

**EFFECTIVENESS OF LECTURE CUM DEMONSTRATION ON FIRST  
AID MEASURES OF MINOR AILMENTS AMONG PRIMARY  
SCHOOL TEACHERS OF SELECTED SCHOOLS AT  
ACHARAPAKKAM BLOCK, KANCHEEPURAM DISTRICT**

**By**

**Ms. LEITAM MELORY DEVI**



**A Dissertation submitted to**

**THE TAMILNADU Dr.M.G.R. MEDICAL UNIVERSITY,**

**CHENNAI.**

**IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE  
DEGREE OF MASTER OF SCIENCE IN NURSING**

**SEPTEMBER- 2014**

## **CERTIFICATE**

This is to certify that **“EFFECTIVENESS OF LECTURE CUM DEMONSTRATION ON FIRST AID MEASURES OF MINOR AILMENTS AMONG PRIMARY SCHOOL TEACHERS OF SELECTED SCHOOLS AT ACHARAPAKKAM BLOCK, KANCHEEPURAM DISTRICT”** is a bonafide work done by **Ms.LEITAM MELORY DEVI,M.Sc (N) II Year Student**, Adhiparasakthi College of Nursing, Melmaruvathur, in partial fulfillment of **THE TAMIL NADU Dr.M.G.R MEDICAL UNIVERSITY** towards the award of the degree of **Master of Science in Nursing, Branch-I, Medical Surgical Nursing**, under my guidance and supervision during the academic year 2012- 2014.

**Dr. N. KOKILAVANI, M.Sc. (N), Ph.D.,**

**Principal,**

Adhiparasakthi College of Nursing,

Melmaruvathur - 603 319,

Kancheepuram District,

Tamil Nadu



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**Adhiparasakthi College of Nursing,**

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**Internal Examiner**

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**External Examiner**

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# CHAPTER - I

## INTRODUCTION

First aid is the provision of initial care for an illness or injury. It is usually performed by non-experts or sometimes by an expert in case of an emergency, but trained personnel to a sick or injured person until definitive medical treatment can be assessed. Certain self-limiting illnesses or minor injuries may not require further medical care past the first aid intervention. In general, they consist of a series of simple and in some cases, potentially life-saving techniques that an individual can be trained to perform with minimal equipment.

First-aid includes self-help and home care, when medical assistance is not available or is delayed. It also includes well-selected words of encouragement, evidence of willingness to help, and promotion of confidence by demonstration of competence.

The instances of recorded first aid were provided by religious knights, such as the knight hospitaller, formed in the 11<sup>th</sup> century, providing care to pilgrims and knights and training other knights in how to treat common battle field injuries. The practice of first aid fell largely into disuse during the High Middle Ages, and organized societies were not seen again until in 1859 Jean Henry Dunant organized local villagers to help victims of the battle of Solferino, including the provision of first aid. Four years later, four nations met in Geneva and formed the

organization which has grown into the Red Cross, with a key stated aim of "aid to sick and wounded soldiers in the field". This was followed by the formation of St. John Ambulance in 1877, based on the principles of the knights hospitaller, to teach first aid, and numerous other organizations joined them with the term first aid first coined in 1878 as civilian ambulance services spread as a combination of "First treatment" and "National aid" in large railway centers and mining districts as well as with police forces. In 1878 Surgeon-Major Peter Shepherd, together with Colonel Francis Duncan established the concept of teaching first aid skills to civilians. Shepherd, together with a Dr. Coleman, conducted the first class in the hall of the Presbyterian school in Woolwich using a comprehensive first aid curriculum that he had developed. It was Shepherd who first used the English term "first aid for the injured" First aid training began to spread through the empire through organizations such as St. John, after starting, as in the UK, with high risk activities such as ports and railways.

Many developments in first aid and many other medical techniques have been driven by wars, such as in the case of the American Civil War, which prompted Clara Barton to organize the American Red Cross. Today, there are several groups that promote first aid, such as the military and the Scouting movement. New techniques and equipment have helped make today's first aid simple and effective.

The person giving first aid, the first-aider, deals with the whole situation, the injured person, and the injury or illness. He knows what not to do as well as what to do; he avoids errors that are frequently made by untrained persons through well-meant but misguided efforts. He knows, too, that his first aid knowledge and skill can mean the difference between life and death, between temporary and permanent disability, and between rapid recovery and long hospitalization.

Statistics showed that accidents are the leading cause of death among persons from one year old to 38 years old; thereafter, accidents are one of the leading causes. The annual cost of medical attention, the loss of earning ability due to temporary or permanent impairment, the direct property damage, and the insurance costs amount to many billions of dollars each year, not to mention the toll in pain, suffering, disability, and personal tragedy.

First aid training is of value in both preventing and treating sudden illness or accidental injury and in caring for large number of persons caught in a natural disaster.

If you, as a first-aider, are prepared to help others, you are better able to care for yourself in case of injury or sudden illness. Even if your own condition keeps you from caring for yourself, you can direct others in carrying out correct procedures to follow in your behalf.

Having studied first aid, you are prepared to give others some instruction in first aid, to promote among them a reasonable safety attitude, and to assist them wisely if they are stricken. There is always an obligation on a humanitarian basis to assist the stricken and the helpless. There is no greater satisfaction than that resulting from relieving suffering or saving a life.

First aid training is of particular importance in case of catastrophe, when medical and hospital services are limited or delayed. Catastrophe may take the form of a hurricane, a flood, an earth-quake, a tornado, an explosion, or a fire. It may also take the form of a single accidental death or a life-threatening illness. Knowing what to do in an emergency helps to avoid the panic and disorganized behavior that are characteristic of unprepared persons at such times. Knowledge of first aid is a civic responsibility. It not only helps to save lives and prevent complications from injuries but also helps in setting up an orderly method of handling emergency problems according to their priority for treatment, so that the greatest possible good may be accomplished for the greatest number of people.

First aid training not only provides with knowledge and skill to give life support and other emergency care but also helps you to develop safety awareness and habits that promote safety at home, at work, during recreation, and on the streets and highways. In the promotion of safety awareness, it is important to closely relate three terms: cause, effect, and prevention.



Learning basic first aid techniques can help to cope with an emergency. You may be able to keep a person breathing, reduce their pain or minimize the consequences of injury or sudden illness until an ambulance arrives. This could mean the difference between life and death for them.

It is a good idea to take first aid course so that you can recognize an emergency and give basic first aid until professional help arrives.

### **NEED FOR THE STUDY**

The focus of health and safety in the school as a workplace is on the prevention of illness and injuries. Where an injury or illness does occur, first aid facilities that are adequate for the immediate treatment of injuries and illnesses that may arise in a school are provided.

All departments of education and communities staff in schools share a special duty of care to provide a secure and a safe environment. In particular in an emergency, all staff has a duty of care to provide assistance if a person requires immediate attention and no staff member trained in first aid is available.

Staff are to use common sense which dictates that in an emergency, while they should not act beyond their capabilities and qualifications, they are expected to do what they can do to prevent the condition worsening while awaiting medical services.

Schools are required to have appropriate first aid facilities that are adequate for the immediate treatment of injuries and illnesses; this includes having suitable trained staff available.

Substantial proportion of the world's population 35-45% constitutes young children. Children are prone to get accidents due to their development and learning process. Almost 40% Indians are below 15 years of age and the Tamil Nadu total population for children is 62,405,679. Incidence of domestic injury was 55/1000 in the age group of 0-14 years.

**Singh AJ** reported that, the average episodes of minor injuries per year were 2.9 in rural and 2.1 in urban area, point prevalence was higher in urban areas. First aid training of teachers or the students was lacking in both the areas. Many of the injuries (41-46%) occurred during the school time. Fingers/hands or feet were affected most. Main sources of injuries were farm implements, thorn, blade and stick in rural areas and finger nails, kitchen appliances and furniture in urban area. Rural students were more tolerant to minor injuries. Lesser number of rural students had taken tetanus toxoid. Wound washing with water as the first action was reported by 20-22% students in both the areas. Application of urine or chewed grass was reported by rural students only, whereas use of ointment, tablet, bandage, injection as the first action was observed in urban students only. Hence, incidence of minor injuries was higher in rural area as compared to urban area. Training of students on elementary hygienic wound care is recommended.

