AW GYLP

1	I5TFGL IJST IRVF	59	57	-0.32	K[
2	I5TFGM ÖJG ; VMDF	59	57		

Ho₈₂ AYL JW] ; FWFZ6 AF/SMJF/F I5TFGL DFGI; S :Jf:yI VG[ÖJG ; VMDFGF DwI SM JrR[SM. ; ULG ; C; AW GYLP

1	I5TFGL DFGI; S :Jf:yI	45	43	0.77	GYL
2	I5TFGM ÖJG ; VMDF	45	43		

Ho₈₃ AYL JW] ; FWFZ6 AF/SMJF/F I5TFGL IJST IRVF VG[DFGI; S :Jf:yI GF DwI SM JrR[SM. ; ULG ; C; AW GYLP

1	I5TFGL IJST IRVF	45	43	-0.63	GYL
2	I5TFGM ÖJG ; VMDF	45	43		

Ho₈₄ ; FWFZ6 A[AF/SMJF/F I5TFGL IJST IRVF VG[ÖJG ; VMDFGF DwI SM JrR[SM. ; ULG ; C; AW GYLP

1	I5TFGL IJST IRVF	75	73	-0.33	K[
2	I5TFGM ÖJG ; VMDF	75	73		

Ho₈₅ ; FWFZ6 A[AF/SMJF/F WMP12 ; WL VelF; SZ] F I5TFGL IJST IRVF VG[ÖJG ; VMDFGF DwI SM JrR[SM. ; ULG ; C; AW GYLP

1	I5TFGL IJST IRVF	60	58	-0.31	K[
2	I5TFGM ÖJG ; VMDF	60	58		

Ho₈₆ 35 JOFYL p5ZGF ; FWFZ6 AF/SMGF I5TFGL IJST IRVF VG[ÖJG ; VMDFGF DwI SM JrR[SM. ; ULG ; C; AW GYLP

1	I5TFGL IJST IRVF	75	73	-0.18	GYL
2	I5TFGM ÖJG ; VMDF	75	73		

Ho₈₇ ; FWFZ6 A[AF/SMJF/F I5TFGL IJST IRVF VG[ÖJG ; VMDFGF DwI SM JrR[SM. ; ULG ; C; AW GYLP

1	I5TFGL IJST IRVF	60	58	-0.28	K[
2	I5TFGM ÖJG ; VMDF	60	58		

Ho₈₈ ; FWFZ6 AF/SMGF 35 JQFYL GLRGL pDZGF I5TFGL IJST IRTF VG[ÖJG ; ¶MDFG
DwI SMJrR[SM. ; ULG ; C; AW GYLP

SPFS	IJUT	; bIF	:JFTÉ ; bIF	r-ISDT	; FYSTF
1	I5TFGL IJST IRTF	45	43	-0.31	K[
2	I5TFGM ÖJG ; ¶MDF	45	43		

; FWFZ6 AF/SMGF I5TFGF 5ZT+ 5IZJtI MJrR[GF ; C; AWG\SM8S

HO SP	HY	A[5IZJtI MJrR[GM ; C; AW Uj6FS	IJWFIS VYJF IGOFWIS	VYGM ; JRTFY" ; AW
Ho ₇₉	DFGI; S XMB WZFJTF I5TF	IJST IRTF DFGI; S :JF:yI	0.65	IJWFIS WG ; C; AW
Ho ₈₀	A\YL JW] ; FWFZ6 AF/SMGF I5TF	IJST IRTF ÖJG ; ¶MDF	-0.40	IGOFWS K6 ; C; AW
Ho ₈₁	; V\ST SBJADF ZCITF ; FWFZ6 AF/SMGF I5TF	DFGI; S :JF:yI ÖJG ; ¶MDF	-0.32	IGOFWS K6 ; C; AW
Ho ₈₂	A\YL JW] ; FWFZ6 AF/SMJF/F I5TF	DFGI; S :JF:yI ÖJG ; ¶MDF	0.77	IJWFIS WG ; C; AW
Ho ₈₃	A\YL JW] ; FWFZ6 AF/SMGF I5TF	IJST IRTF DFGI; S :JF:yI	-0.63	IGOFWS K6 ; C; AW
Ho ₈₄	; FWFZ6 A[AF/SM JF/F I5TF	IJST IRTF ÖJG ; ¶MDF	-0.33	IGOFWS K6 ; C; AW
Ho ₈₅	; FWFZ6 AF/SMJF/F WMP12 ; JWL E6, F I5TF	IJST IRTF ÖJG ; ¶MDF	-0.31	IGOFWS K6 ; C; AW
Ho ₈₆	35 JQFYL p5ZGF ; FWFZ6 AF/SMGF I5TF	IJST IRTF ÖJG ; ¶MDF	-0.18	IGOFWS K6 ; C; AW
Ho ₈₇	; FWFZ6 A[AF/SM JF/F I5TF	IJST IRTF ÖJG ; ¶MDF	-0.28	IGOFWS K6 ; C; AW
Ho ₈₈	35JQF" ; JWLGF ; FWFZ6 AF/SMGF I5TF	IJST IRTF ÖJG ; ¶MDF	-0.31	IGOFWS K6 ; C; AW