The incidence of neonatal respiratory distress ranges from 2.2% to 7.6% in developed countries and 0.7% to 8.3% in India. A study conducted in Pondicherry, India, found the incidence of neonatal respiratory distress to be 6.7%. The leading cause of neonatal respiratory distress is transient tachypnea (50-60% of respiratory distress cases) followed by infections, meconium aspiration, and hyaline membrane disease(HMD). The case fatality rate for respiratory distress in India is 30-40%. In the Pondicherry study, it was 19%. Case fatality is highest for newborn with hyaline membrane disease(20-40% in developed countries and 50-75% in India).

**Mitch Stroller, President Of Safe Kids Worldwide (2008)** reports to the nation after the survey conducted in the year 2007 on childhood injury mortality and parental views on child safety. They have ranked the causes according to the accidents. Motor vehicle accident stood first rank, drowning as 2<sup>nd</sup>, airway obstruction as 3<sup>rd</sup>, poisoning as 4<sup>th</sup>, unintentional fire arm injury as 5<sup>th</sup>, pedestrian accident as 6<sup>th</sup>, bicycle accidents as 7<sup>th</sup>, fire/burn as 8<sup>th</sup>, falls as 9<sup>th</sup> rank.

**Martin C.B, et.al. (2008)** conducted a study aimed to analyze accident involving foreign bodies among children less than 15 years of age in terms of first aid at Brazil. Data were obtained from the general hospital records and the municipal mortality data base. A total of 434 accidents were analyzed, with 0.7% mortality boys predominated (53.7%),incidence rate highest among children 1-3, foreign body penetration(eyes, nostrils and ear)94%, inhalation or ingestion of

objects(2.5%), aspiration of gastric contents(0.7%). These results contribute to epidemiological knowledge on such accidents and indicate the need of education regarding first aid measures to teachers.

**Howe L.D, et. al., (2006)** conducted a study of risk factors for injuries in young children in four developing countries. Injury occurrence was studied in cohorts of 2000 children of age 3-10 years at enrollment, in Ethiopia, Peru, Vietnam and India. Occurrence of child injury was high in all countries. This report provides further evidence of the importance of childhood injury in developing countries.

**Glauser (2010)** reported that 40,000 people are burned annually in Bulgaria; 12% of these are children under 14 years of age. The most frequent cause for burns in these children was a hot liquid, (i.e) in 1531 (72.82%) of the cases. Of the 1531 children, 700 (45.72%) burned themselves by spilling hot liquids, 521 (34.03%) fell onto household utilities containing hot liquids, and 310 (20.27%) splashed themselves with hot water. Flame was the cause of burning in 267 children (12.71%). This indicates that the most frequent burns are scalds, the age group between second and third year of age being the most affected. Burns usually occur at home - in the kitchen, in the bathroom, or in the living-room. In most cases the behavior of the children and that of their parents is at fault.

**Edward (2009)** conducted a retrospective study of all pediatric fractures presenting to hospital in Edinburgh, Scotland in 2000 was undertaken. It showed

that the incidence of fractures was 20.2 per 1000 per year and that 61% of children's fractures occurred in males.

**WHO (2008)** reported that the first aid is a measure to save the life of the person. India is one of the largest developing countries in the world; it constitutes around 20% of school going children. The future of our country rests on the children who will become the future citizens and leaders. Care for the children is not only vital in itself but the most important aspect of the health of the community as a whole.

**According to WHO** report, each year approximately 950,000 children aged less than 18 years die as a result of an injury or violence. Nearly 90% of these- about 830,000- are due to unintentional injuries.

**UNICEF (2008)** reported in India - a country of over a billion people - is today one of the youngest countries in the world. Nearly one third of its population is under 15 years of age. Economists and advocates of developments have repeatedly stressed that India needs to provide far greater access to improved healthcare and education for this young population.

Cross sectional survey in rural Tamil Nadu Report showed that the rate of accidents and poisoning among children in 0-14 years are drowning 7.2%, burns 3.81%, falls 81.67%, animal bites 0.76% and poisoning 40.3%. Injury rate in

children in 0-14 years was 341.89 per 1000 child-years and mortality rate of 39.16 per 100,000 child-years due to injuries.

**Sosada K. et.al.,(2012)** conducted a study to evaluate the knowledge of teachers and high school students in Silesia on the principles of first aid from November 2011 to March 2012. The study was based on sample of 227 secondary school students and 79 secondary school teachers. Study results in insufficient knowledge of secondary school students and teachers to perform basic life support. The study concluded that education programme in secondary school should be initiated in terms of extending social safety.

**Goniewicz M. et. al., (2012)** conducted a study to find out the opinion of high school students on first aid in emergency cases, determine to what extent young people are prepared to administer first aid as well as evaluate of actual way of training young people in school. The survey study included 642 students of 3<sup>rd</sup>class of randomly chosen high school in Lublin. The results of the study show that almost 80% of respondents know how important first aid is. Only 21% undertakes first aid procedures at the scene of accident. 67% claimed that their skills are insufficient. Unfortunately the level of first aid training is very poor. Students do not learn practical skills. The study concluded that training should start in primary school and continue in adult life in the place of work.

**Li F et.al., (2012)** conducted a cross-sectional study among staff members at selected preschools of Shanghai, China. The aim of the study were to assess a

baseline level of first aid knowledge and overall attitudes regarding first aid among staff members. Results shows that out of 1067 subjects, only 39 individuals achieved passing scores. In particular, subjects lack knowledge regarding first aid for convulsive seizures, chemical injuries to the eye, inhaled poison and choking and coughing. A multiple linear regression analysis showed scores were significantly higher among staff members, with more education, those who had received first aid training before or were already health care providers, younger employees, and staff members from rural districts. The study conclude that the level of first aid knowledge among preschool staffs in Shanghai was low. There is urgent need to educate staff members regarding first aid practice and the various risk factors relating to specific injuries.

## **STATEMENT OF THE PROBLEM**

**Effectiveness of lecture cum demonstration on First-Aid measures of minor ailments among primary school teachers of selected schools at Acharapakkam Block, kancheepuram District.**

## **OBJECTIVES:**

- ❖ to assess the awareness on selected first-aid measures of minor ailments among primary school teachers.

- ❖ to assess the effectiveness of lecture cum demonstration on first aid measures of minor ailments among primary school teachers.
- ❖ to find out an association between pre-test and post-test findings with selected demographic variables.

## **OPERATIONAL DEFINITION**

### **EFFECTIVENESS:**

In this study, it refers to significant gain in knowledge as determined by the pre-test and post-test knowledge level scores on selected first aid measures like scalds and burns, fracture, minor injury, foreign bodies, snake bite, dog bite, convulsion and food poisoning.

### **LECTURE CUM DEMONSTRATION:**

It is a combined teaching strategy in which the scholar teach and demonstrate the various aspects of first aid measures on scalds and burns, fracture, minor injury, foreign bodies, snake bite, dog bite, febrile convulsion and food poisoning.

### **FIRST AID:**

First aid is the provision of initial care for an [illness](#) or [injury](#). It is usually performed by non-expert, but trained personnel to a sick or injured person until definitive [medical treatment](#) can be accessed.



## **MINOR AILMENTS:**

Minor ailments are generally defined as conditions that will resolve on their own and can be reasonably self-diagnosed. The minor ailments which include in the study are - Scalds and burns, fracture, minor injury, foreign bodies, snake bite, dog bite, febrile convulsion and food poisoning.

## **PRIMARY SCHOOL TEACHER:**

Teachers who work with children between the ages of 5 and 11 and teach all of the subjects in the national curriculum.

## **ASSUMPTIONS**

- Primary school teachers have less knowledge about first aid.
- Parents and teachers play an important role in imparting knowledge to children.
- Lecture cum demonstration helps to gain adequate knowledge on selected first aid measures.

## **LIMITATIONS**

- The study is limited to primary school teachers.
- Data collection period is limited to 6 weeks.

## **PROJECTED OUTCOME**

- It helps the primary teachers to know the importance of first aid and  
able to apply it in any situation
- It motivates the primary teachers to apply their knowledge in specific  
situation while they need to apply first aid in school children.

## **CONCEPTUAL FRAMEWORK**

The investigator adopted Imogene King's goal attainment theory (2014) based on personal and interpersonal systems including perception, action, interaction and transaction. The investigator adopted this basic theory for conceptual framework which is aimed to find out the effectiveness of lecture cum demonstration on primary school teachers regarding first aid measures of burns and scalds, fracture, minor injury, foreign bodies, snake bite, dog bite, febrile convulsion and food poisoning. This involves interaction between the researcher and primary school teachers. There are four major concepts.

### **PERCEPTION**

It refers to people's representation of reality. It is not observable but it can be inferred. Hence the investigator perception is the need for teaching programme on first aid measures of scalds and burns, fracture, minor injury, foreign bodies, snake bite, dog bite, convulsion and food poisoning among primary school teachers of Government primary schools located at kancheepuram district.

### **ACTION**

It refers any changes that have to be achieved. The nurse educator has planned for lecture cum demonstration method on first aid measures of scalds and burns, fracture, foreign bodies, minor injury, snake bite, dog bite, convulsion and food poisoning among primary school teachers to update their knowledge.

## **INTERACTION**

It refers to the verbal and non-verbal behavior between one individual and environment or between two or more individual who involve goal directed perception and communication. Here the investigator interacts with the primary school teachers by giving pretest and lecture cum demonstration programme.

## **TRANSACTION**

This is the achievement of a goal. In this stage the investigator reassesses the knowledge regarding first aid measures of burns and scalds, fracture, minor injury, foreign bodies, snake bite, dog bite, convulsion and food poisoning on primary school teachers by conducting post-test.

## **CHAPTER –II**

### **REVIEW OF LITERATURE**

This chapter attempts to present a broad review of the study conducted, the methodology adopted and conclusion drawn by earlier investigations. It helps to study the problem in depth. Related research literature was reviewed to broaden the understanding and to gain insight into the selected area under study. The review is organized in the following headings;

**SECTION 1:** Study related to First aid measures of minor ailments.  
Literature has been reviewed under the following heading,

**Part A:** literature related to burns

**Part B:** literature related to fracture

**Part C:** literature related to minor injury

**Part D:** literature related to foreign bodies in ear, nose,throat and eye

**Part E:** literature related to snake bite

**Part F:** literature related to dog bite

**Part G:** literature related to convulsion

**Part H:** literature related to food poisoning

**SECTION 2:** Literature related to effectiveness of lecture cum demonstration programme.

**SECTION 3:** Literature related to first aid training program among teacher.

**SECTION 1: Study related to First aid measures of minor ailments**

**Part A: literature related to burns**

[Murray L. Katcher](#).et.al., (2011) reviewed that the hot tap water is a common source of household burn injury. The chart of all children's hospitalized for tap water scalds in Dane County, Wisconsin, during a ten-year period were reviewed. Of 33 children, 29 (88%) had readily identifiable risk factors: 17 (52%) children were younger than 5 years; three (9%) were older than 65 years; ten (30%) were physically or mentally disabled. Almost all of these injuries could have been prevented by lowering the temperature of the household water heater to below 54.4 °C (130°F) and preferably between 48.9 and 51.7 °C (120 to 125 °F).

[Colleen M. Ryan](#).et.al., (2010) concluded while some children surviving severe burns had lingering physical disability, most had a satisfying quality of life. Comprehensive burn care that included experienced multidisciplinary after care played an important role in recovery.

[Guillermo Morales](#). et.al., (2010) documented in 79 burned children, including 11 with burns of over 50%, treated with saline solution alone, there was no two-day mortality. In 74 other children, including 14 with burns of

over 50%, treated with plasma plus dextrose and water, there was 12% two-day mortality. Selection of children was made on a strictly alternating basis. In 73 burned children treated with saline solution alone, there was 19% two-day mortality. In 92 other children treated with a combination of plasma and saline solution, there was only 9% mortality. Saline solution therapy is considered good emergency therapy for adults, and addition of plasma to saline solution reduced the over-all acute mortality in children, particularly in the more severely burned.

[Kohl Markley et.al, \(2010\)](#) concluded that the effect of fluid therapy on shock mortality and late mortality has been studied in 308 severely burned children. Two fluid regimens were compared simultaneously on an alternate-case basis. The results show (1) therapy with saline solutions alone was more effective than a fluid regimen deficient in electrolytes and (2) no additional advantage could be conclusively shown by combination of plasma with saline solutions.

**Gordon M. Carver et.al.,(2009)** mentioned that the alkali burns of the esophagus were seen in 233 clients within 25 years in a single hospital. Most of these burns came from drinking lye, and 188 of the clients were children less than 6 years old. Stricture followed in most cases, commonly within two months but sometimes more than a year after the accident. It was present at the time of admission in 170 children. The upper third of the esophagus was the most frequent site.

**Hsiao M et.al., (2013)** conducted a survey of 420 grade 5 students in Cambodia on their knowledge of burn prevention and first aid treatment. A 34 question survey regarding burn prevention and first aid treatment for burn injuries was developed. A total of 420 students were surveyed. This survey identified significant inadequacies in Cambodian children's knowledge about burn prevention and first aid treatment and suggested that a televised burn prevention campaign could be an effective method to improve their knowledge.

#### **Part B: literature related to fracture**

**Elliott Fisher. et.al., (2011)** determined the rates of femur fracture by year of age for children younger than 6 years and by month of age. The highest rate of femur fracture was in children younger than one year and in 2-year-olds; the greatest number of fractures occurred during the third month of life. While femur fractures in children are often due to accidental injury, the reasons for the peak in the first year and the subsequent decline are not clear.

**Patrick D. Brophy. et.al., (2011)** concluded that the most rib fractures in infants are caused by child abuse. Although much less common, rib fractures can also occur after serious accidental injuries, birth trauma, or secondary to bone fragility. A thorough clinical and imaging evaluation is mandatory.

**[Robert H. Ramsey. et.al., \(2011\)](#)** reviewed that fifteen cases of fracture of the ulnar shaft associated with dislocation of the radial head in children were



studied. The injury is most common in the age range of five to nine years and consists almost entirely of the anterior or lateral type of dislocation. Early diagnosis and prompt treatment permit satisfactory stable reduction by closed methods in most cases. Although general anesthesia is sometimes necessary, many such injuries may be reduced with local anesthesia or no anesthesia. Immobilization for 5 or 6 weeks is sufficient, and recovery of full function in 2 to 4 weeks after cast removal is common.

[Sara J. Achenbach et.al., \(2010\)](#) concluded that there has been statistically significant increase in the incidence of distal forearm fractures in children and adolescents, but whether this is due to changing patterns of physical activity, decreased bone acquisition due to poor calcium intake, or both is unclear at present. Given the large number of childhood fractures, however, studies are needed to define the cause(s) of this increase.

[Tobias. et.al, \(2009\)](#) concluded that the evidence for an association between bone density and fractures in children is limited. The results from this meta-analysis suggest that there is an association between low bone density and fractures in children. Although there was no evidence of heterogeneity or publication bias, this meta-analysis is based on case-control studies that are prone to bias. A well-conducted prospective cohort studies are required to confirm the association between bone density and fractures in children.

## **Part C: literature related to minor injury**

**Sundblad G. et.al., (2012)** conducted a study on injuries during physical activity in school children. Every sixth student reported 306 injuries. Twice as many girls than boys were injured during physical education class. There were no age and gender differences in incidence rate during leisure activities. Most injuries were minor. Primary care of the injured student was most often carried out by the physical education teacher or coach which accentuates the importance of continuous sports medicine first aid education for this group.

**Frederick K et.al., (2010)** conducted a study to evaluate the effectiveness of an injury prevention programme for school children. The results demonstrate the benefits of the Injury Minimization Programme for Schools (IMPS) on injury prevention knowledge, attitudes and behaviour.