p5Z 5pF6GL r- S; MBLGL S], 10 XgI ptS<5GFVM ZRJDFA
VFJL CTLP HDPYL 09 ptS<5GFVM ; FYS K[VG[01
ptS<5GF ; FYS GYLP Ho TOFJT NXF"JTL GYLP SFZ6MDF
SF8\AS 5IZI:YIT4 DFGI; S XMB4 SBJAGM 5SFZ VgI :JT+
5IZJtI'GL VFTZJTL"V; ZMYFI KP

5.6 F-S; MBLGF ; DU| 5ZT+ 5IZJtI"5Df6GF TFZ6M0

Ho89 IEpf VFJSJF/F ; FWFZ6 AF/SGF I5TFGL DI; S VFJS s~FP3000 YL VMK4 ~FP 3,000 YL ~FP 5,000 JrRf ~FP 5,000 YL JW]f WZFJTF IJST IRVTFG 5f%TFSM JrR[SM. ; \ uGTF HMUF D/TL GYLP

IJRZ6 DkI	IJRZ6GF JUGM; ZJF/M	:JFTVEGL DF+F	IJRZ6GL DF+F	F ISDT	; FYS
BSS	269.21	2	134.61	0.38	GYL
WSS	41585.38	117	355.43		
TSS	418554.59	119			

Ho90 IEpf VFJSJF/F ; FWFZ6 AF/SGF I5TFGL DFI; S VFJS s~FP3000 YL VMK4 ~FP 3,000 YL ~FP5,000 JrRf ~FP 5,000YL JW] f WZFJTF DFGI; S :JF:yI GF 5f%TFSM JrR[SM. ; \ uGTF HMUF D/TL GYLP

BSS	50.36	2	25.18	0.79	GYL
WSS	3727.61	117	31.86		
TSS	3777.97	119			

Ho91 IEpf VFJSJF/F ; FWFZ6 AF/SGF I5TFGL DFI; S VFJS s~FP 3000 YL VMK4 ~FP 3,000 YL ~FP5,000 JrRf ~FP 5,000 YL JW]f WZFJTF ÖJG ; VMFGF 5f%TFSM JrR[SM. ; \ uGTF HMUF D/TL GYLP