[Sidney K. Wynn.et.al., \(2011\)](#) reviewed in the child with an extensive burn and new superficial venous channels spring up in a relatively short time. When tendon exposure occurs, there will often develop a granulation tissue covering from the surrounding areas within 10 to 14 days. This is less time than it would take to prepare an abdominal-pedicle or a cross-leg flap. Long-standing immobilization of a joint of a child or exposure of the joint of a child is not the major problems that they are in the adult. Comparison between the adult and the child, from the problem of the simple small superficial coverage to that of the larger deep areas, can be made in practically every circumstance.

[James E. Wilberger. et.al, \(2010\)](#) outlined that the dog bites are a common cause of injury in infants and children, with the face and head frequently involved. While scalp injuries may be extensive and severe, only five cases of compound depressed skull fractures caused by dog bites have been reported four cases are presented to point out the potential risks of cranial penetration and underlying brain injury when infants and children suffer dog bites to the head. The principles for management of these injuries are outlined.

[John eddy luckey. et.al, \(2009\)](#) listed the subcutaneous injuries of the abdominal organs. The stomach, when of normal size and in its proper position, is so well protected that it is seldom injured by non-penetrating forces. Contusions, laceration or complete rupture may result from a blow or kick, administered over the organ, when in a state of partial or complete distention. Violent emesis has caused rupture of the stomach in cases already weakened by constitutional or local disease.

#### **Part D: literature related to foreign bodies in ear, nose, throat and eye**

**Kazokoglu H. et. al., (2010)** conducted a retrospective study on intra ocular foreign bodies. The study shows that whenever technically possible magnetic extraction was the preferred method of removing the foreign body, 48% eyes developed endophthalmitis, 66.6% eyes developed traumatic cataract and 29.6% eyes developed retinal detachment after the trauma. 44.5% eyes had a visual acuity of 1/10 or better after the appropriate medical and surgical treatment.

**Martins CB et. al., (2011)** conducted a study to analyze accidents involving foreign bodies among children less than 15 years of age residing in Londrina, Brazil in terms of first aid, hospitalization and death. Data were obtained from general hospital records and municipal mortality database. A total of 434 accidents were analyzed. Boys predominated and the incidence rate was highest among children 1-3 years of age. Foreign bodies penetration in eyes, nostril and ears accounted for 94%, inhalation/ingestion of objects 2.5% and these causes accounted for all the deaths. The results contribute to epidemiological knowledge on such accidents and indicate the need to restructure health services in order to decentralize care for less complex injuries, besides emphasizing the need for preventive measures.

**Kumar P et. al., (2013)** conducted a study on inhaled foreign bodies in children; diagnosis and treatment. The study emphasized on highlighting the high index of suspicion needed on behalf of the clinicians involved in the care of children.

**Rouillonet. al., (2013)** conducted a retrospective study to analyze the circumstances, diagnostic difficulties and initial treatment of serious foreign bodies. The inefficiency of external extraction methods and the mean delay between clinical signs and initial treatment lead to propose a new strategy for the emergency treatment of foreign bodies with asphyxia. The study recommend the

use of laryngoscope and Magill forceps to eliminate doubt in the case of first severe asthma attack.

**Stagnitti F et. al., (2011)** conducted a retrospective investigation on 95 patient treated for accidental tracheobronchial foreign bodies inhalation. The study reveals that 60% of cases were children under 3 years, 25% of cases children under 10, 10% from 10 to 60 and 45% over 60. As regard to gender, male and female has been 2 to 1 in favour of male. Since 85% of the study population was represented by children under 10, its clear that male children in this range of age has a greater statistical risk for accidental tracheobronchial foreign bodies inhalation.

#### **Part E: literature related to snake bite**

**Van Helden DF et. al., (2014)** conducted a study to examine the use of topical pharmacological agents as a snake bite first aid where slowing venom reaching the circulation prevents systemic toxicity. The findings suggest that a range of agents that inhibit lymphatic flow could potentially be used as an adjunct treatment to pressure bandaging with immobilization(PBI) in snake bite first aid. This is important given that PBI is often incorrectly applied. The use of local anesthetic would have the added advantage of reducing pain.

**Adukauskiene D et. al., (2011)** conducted a study on venomous snake bites so as to make people to understand the major mistake in providing first aid.

The study presents the essential tips of Snake Bites" by the World Health Organization(2010). The tips are-a) do not panic, b) lie down on your back, c) call for help, d) remove jewellery, e) clean the wound, f) wrap a cloth on the bite.

**Micheal GC et. al., (2011)** conducted a study to assess the effect of pre hospital care for venomous snake bite on outcome in Nigeria. The study conclude that the use of any first aid was associated with a longer hospital stay than no use. The anti-venom requirement was greater in subject who had used a tourniquet and in those who presented late. Topical used of concoctions were associated with increased risk of death or disability, longer time interval before presentation, a higher cost of hospitalization and an increased risk of wound infection.

**Pandey DP et. al., (2010)** conducted a retrospective study to assess the change in the pattern of management and of snake bite victims after first aid training. The study conclude that first aid training changes the attitude of the people in management of snake bite victims and is one of the effective ways in decreasing mortality.

#### **Part F: literature related to dog bite**

**Hemagiri K et. al., (2012)** conducted an epidemiological study on dog bite and its management in Bellary, Karnataka to know the patterns of dog bites in children, the morbidity pattern, the circumstances of dog bite, ascertain the first aid and vaccination practice by people after dog bites. Study results shows that

males child have higher incidence of dog bite compared to female child and the majority of children belongs to 10-12 years age group. 42% of children were bitten over lower limbs and 43.8% of the victims had some local treatment immediately. 77% of the victims were received anti rabies vaccine and only 11% of the dogs were vaccinated against rabies.

**PrakashM et. al., (2013)** conducted a study on knowledge, attitude and practice about rabies prevention and control. Study results shows that the level of awareness about rabies and its control measures is not high. The attitude and practice of the respondents reflect the lack of information, education and communication activities, inaccessibility of the treatment facilities and the lack of services that would enable community participation in rabies control.

**Eichmann C et. al., (2012)** conducted a study on canine specific Short Tandem Repeat (STR) typing of saliva on dog bite wounds. The study found out that, canine short tandem repeat typing of saliva traces on dog bite marks are found more when the bandages and swabs showed high amounts of human blood ie when the dog bite cases, which did not result in bleeding wounds, showed less success in obtaining useful short tandem repeat results, probably due to the fact that the surface of the wounds may have been treated before the victims consulted medical aid which therefore remove the canine cells.

## **Part G: literature related to convulsion**

**Shehata GA et. al., (2010)** conducted a study to assess knowledge, attitude and practice with respect to epilepsy among secondary school teachers in Assiut City, Egypt. A 12 Item questionnaire was self-administered to 184 teachers, who selected randomly. The current study suggests that, a well-directed health educational program about causes and management of epileptic seizures may improve the perception of epilepsy by teachers in Egypt.

**Alikor EA et. al., (2013)** conducted a study to determine the knowledge of primary school teachers in Port Harcourt metropolis of epilepsy, their knowledge of the management of an attack of epilepsy and the attitude of these teachers towards epilepsy in children. The study results did not reach statistically significant level ( $p=0.076$ ). The study conclude that the overall knowledge of primary school teachers about first aid management of an epileptic attack is poor. Education of the primary teacher and general public on epilepsy is recommended.

**Roberts RM et. al., (2010)** conducted a study on first aid information video in reducing epilepsy-related stigma. Results showed that the video was effective in both enhancing the level of knowledge of epilepsy and improving attitudes towards epilepsy. Presenting this first aid educational video to the public, specifically those who are most likely to encounter someone with epilepsy(eg. teachers, future health professionals), may be particularly fruitful.



**Pandian JD et. al., (2012)** conducted a study to assess the knowledge, attitude and practice with respect to epilepsy among school children in Kerala, Southern India. The study reported that familiarity with epilepsy was high among school students in Kerala misconception and negative attitudes were alarmingly high. Persistent and effective information campaign, therefore, are necessary to change their attitude towards fellow students with epilepsy.