BSS	47.92	2	23.96	0.46	GYL
WSS	6078.45	117	51.95		
TSS	6126.37	119			

Ho92 IEpf jIFJ; FIJF/F ; FWFZ6 AF/SGF I5TFGL IJST IRVTFG 5f%TFSM JrR[SM. ; \ uGTF HMUF D/TL GYLP

BSS	302.63	2	151.32	0.36	GYL
WSS	48395.29	117	415.34		
TSS	48897.92	119			

Ho93 IEpf jIFJ; FIJF/F ; FWFZ6 AF/SGF I5TFGF DFGI; S :JF:yI GF 5f%TFSM JrR[SM. ; \ uGTF HMUF D/TL GYLP

BSS	36.49	2	18.25	0.44	GYL
WSS	4810.83	117	41.12		
TSS	4847.32	119			

Ho94 IEpf jIFJ; FIJF/F ; FWFZ6 AF/SGF I5TFGF ÖJG ; VMFGF 5f%TFSM JrR[SM. ; \ uGTF HMUF D/TL GYLP

BSS	26.77	2	13.39	0.25	GYL
WSS	6219.22	117	53.16		
TSS	6245.99	119			

Ho95 IEpf 7FITGs General, BC. SC.f ; FWFZ6 AF/SMGF I5TFGL IJST IRVTFG 5f%TFSM JrR[SM. ; \ uGTF HMUF D/TL GYLP

BSS	107.93	2	53.97	0.18	GYL
WSS	35539.24	117	303.75		
TSS	35647.17	119			

Ho96 IEþf 7FITGF ; FWZ6 AF/SMGF I5TFGF DFGI ; S :Jf:yl GF 5F%TFSM JrR[SM. ; \ uGTF HMJF D/TL GYLP

IJRZ6 DkI	IJRZ6GF JU'GM ; ZJF/M	:JFTËGL DF+F	IJRZ6GL DF+F	F ISDT	; FYS
BSS	20.45	2	10.23	0.33	GYL
WSS	3597.87	117	30.75		
TSS	3618.32	119			

Ho97 IEþf 7FITGFs General, BC. SC.f; FWZ6 AF/SMGF I5TFGF ÖJG ; VMDFGF 5F%TFSM JrR[SM. ; \ uGTF HMJF D/TL GYLP

BSS	162.41	2	81.21		
WSS	7050.71	117	60.26	1.35	GYL
TSS	7213.12	119			

Ho98 IEþf 7FITGFs General, BC. SC.f IJIX08 AF/SMGF I5TFGL IJST IRVTFGF 5F%TFSM JrR[SM. ; \ uGTF HMJF D/TL GYLP

BSS	639.77	2	346.89		GYL
WSS	41450.82	117	354.28	0.98	
TSS	42144.59	119			

Ho99 IEþf 7FITGF IJIX08 AF/SMGF I5TFGF DFGI ; S :Jf:yl GF 5F%TFSM JrR[SM. ; \ uGTF HMJF D/TL GYLP

BSS	58.81	2	29.41		
WSS	3830.19	117	32.74	0.90	GYL
TSS	3889.00	119			

Ho100 IEþf 7FITGFs General, BC. SC.f IJIX08 AF/SMGF I5TFGF ÖJG ; VMDFGF 5F%TFSM JrR[SM. ; \ uGTF HMJF D/TL GYLP

BSS	211.96	2	105.98	1.80	GYL
WSS	6877.34	117	58.78		
TSS	7089.30	119			

5.7 F- S; MBLGF TFZ6MGM; FZ 0

HO SD	:JT+ 5IZJtI"	FGL ISDT	; FYSTF
89	; FWZ6 AF/SGF I5TFGL DF; S VFJS VG[IJST IRVF	0.38	GYL
90	; FWZ6 AF/SGF I5TFGL DF; S VFJS VG[DFGI; S :JF:yI	0.79	GYL
91	; FWZ6 AF/SGF I5TFGL DF; S VFJS VG[ÒJG ; VMF	0.46	GYL
92	; FWZ6 AF/SGF I5TFGMjI J; FI VG[IJST IRVF	0.36	GYL
93	; FWZ6 AF/SGF I5TFGMjI J; FI VG[DFGI; S :JF:yI	0.44	GYL
94	; FWZ6 AF/SGF I5TFGMjI J; FI VG[ÒJG ; VMF	0.25	GYL
95	IJIX08 AF/SGF I5TFGL IEpf 7FIT VG[IJST IRVF	0.18	GYL
96	IJIX08 AF/SGF I5TFGL IEpf 7FIT VG[DFGI; S :JF:yI	0.33	GYL
97	IJIX08 AF/SGF I5TFGL IEpf 7FIT VG[ÒJG ; VMF	1.35	GYL
98	IJIX08 AF/SGF DFTFGL IEpf 7FIT VG[IJST IRVF	0.98	GYL
99	IJIX08 AF/SGF DFTFGL IEpf 7FIT VG[DFGI; S :JF:yI	0.90	GYL
100	IJIX08 AF/SGF DFTFGL IEpf 7FIT VG[ÒJG ; VMF	1.80	GYL

5.8 JWZ[IJST IRVF 5FK/GF SFZ6M0

1. DFTFvI5TFDF\VFtDIJ` JF; GM VEFJ CMI KP
2. jI ISTDf\; TT IGQFWS ZLT[IJRFZTF CMI KP
3. JF:TIJS 5IZI:YITG[wI FGDF\ZFBTF G CMI P
4. IJWFIS ; RGM ICTfK]jI ISTVMGF ; , FCv; RGMGM V:JLSFZ SZTF
CMI P
5. SBJADF4 VFOMxv5OMXDF\ ; DFHDF C/LvD/L XSTF G CMI VG[
IJRFZMGL VF5v, [SZJDF4 VFTZIS|F SZJDF V; DYTF WZJTF
CMI P
6. ; TT IGQ0/TF456 IJST IRVF 5FK/G\VF5 5A/ SFZ6 KP

7. SϩL NJFVING}5ϩF6 38F0J}VY{AW SZJFP
8. 5ϩ6FI FD4 wI FG4 S; ZTv I MJ SZJFP

5.9 IJSIT IRVF VMKL SZJFGF ; RGM0

1. SM. 56 5/EMGF C, H~ZYL D/X[VϩM IJ` JF; ZFBJFYL IJST IRVF 38[KP
2. ; TT JTDfG 5IZI:YITG[IJWFI S 1I08SM6YL HMJFGL JI} S{/JJP
3. ; TT SϩA4 VF0MXv5F0MX4 ; DFH ; FY[; 5SDF\ ZCL IGQFWSv IJWFI S 5}JUϩM DGMJ, 64 IJRFZMGL ZHMFT EFZF 56 IJST IRVF 38[KP
4. SM. 56 NϩBN 5IZI:YIT S[38GFG[; CH :JLSFZL VG[VF 5IZI:YIT VF56F CFYGL JFT K[TD IJWFI S ; DH S{/JJP4 jI ISTGL IJST IRVF 38[KP
5. ; DI 4 ; HMJM 5IZI:YITG[VF56L 1I08V[G HMTF ; DI ; FY[AW] AZFAZ Y. HX[TP}J, 6 S{/JJP
6. ; TT WLZH VG[XFIT5}S4 VfwI FtDS DFU" S{/JLIJST IRVF VMKL Y. HFI KP 8SDF\IJST IRVF VMKL SD YFI TGF IZ; M; " XML TGMVD, SZLV[TMWLD[WLD[IJST IRVF VMKL YFI KP

5.10 GA/F DFGI; S :JF:yI GF SFZ6M0

1. VFW]GS SM, D[G IJSITG[56 IRTFGF IJU TZLS[VM/BEJ[K[VG[DFGJLV[XFZLIZS :JF:yI 8SFJJF Hϩ, L DCGT SZJL 50[KPTGFYL JWfZ[DCGTP DFGI; S :JF:yI 8SFJJF DF8[SZJL 50[K[VG[; TT VfwI FtDLS56DF\jI ISTV[IGZFXfvCTFXF4 IRTFVMGM ; FDGM SZJM 50TMCM KP T}YL T}G}DFGI; S :JF:yI HMBDFI KP

2. ; TT IRVTF4 BMBF IJRFZMIGZFXFVMDFYL jI ISTVMG\ DFGI; S :JF:yI HMBDFI KP
3. DFGJLDF\ ZC[, F , FU6LXL, :JEFJ Vgl jI IST ; FY[; DFI MHG ; FWJFDF\ DNN~5 YFI K[TYF JI ISTS ; DFI MHGGM VEFJ GA/F DFGI; S :JF:yI DF8[HJFANFZ KP
4. VFWJGS ÖJG ; TT ; BQFDI VG[URJFOF EZ[, \AGT\HFI KP TI 56 DFGJLGF GA/F DFGI; S :JF:yI DF8[HJFANFZ KP
5. GA/F DFGI; S :JF:yI DF8[VFIYS ; FDFIHS JFTEJZ6 VG[DMBJFZL 56 jI ISTGF GA/F DFGI; S :JF:yI DF8[SFZ6E]T KP