**Ndour D et.al., (2014)** conducted a study to evaluate teacher's knowledge, awareness, and current attitudes about epilepsy in order to obtain baseline data for the development of a school health education programme on epilepsy. The study was carried out in Dakar. It was conducted by sending self-administered and anonymous questionnaires to 400 elementary school teachers. This study demonstrated encouraging knowledge of teachers about epilepsy. However some of their wrong attitudes may be attributed to superstitions and could be improved by informative actions and better training about epilepsy.

#### **Part H: literature related to food poisoning**

**Ali Abbas et. al., (2013)** conducted an analytical study on mother to assess first aid home for the treatment of food poisoning among children. The results of the study indicated the level mean of scores related to first aid procedures applied by mother and was moderately level on half items and high level on other half of item. The study concluded that most of mothers don't have prior knowledge of the procedures used for ambulance cases of food poisoning in children.

**AniruddhaGhoseet. al., (2014)** report an incident of food poisoning in 27 law enforcement personnel with rapidly developing sequelae and a high mortality due to ingestion of Barium Carbonate contaminated flour. The study concluded that the use and availability of Barium Carbonate should be restricted.

**El Aalet. al., (2013)** conducted a study to identify the effect of educational health program to improve mother's hygienic practices to prevent poisoning among their children. The study concluded that, the health educational program about food poisoning had positive effect to upgrade mother's knowledge and improve their hygienic practices. Highly educated and elderly mothers had better knowledge, hygienic practices and positive attitude regarding food poisoning.

**SemraAkaret. al., (2014)** conducted a study on consumers awareness on food poisoning to determine the level of knowledge of consumers on types of food poisoning and whether or not they have had food poisoning in the past. It was determined that there exist a statistically meaningful correlation between the educational level of the participants and their knowledge about micro-organisms( $p < 0.005$ ). The study concluded that, as the educational level of consumers increase, they start to have knowledge about Hazard Analysis and Critical Control Points (HACCP).

### **SECTION 3: Literature related to effectiveness of lecture cum demonstration:**

**Dr.FazalurRahman et.at,(2011)** conducted a study to assess the impact of discussion method on students performance. The result of the study revealed that the group taught with discussion method performed better than the control group which indicates the usefulness of discussion method in teaching of social studies at secondary level.

**Dr. Archana.Get.al(2012),** Conducted a comparative study to compare the effectiveness of the lecture cum demonstration and laboratory method in teaching off science. The study result shows that there is significant differences in the post test mean achievement score at 0.5 level. The study concluded that laboratory method is more effective than lecture cum demonstration for teaching science.

**Imtiazali et.al,(2012),** a comparative study was conducted to compare the students achievement taught by lecture method and lecture cum workbook of teaching general science at elementary level. Pre- test and post- test was done for both the experimental and control group. The result of the test revealed that the scores of experimental group of all the schools in the area of knowledge, comprehension, and analysis higher as compare to the control group. thus the study concludes that lecture cum discussion was highly significant in teaching the students.

**MeenakshiBharaj et.al,(2013)** A multi- dimensional study was conducted to assess some intellectual and non- intellectual endowment and characteristics of intellectually gifted children and also to see how their self -development could be influenced by a planned orientation through lecture cum demonstration and exercise. The problems were given to assess the ability for generalizing, reasoning and dealing with abstractions. The study result shows that gifted children need three thing from their parents and teachers which includes acceptance, undestanding and superior insight so that they learn readily and easily,have a good memory to listen. Hence lecture cum demonstration method was effective in self-development of gifted child.

### **SECTION 3: Literature related to first aid training program among teacher.**

**RamSharan Mehta (2012)** conducted a study on impact of first aid training program for school teachers and school management committee members with an objective to train the school teachers and management committee members regarding first aid management of common problems and evaluate the effectiveness of training program. The study concludes that training program is highly effective and it can be implemented for all the teachers as well as high school students.

**Feng Li et. al., (2012)** conducted a cross-sectional study to assess a baseline level of first aid knowledge and overall attitude regarding first aid among staff members in Sanghai preschools. The results scores were significantly higher

among staff members with more education, those who had receive first aid training before, younger employees and staff member from rural districts. The study concluded that, the level of first aid knowledge among pre- school staff in Sanghai was low.

**Sunil Kumar D. et. al., (2013)** conducted a cross-sectional study in 40 randomly selected schools of Mysore to assess the perception and practices regarding first aid. Teachers who had minimum 1 year experience were included. The overall perception and practice regarding first aid among school teacher was found to be poor. Wound was found to be the commonest event requiring the first aid care in the school.

**Ali et. al., (2010)** conducted an interventional study on 60 newly graduate nursery teachers to develop, implement and evaluate an educational training program on first aid of some emergency situations occurring to pre-scholar. The study results shows that there was high significant improvement of knowledge and practice of the studied group in the post-test in comparison to pre-test. Hence the designed health education and training program led to significant improvement of knowledge and practice of nursery school teachers in first aid and dealing with emergency situations occurring to pre-schooler.

**Yossra (2013)** conducted a cross-sectional study in 5 randomly chosen primary schools in different regions of Baghdad, carried out on 100 primary school teachers to estimate the adequacy of primary school teacher knowledge of

first aid concerning external bleeding and fractures. The study concluded that, primary school teachers knowledge of first aid concerning external bleeding and fracture is poor and certainly inadequate.

**Baser M et.al., (2010)** conducted a study to determine the knowledge and attitudes of a sample of Turkish teachers regarding the administration of first aid. 312 teachers took part in the study. Data were analyzed by chi square test. Results shows that, most of the teacher do not have correct knowledge and attitudes about first aid. The study emphasized that there is a need of first aid training programme for the teachers.

## **CHAPTER – III**

### **METHODOLOGY**

This chapter describes the methodology which has been followed to assess the effectiveness of lecture cum demonstration programme on selected first aid measures of minor ailments among primary school teachers at Acharapakam block, Kancheepuram district.

The methodology of research indicates the general pattern of organizing the procedure of gathering valid and reliable data for an investigation. Research methodology provides a brief description of the method adopted by the investigator of the study.

The research methodology includes the description of research design, the setting, population, sample size, sampling technique, criteria for selection of sample, instrument and tools for data collection.

### **RESEARCH DESIGN**

Pre-experimental with one group pre-test, post-test design was selected for the study to assess the effectiveness of lecture cum demonstration on first aid measures of minor ailments among primary school teachers.

## **SETTING OF THE STUDY**

The study was conducted in Government primary schools at Acharapakkam block, Kancheepuram district, Tamil Nadu.

## **POPULATION**

The population of the study includes all the available primary school teachers who are working at Government Primary School, Acharapakkam block, Kancheepuram District.

## **SAMPLE**

In this study, samples were primary school teachers who work at Government Primary School, Acharapakkam block, Kancheepuram District, Tamil Nadu.

## **SAMPLE SIZE**

The total number of sample was 30 primary school teachers working at government primary schools, Acharapakkam block, who had fulfilled the inclusion criteria.

## **SAMPLING TECHNIQUE**

Non-probability, convenient sampling technique was used by the investigator for this study.



## **CRITERIA FOR SELECTION OF THE SAMPLE**

### **Inclusion criteria:**

- ❖ Primary school teachers who is willing to participate in the study.
- ❖ Both male and female teachers are included.
- ❖ Teachers who knows English or Tamil.

### **Exclusion criteria:**

- ❖ Teacher who are not willing to participate in the study.
- ❖ Teacher out of Acharapakkam Block.

## **INSTRUMENTS FOR DATA COLLECTION**

Tool is an instrument or apparatus that is necessary in the performance of some task. The scholar constructed the Instrument based on the objectives of the study through literature review and expert's guidance. Instrument for data collection are derived under the following headings like demographic variables, questionnaire method for evaluating the effectiveness of lecture cum demonstration on first aid measures of minor ailments.

### **SECTION I**

This section consists of information about demographic variables such as age of the teacher, sex, educational status of the teacher, area at residence of the teacher, past- experience of first aid management, source of getting first aid knowledge and previous exposure to any first aid training programme.

### **SECTION II**

This section deals with questionnaire for assessment of knowledge regarding first aid. It consists of 48 multiple choice questions related to knowledge regarding first aid measures of minor ailments among primary school teachers. Each correct answer will be given the score of one and the wrong answer will be given the score of zero. The total possible score will be 48.

### **DATA COLLECTION**

The study was conducted in Government primary school, Acharapakkam block, Kancheepuram district. The data was collected for a period of six weeks by using the prepared tools. The tools were developed based on the study and through review of literature.

## **CHAPTER – IV**

### **DATA ANALYSIS AND INTERPRETATION**

This chapter deals with analysis and interpretation of data collected from 30 samples of primary school teachers working in Government primary school at Acharapakkam block, Kancheepuram district. It deals with description of tool, report of the pilot study, reliability, validity, informed consent, scoring procedure, scoring interpretation, data collection procedure and statistical method.

#### **DESCRIPTION OF THE TOOL**

The instrument was classified into 2 parts.

#### **PART I**

It consist of demographic variables of primary school teachers in Government primary school, Acharapakkam block, Kancheepuram district such as age, gender, educational status of the teachers, area at residence of the teachers, past experience regarding first aid management, any previous exposure to first aid knowledge and any previous exposure to first aid training programme. The data were collected by interviewing the teachers and based upon their answers a tick mark (✓) was put for the appropriate response of each item.

## **PART II**

The data was collected through a well prepared multiple choice questionnaire. It consists of 48 questions and total score was 48. Each correct response was given a score of one and the wrong answer will be given the score of zero.

### **REPORT OF PILOT STUDY**

Prior permission from the authorities was obtained and individual consent has been taken from the five samples selected for the study .The pilot study was conducted in Government Primary Schools, Acharapakkam block, Kancheepuram District, for a period of one week .The questionnaire method were used to find out the reliability, validity, feasibility and practicability of the tool which was evaluated by experts of the research committee. According to simple random sampling technique, five samples were taken and by using the questionnaire method, the effectiveness of lecture cum demonstration programme on selected first aid measures among primary school teachers was assessed. The result of the pilot study showed that there was a positive correlation between knowledge of primary school teachers and the study was found to be feasible.

### **VALIDITY**

The tool was prepared by the investigator based on literature review, under the guidance of experts and on the basis of objectives, which were assessed and evaluated and has been accepted by experts of research committee. The content

validity of the tool was obtained from research experts of Medical Surgical Nursing.

### **RELIABILITY**

The assessment tool was developed by the investigator based on the review of literature which was evaluated and accepted by the experts of the research committee. Reliability was checked by experts. Reliability and practicability of the tool was tested through the pilot study and used for main study.

### **INFORMED CONSENT**

The investigator obtained permission from research committee prior to the pilot study. Permission was obtained from the Assistant Education Officer, Acharapakkam block, to conduct the study. The oral consent from each primary school headmaster and teacher was obtained before starting the data collection.

### **DATA COLLECTION PROCEDURE**

The main study was conducted in Government Primary Schools, Acharapakkam block at Kanchipuram district. The investigator introduced herself to the school headmaster and teachers and developed a good rapport and made them to co-operate and accept for the study. After getting demographic data from the school teachers, pretest was done with the help of the prepared tool. After the pretest, lecture cum demonstration programme on first aid measures related with

burns, fracture, minor injuries, foreign bodies, snake bite, dog bite, convulsion and food poisoning was shown to the school teachers. Seven days after the lecture cum demonstration, posttest was done to evaluate the effectiveness of first aid by using same evaluation tools. Based on the collected data, effectiveness was found by comparing the pretest and post test score.

### **SCORE INTERPRETATION**

The instrument consists of 48 questions regarding first aid measures like burns, fracture, minor injuries, foreign bodies, snake bite, dog bite, convulsion and food poisoning. The maximum score was 48 and minimum score was zero. The percentage of knowledge level was calculated using the formula as follows.

$$\text{Score interpretation} = \frac{\text{Obtained score}}{\text{Total Score}} \times 100$$

Based on information data were classified as follows.

- < 50% - Inadequate knowledge
- 50-75% - Moderately adequate knowledge
- > 75% - Adequate knowledge

## STATISTICAL METHOD

Descriptive statistical analysis and inferential statistical analysis methods was used to find out the percentage, mean, standard deviation, Paired t test and chi square.

**Table: 4.1**

S.NO	DATA ANALYSIS	METHODS	REMARKS
1.	Descriptive analysis	The total number, percentage, mean and standard deviation.	To describe the demographic variables of primary school teachers.
2.	Inferential analysis	Paired ' t ' test  Chi square	Analyzing the effectiveness between pretest and posttest.  Analyzing the association between selected demographic variables and knowledge on selected first aid measures among primary school teachers.

**DATA ANALYSIS AND INTERPRETATION HAVE BEEN DONE UNDER  
THE FOLLOWING HEADINGS**

**SECTION –A**

Frequency and percentage distribution of demographic variables of primary school teachers about First aid measures.

**SECTION – B**

Comparison between pretest and posttest level of knowledge on first-aid measures among primary school teachers.

**SECTION – C**

Comparison between mean and standard deviation of pretest and posttest regarding knowledge level on first aid measures among primary school teachers.

**SECTION – D**

Mean and standard deviation of improvement score for knowledge level on first aid measures among primary school teachers.

**SECTION – E**

Analyzing the association between demographic variables and knowledge level on first aid measures among primary school teachers.



**SECTION –A**

**TABLE 4.2: FREQUENCY AND PERCENTAGE DISTRIBUTION OF  
DEMOGRAPHIC VARIABLES OF PRIMARY SCHOOL TEACHERS  
ABOUT FIRST AID MEASURES**

**NO=30**

S.No	Demographic variable	Frequency	Percentage
1.	Age a) 30-40 years b) 41-50 years c) 50-58 years	18 8 4	60.00% 26.67% 13.33%
2.	Gender a) Male b) Female	8 22	26.67% 73.33%
3.	Educational Status of the teachers a) D..T.Ed b) B.Ed	9 21	30.00% 70.00%
4.	Area at residence of the teachers a) Rural b) Urban	21 9	70.00% 30.00%
5.	Any past experience regarding knowledge of first aid a) Yes b) No	0 30	.00% 100.00%
6.	Exposure to knowledge regarding first aid from a) Mass Media b) Books c) Magazine	0 27 3	.00% 90.00% 10.00%
7.	Previous exposure to any first aid training programme 46		

**Table 4.2** depicts the frequency and percentage distribution of the demographic variables of primary school teachers. Out of 30 primary school teachers, 18(60.0%) were in 30-40 years, 8(26.67%) were in 41-50 years, 4(13.33%) were in 51-58 years. Regarding gender 8(26.67%) were male and 22(73.33) were female. With regard to educational status 9(30.0%) teachers has done diploma in education and 21(70.0%) teachers has done bachelor in education. As for the residence of teacher 21(70.0%) were from rural area and 9(30.0%) were from urban areas. Among 30 teachers, no one had experience regarding first aid management. Out of 30 teachers 27(90.0%) had receive first aid knowledge from books and 3(10.0%) had receive from magazine. Regarding previous exposure to first aid training programme, out of 30 teachers none of them has exposed to any first aid training programme

## SECTION – B

**TABLE – 4.3: COMPARISON BETWEEN PRETEST AND POSTTEST LEVEL OF KNOWLEDGE ON FIRST-AID MEASURES OF MINOR AILMENTS AMONG PRIMARY SCHOOL TEACHERS.**

**N=30**

Knowledge level	Pre Score		Post Score	
	Frequency	Percentage	Frequency	Percentage
<b>Inadequate</b>	26	86.7	0	0
<b>Moderate</b>	4	13.3	5	16.7
<b>Adequate</b>	0	00.0	25	83.3
<b>Total</b>	30	100.0	30	100.0

**Table 4.3** shows the knowledge regarding first aid measures through the pretest and posttest based on questionnaire method. On the pretest among 30 primary school teacher, 4(13.3%) had moderately adequate knowledge and 26(86.7%) primary school teacher had inadequate knowledge. In the post test 25(83.3%) had adequate knowledge and 5(16.7%) primary school teacher had moderately adequate knowledge and none of them had inadequate knowledge.