5.11 DFGI; S :JF:yI ; WfZJF DF8GF ; RGMo

1. jI ISTV[5IZI:YITG[:JLSFZL IJWFI S EFJ S/JJMP
2. ; TT 5MTFGL XIST4 DIFNF4 1FITG[VM/BL ; CH :JLSFZL SFI" SZJFYL DFGI; S :JF:yI DF\ ; WfZMYFI KP
3. 5MTFGL 1I08V[V; DY"CMI 56 ALHFGL 1I08V[; DY"CMI 4 TMTGL ; FY[TFNFtdI ; FWJFYL DFGI; S :JF:yI ; WfZL XSFI KP
4. jI ISTDF\ ZC[, L , FU6L4 GD]TF4 NIF4 ; CEFULTF4 IJJS HJF IJWFI S UJM DFGI; STFG[NZ SZJFDF\ DNN~5 YFI KP
5. ZRGftDS 1I08SM6 DFGI; S :JF:yI G[; WfZJFDF\ DNN~5 YFI KP
6. 5MTFGL HFT ; FY[VftDF ; FY[; TT JFTF, F5MRTG EFZF VfwI fitDS 1I08SM64 IMU 5âIT EFZF 56 DFGI; S :JF:yI ; WfZL XSFI KP
7. WLZH ICDT4 XFIgTYL 1- VftDIJ`JF; EFZF 5J1GM ; FDGM SZJFYL DFGI; S :JF:yI ; WfZL XSFI P

8. ; TT 5Z6FNFI L 5:TSMG\ JFRG4 DCFG ; \ 5ZDFMGF ; 5SYL 56 DFGI; S :JF:yI ; JWFZL XSFI P

5.12 GA/F ÒJG ; \TMFGF SFZ6M0

1. jI ISTG\ ; TT 5IZJTGX, K[VG[TGL ; FY[; S/FI, F ÒJG ; \TMF V[DFGJÒJGG\ HI8, 5IZA/ K[VG[5IZJTG VG[5IZI:YIT ; FY[jI ISTGF ÒJG; \TMFDF\ 56 5IZJTG VFJ[K[VG[T\YL H NZS jI ISTGF IJRFZM V G[ÒJG 5\I GF 1108SM6 V, U V, U HMUF D/[KP
2. jI ISTDF\ VFYIS4 ; FDFIHSvXIFI6S4 , uG NZYM HUF 5IZA/MGL 56 VS IF ALÒ ZLT[HMUF D/[KP TM 5KL S\, FS V7FG 5IZA/MGL V; Z HMUF D/TL GYLP

5.13 ÒJG ; \TMF JWFZJFGF ; RGM0

1. JF:TIJS 5IZI:YITGL ; DHJTL D/[JL ÒJG; \TMF JWFZL XSFI KP
2. jI ISTGM HgD DFGJS\DF\YI M K[T\YL 5MTFGF SBJADF\ VS jI IST TZLS[; DU|SBJA IJIX08 jI IST K[TG M VFGN , \M HM VP
3. jI ISTG[H[VD\I IHNUL OZL D/X[GIC TD TDF\VFJ, 5IZI:YIT ; O/TF4 IG00/TFG[ÒJGG\ VS VU K[TD ; DHJFYL jI ISTGM ; \TMF JW[KP
4. ALHFGM DC, N\BL VF56F h\OF AF/JF GIC TD ; DHJFYL ÒJG; \TMF ; JWFZL XSFI VG[IJWFI S DGMJ, 6 JW[KP
5. ; TT 5IZJTGX, G[:JLSFZL VG[TGL ; FY[RF, JFYL jI ISTDF\ IJSF; XL, TFGM U\6 S/JFI K[VG[GJF 1108SM6 EFZF 5MTFGF jI IST\JG[JWFZ[IJSF; XL, AGFJL 5MTFGM ÒJG; \TMF JWFZ[KP