## SECTION – C

**TABLE – 4.4: COMPARISON BETWEEN MEAN AND STANDARD DEVIATION OF PRE TEST AND POST TEST REGARDING KNOWLEDGE LEVEL ON FIRST AID MEASURES OF MINOR AILMENTS AMONG PRIMARY SCHOOL TEACHERS.**

**N=30**

	<b>Mean</b>	<b>N</b>	<b>Std.Deviation</b>	<b>Std.Error</b>
				<b>Mean</b>
<b>Post score</b>	2.83	30	0.37	0.069
<b>Pre Score</b>	1.13	30	0.34	0.063

**Table 4.4** shows that the overall mean of knowledge regarding selected first aid measures of minor ailments among primary school teachers was 2.83 with standard deviation of 0.37 and the overall mean of knowledge regarding first aid measures of minor ailments in post-test was 1.13 with standard deviation of 0.34.

**SECTION – D**

**TABLE – 4.5: MEAN AND STANDARD DEVIATION OF IMPROVEMENT SCORE FOR KNOWLEDGE LEVEL ON FIRST AID MEASURES OF MINOR AILMENTS AMONG PRIMARY SCHOOL TEACHERS  
N=30**

	Paired Differences					T	P Value
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			
				Lower	Upper		
<b>Post score - Pre score</b>	1.700	.5959	.10881	1.4774	1.92254	15.62	<0.05

**Table 4.5** reveals that the mean and standard deviation of improvement score for effectiveness of lecture cum discussion programme on selected first aid measures among 30 primary school teachers. The improvement score of mean value was 1.70 with the standard deviation of 0.59 and the ‘t’ test value was 15.62 which were statistically significant. It implies that the lecture cum discussion programme was effective and showed improvement in knowledge level of teachers about first aid at  $P < 0.05$

**SECTION – E**

**TABLE – 4.6: ANALYZING THE ASSOCIATION BETWEEN DEMOGRAPHIC VARIABLES AND KNOWLEDGE LEVEL ON FIRST AID MEASURES AMONG PRIMARY SCHOOL TEACHERS.**

Sl. No	Demographic variable	Post score						Chi - square	P value
		Inadequate		Moderate		Adequate			
		N	%	N	%	N	%		
1	Age							3.7	0.157
	30-40 years	0	0.00%	2	6.67%	16	53.33%		
	41-50 years	0	0.00%	1	3.33%	7	23.33%		
	50-58 years	0	0.00%	2	6.67%	2	6.67%		
2	Gender							2.57	0.276
	Male	0	0.00%	0	0.00%	8	26.67%		
	Female	0	0.00%	5	16.6%	17	56.66%		
3	Educational status of the teachers							0.28	0.593
	D..T.Ed	0	0.00%	2	6.67%	7	23.33%		
	B.Ed	0	0.00%	3	10.0%	18	60.00%		

4	Area at residence of the teachers								
	Rural	0	0.00%	4	13.3%	17	56.67%	0.28	0.5
	Urban	0	0.00%	1	3.33%	8	26.67%	6	93
5	Exposure to knowledge regarding first aid								
	Mass Media	0	0.00%	0	0.00%	0	0.00%	0.66	0.4
	Books	0	0.00%	5	16.6%	22	73.33%	7	14
	Magazine	0	0.00%	0	0.00%	3	10.00%		

NS –NOT SIGNIFICANT

**Table 4.6** shows that the demographic variables of age teachers, gender, educational status of the teachers, area at residence of the teachers, past experience regarding first aid management, exposure to knowledge regarding first aid and previous exposure to any first aid training programme had no significant association with the level of knowledge.



## CHAPTER –V

### RESULTS AND DISCUSSION

The aim of the study was to assess the effectiveness of lecture cum demonstration programme on selected first aid measures of minor ailments among primary school teachers. A total number of 30 primary school teachers had been selected for the study. The pretest was conducted using questionnaire. After the pretest a lecture cum demonstration regarding first aid measures of minor ailments was shown to the teachers. After seven days, post test was conducted by using the same questionnaire.

The study has proved that lecture cum demonstration programme has brought an excellent changes in the level of knowledge of primary school teachers regarding first aid measures on burns, fracture, minor injury, foreign bodies, snake bite, dog bite, convulsions and food poisoning.

**The first objective was to assess the knowledge regarding first aid measures of minor ailments among primary school teachers.**

The assessment of the knowledge regarding first aid measures of minor ailments was carried out in Government Primary Schools, Acharapakkam block at Kancheepuram district. In the assessment, out of 30 primary school teachers, 4(13.3%) had moderately adequate knowledge and 26(86.7%) had inadequate

knowledge. The overall mean in the pretest was 1.13 with the standard deviation of 0.34. It reveals that, primary school teachers needs educational programme to improve their knowledge on first aid measures of burns, fracture, minor injury, foreign bodies, snake bite, dog bite, convulsions and foreign bodies.

**The second objective was to evaluate the effectiveness of lecture cum demonstration programme on selected first aid measures of minor ailments among primary school teachers.**

Comparison of pre-test and post-test shows that, in post -test 25(83.3%) primary school teachers had adequate knowledge, 5(16.7%) had moderately adequate knowledge and none of them was in inadequate knowledge. The overall mean of knowledge regarding first aid measures of minor ailments in post-test was 2.83 with the standard deviation of 0.37. The improvement score of mean value was 1.70 with the standard deviation of 0.59 and the 't' test value was 15.62 which were statistically significant. Hence, the findings reveals that the effectiveness of lecture cum demonstration on selected first aid measures of minor ailments among primary school teachers was statistically significant.

**The third objective was to associate the effectiveness of lecture cum demonstration programme on first aid measures of minor ailments among primary school teachers with their selected demographic variables.**

The finding of the study shows that the demographic variables of age of teachers, gender, educational status, area at residence, past experience regarding first aid management, past knowledge regarding first aid and previous exposure to any first aid training programme had no significant association with the level of knowledge.

## **CHAPTER –VI**

### **SUMMARY & CONCLUSION**

#### **SUMMARY**

The present study was conducted to assess the effectiveness of lecture cum demonstration on first aid measures of minor ailments among primary school teachers. Pre experimental one group pretest and post-test research design was used for this study . 30 primary school teachers who met the inclusion criteria were selected from Government Primary Schools, Acharapakkam block by using convenient sampling technique. The investigator first introduced herself to the teachers and developed a rapport with them. The pretest was conducted with the questionnaire then lecture cum demonstration on first aid measures of minor ailments was shown to the teachers. Seven days after the lecture cum demonstration programme post test was conducted by using same evaluation tool. The data collected was grouped and analyzed by using descriptive statistics and inferential statistics.

#### **CONCLUSION**

In pretest out of 30 primary school teachers, 26 (86.7%) teachers had possessed inadequate knowledge and 4 (13.3%) had moderately adequate knowledge. In post-test 5 (16.7%) had moderately adequate knowledge and 25(83.3%) had adequate knowledge. The ‘t’ value 15.62 was compared with

tabulated table value at the level of  $P < 0.05$  was significant .So it concluded that lecture cum discussion programme on selected first aid measures of minor ailments among primary school teachers was effective.

## **NURSING IMPLICATIONS**

The findings of the study have implications in different branches of nursing that is nursing practice, nursing education, nursing administration and nursing research, by assessing a level of teachers knowledge towards the first aid. The investigator received a clear picture regarding the different steps to be taken in different field to improve the same.

## **IMPLICATION FOR NURSING PRACTICE**

- Nurses working in community settings and other health professionals should be aware of first aid education and provide first aid education to school teachers as well as to the school children. The school health programme is an important part of national health programme. The purpose is to maintain, improve and promote the health of every school child. The school health programme also includes planning the course content rules of safety related to first aid.
- The teaching given and it showed that there was an increase in the knowledge and attitude of the primary school teachers regarding first aid.

This would facilitate awareness among school teachers about first aid measures of minor ailments.

#### **IMPLICATION FOR NURSING EDUCATION:**

- The study outlines, the significance of short term courses and in- service education to equip nurses with the current knowledge on first aid measures of minor ailments.
- Nurse educators when planning and instructing nursing students, should provide opportunities for students to gain the knowledge regarding first aid measures of minor ailments.
- Nursing personnel should be given in-service education to update their knowledge.
- Nurse educators when instructing the students, should provide adequate opportunity for each student.