5.14 5]:T]T ; XMMGGGL VUti TF 0

SM. 56 1f+Df\ ; XMS[BIFZ[; XMWG SFI " SZJFGM IJRFZ SZ[K[
tIFZ[V[IJQFI GL p5I MUTF S[VUti TF IJX[IJRFZL ,]\ V[H~ZL KP

VCLV F 56 ; XMMIGSFV[IX1F6SFI " SZ[K[Vß, [; DFHG[8§IGS,
CZ60F/GL ; FY[; FDFgI DF6; G[56 ; TT 5|tGXL, TFGL ; FY[
; FDFIHS4 VFIYS ; DFI MHG4 SF8]AS 5/EM p; EJTF H CMI K[ti FZ[VF
; XMWG ; FDFgI AF/SMGF DFTFvI5TF VG[; DFHG[p5I MJL GLJ0XP ; FY[
; FY[H[3ZDF\ IJS, FU sTDFD SßJUZLGF AF/SMGF DFTFvI5TFG[56 VF
; XMWG p5I MJL GLJ0[KP

VF p5ZFT EFIJ ; XMMSM DF8[56 VF 1f+Df\p5I MJL ; FIAT YXP
VF ; XMMGYL ; DFHGF TDFD 1f+Df\ SFD SZTF SDRFZLU64 JF, LU64
IX1FSU64 IJnFYLU6 JUZ[G[56 VF ; XMWG p5I MJL YX[VG[
EIJQI DF\AF/SMGF pKZ IJSF; DF 56 VF ; XMWG ; FWFZ6 VG[IJIX08
AF/SMGF DFTFvI5TFG[p5I MJL YXP

8§DF\ VFU/ HTA 5]:T]T ; XMWG DFTFvI5TF p5ZFT IX1F6 ; \YF4
; \YFSLI ÒJGG[H GCL4 ; FDFIHS ÒJGG[56 Tß,]H V; ZSFZS AGX[
TDPH IJIX08 AF/SMGF IJSF; 4 IX1F6DF\ VG[T]GF ; JFUL IJSF; GF
S<I F6 DF8[p5I MJL AGX[VG[DFGJJTGGFIJWFI S 5F; FVMG[JW]G[JW]
S/JJF DF8[5]:T]T VeIF; INXF ; RG SZX[T]AFAT IGIüt KP

5.15 5]:T]T ; XMMGGGL DI FNF 0

Vß ; GFTG ; ti K[S[DFGJL SIFZ[I 56 5]b" CMTM GYL TM 5KL
DFGJL EFZF SZJFDF\ VFJ], SM. 56 ; XMWG 5]b"CM. XS[GICP ; XMWG

V[DCF; FUZ Hß, } UCG VG[VFSFX Hß, } IJXF/ KP DF8[; XMWGDF\ ; O/TFGL ; FY[IG00/TFVM 56 ZC[, L KP 1FIT 56 HMUF D/[K[VG[; XMS VF JFTYL VHF6 GYLP Vß, [H ; XMWGGL ; D:IF q DIFNF H6fjIF JUZ ZCL XSTF GYLP

- VF ; XMWG OST HGFU- IHDF 5ZT\H ; LIDT K[VG[JW] :508TF DF8[IJIJW IHDF S[XCZGF DFTFvI5TFGM ; DFJX SZL DIFNFG[BFDLG[IGJFZL XSFI P
- VeIF; GF TFZ6M VgI IJ:TFZG[S[1F+G[, FU]5F0L XSFI GICP
- DFGJ 5IZJT'GXL, TFGF IGI DGMG; Z[K[T\YL 5IZI:YIT AN, FTF DFGJLGF IJRFZM# JT'GDF# 5IZI:YITDF 56 5IZJT'G VFJ[KP T\YL ; FY[T\GL IR\TFDF DFGI; S :JF:yI DF# ÒJG; \TMDFDF 56 5IZJT'G VFJL XSP
- VF p5ZFT VgI T], GFVMGM p5IMU SZL HÐ S[; DFI MHG4 SFI", \TMF4CTFXF4 Dti IR\TF4 DGMU, 6M# 5J'UJCGM 56 VF; XMWGDF\ZC[, BFDLG[DC;VX[IGJFZL XSFI P T\YL HM VF H ; XMWG VDS ; DI 5KL SZJDF\ VFJ[TM XSI K[S[5IZ6FDDF\ TOFJT VFJP
- VFD4 VF ; XMWGDF\ GJF GJF ; XMWGM YTF\ZC[K[TP TP TDF\ ZC[, L BFDLV\# +}8VM#1FITVM# DIFNFVM ZC[T[5KLGf GJF ; XMWGDF\N\ SZL XSFI KP
- jI ISTUT DFICTL5+SDF ; DFJX SZ[, 5IZJT'GMG[VeIF; DF\ ; FS/[GYLP 5ZT] RMP; jI ISTUT ; DFIHS 5IZJtI'G[H VeIF; DF\; FS/JDF\VFJ[, KP

- VCL\IGNX" 480GM 5; N SZJFDA\ VFJ[, KP VFYL JW] :508
VeIF; DF8[VFS0FXF:+LI ZLTGMp5IMU SZ[, GYLP 5ZT]VDŞ
5IZJtIMGL DF+ 8SFJFZL 5DF6[U6TZL SZ[, KP

5.16 ; XWGGF VFWFZ[E, FD6 ; RGM VG[EFIJ ; RGM0

1. ; XWGGF K[, F TAÐFDA; DHFI K[S[VFD SZTF VFD SI]CMT
TM; FZ]CT]T]M]JRFZ EFIJ ; XWGSTF"DF8[INXF; RS AG[KP
2. VFJF 5ŞFZGF ; FDFIHS ; XWGYL jIIST SBJA VG[; DFHDA
:YFI5T ; AWM ; WZJF DF8[p5IMUL KP

VFW]GS ÒJGGF 5]EGM ; TME VG[XFITGF ; /UTF 5]EMG[pS], JF
DF8[VF ; XWVG p5IMUL YFI KP

VF VwI I GGL RSF; 6L DF8[YMDF YMDF ; DI GF VTZ[VF H ; XWVG
OZL OZL 5]GZFJIT" SZL XSFIP

VTDA\ 5IZIX08DA\ H~ZL VgI IJUTMGL ZH]FT SZL ; FWFZ6 VG[
IJIX08 AF/SMsDNA]âfGF DFTfvI5TFGL D], FSFT4 VFJL IJIX08 XF/FGL
D], FSFTMGL T:JLZMDŞJFDA\VFJL KP ; NE"; JR ZH}SZJFDA\VFJL KP

संकेत



; NE} JR

ccprR;Z Dfwl IDS JfI6BI VG[IJ7FG 5JFCGF IJnFYLVNGL
VFSOFXF:+LI I; Iâ4 ; HGftDSXIST VG[VD]T" S1FFV[; FDFgI TÂJ
AMWGF IJSF; GM T], GftDS VeIF; Pcc OFF 5ZDFZ DLGF ; LPs fGM
DCFIGAWP ; FZF08=I]GJI; 8L4 ZFHSMBP

ccZFHSMB IHDFGF ALPV; PVGPV, PGF SDRFZLVNMF ÒJG; VMF4
; \YFUT 5IFJZ6 VG[jI J; FI ; FD, ULZLGM DGMU{7FIGS VeIF; Pcc OFF
DLTF VRP WGXFs fGF[DCFIGAWP ; FZF08=I]GJI; 8L4 ZFHSMBP

ccSMD%l ßZ prrIX1F6 VG[GNGvSMD%l ßZ prR IX1F6 D/JTfI JnFYLVNMF
DFGI; S :JF:yI 4 SF8]AS ; DFIMHG VG[Af{âS S1FFGM T], GftDS
VeIF; Pcc OFF VFZP SP RMRF ; FC]As fGM DCFIGAWP ; FZF08=
I]GJI; 8L4 ZFHSMBP

ccZFHSMB XCZGF Cf. va, 05XZGF NNLVMDf\ DFGI; S :JF:yI 4 ; DFIMHG
VG[IJST IRVFGF VUJGM VeIF; Pcc OFF HFUITAG HP jIF; s fGM
DCFIGAWP ; FZF08=I]GJI; 8L4 ZFHSMBP