#### **IMPLICATION FOR NURSING ADMINISTRATION:-**

- With technology advanced and ever growing challenges of health care needs. The college and hospital administration, have a responsibility to provide nurses, nurse educators with continuing education opportunities on first aid. This will enable the nurses to update their knowledge and to acquire special skills.
- The study finding will help the administrator to arrange continuing education programme for nurses regarding first aid measures of minor

ailments. It helps to prepare adequate learning material for giving health education.

- The nurse administrator should take active part in the policy making, developing protocol, standing orders related health education.
- An educational programme on first aid measures of minor ailments need adequate supervision by nursing administrator and motives them to carry out educative roles.

### **IMPLICATION FOR NURSING RESEARCH:-**

- There is a need for intensive and extensive research in this area. It opens a big avenue for research on innovative methods of creating awareness, development of teaching material and setting up multimedia centers for teaching and for creating awareness among the public regarding first aid.
- These study findings will identify the present knowledge about first aid to know extent of necessary information to be given.
- This study will motivate other investigator to conduct future studies regarding this topic.
- This study will help the nurse researchers to develop insight into the developing module and set information towards awareness about first aid and prevention of complication.

### **RECOMMENDATIONS:-**

Based on the research findings the following recommendations can be made:

- The same study can be replicated on a larger sample and also at different settings.

- A comparative study can be done between rural and urban primary school teachers.
- A descriptive study on assessing the knowledge and attitude of primary school teachers on first aid measures of minor ailment and their practice can be done.
- A structured teaching programme on first aid can be prepared and given to the teachers and the parents so that they can impart knowledge to all school going children.
- The effectiveness of various methods of teaching like interactive video and audio programmed instructions, self-instructional module about first aid, in implementing the knowledge and attitude of primary school teachers and their practice can be tested and evaluated through the research.
- The video programme on first aid can be shown to the teachers and parents so that they can impart knowledge to all school going children.



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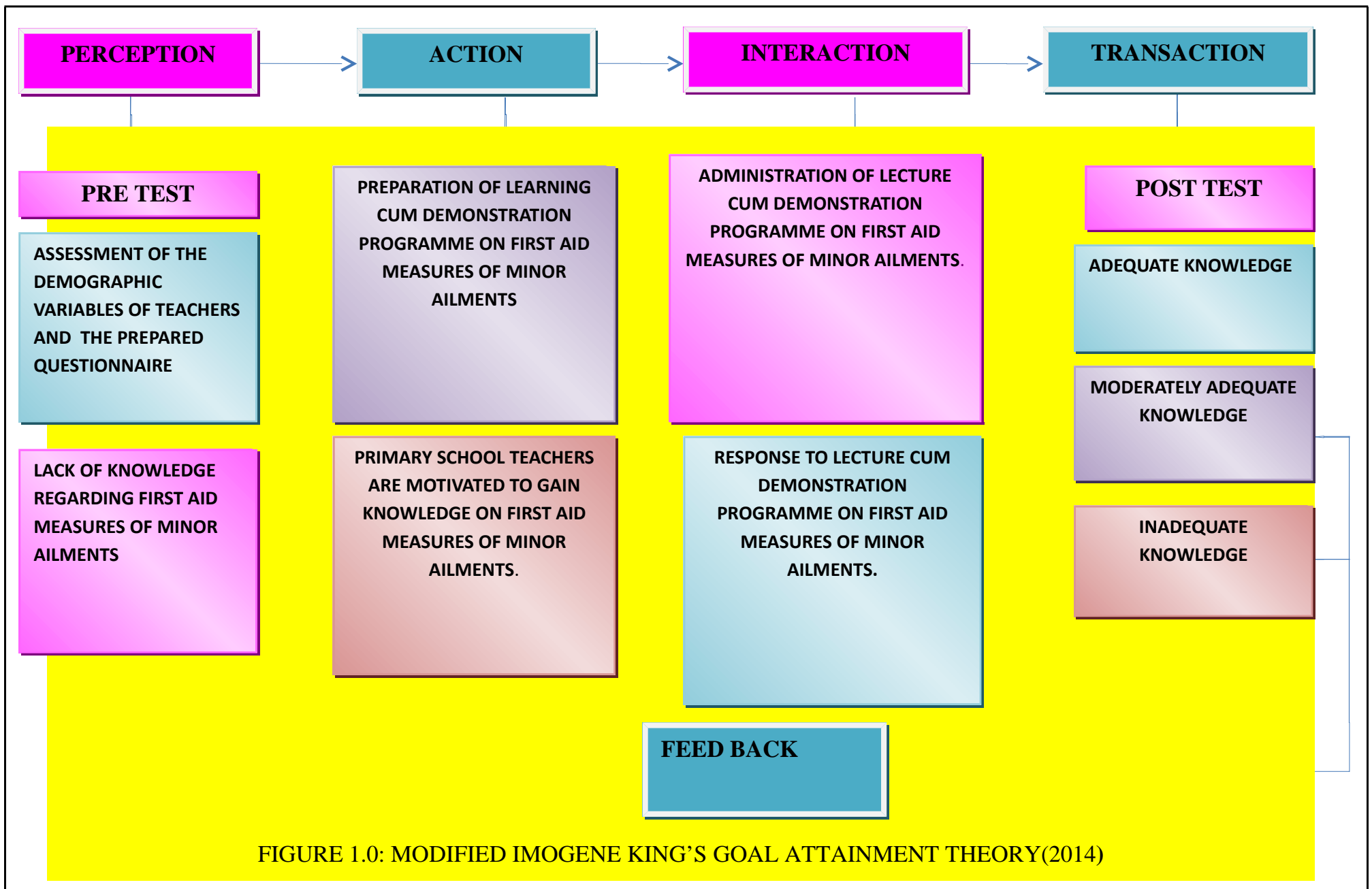


FIGURE 1.0: MODIFIED IMOGENE KING'S GOAL ATTAINMENT THEORY(2014)

**PART-III**

**KEY ANSWER**

Sample no	Keys
1	A
2	C
3	A
4	A
5	A
6	A
7	C
8	D
9	A
10	B
11	A
12	B
13	A
14	A
15	B
16	B
17	D
18	B
19	D
20	D
21	B
22	C
23	A
24	A
25	B
26	A
27	A
28	A
29	A
30	C
31	A
32	B
33	C
34	A
35	A
36	A
37	B

38	A
39	B
40	A
41	A
42	A
43	A
44	A
45	A
46	A
47	A
48	B



**SCHOLAR GIVING AN INTRODUCTION ABOUT FIRST AID TO THE TEACHERS**



**SCHOLAR EXPLAINING ABOUT THE FIRST AID MEASURES OF MINOR AILMENTS TO THE TEACHERS**





**SCHOLAR DEMONSTRATING THE APPLICATION OF SPLINT AS A FIRST AID MANAGEMENT OF FRACTURE.**



**SCHOLAR DEMONSTRATING THE FIRST AID MANAGEMENT OF FOREIGN BODY IN EYE.**

**PART-II**  
**QUESTIONNAIRE**

**INTRODUCTION TO FIRST AID**

1. First aid means

- a) giving immediate care before medical help [ ]
- b) giving support before medical help [ ]
- c) proper stabilization before medical help [ ]
- d) care giving in hospital before first aid [ ]

2. Symbol and colour of the First aid box is

- a) blue cross with grey background [ ]
- b) blue cross with yellow background [ ]
- c) white cross with green background [ ]
- d) red cross with white background [ ]

3. First aid kit contains

- a) gauze, cotton, medicine, bandages [ ]
- b) blanket, sheets, pillow and its cover [ ]
- c) powder, oil, comb, soap and paste [ ]
- d) blood, blood products and IV set [ ]

4. ABC stands for

- a) Airway Breathing Circulation [ ]
- b) Aspiration Bleeding Circulation [ ]

c) Airway Bleeding Co-operation [ ]

d) Aspiration Breathing Circulation [ ]

5. Primary rules of first aid is to

a) maintain ABC [ ]

b) permanent treatment [ ]

c) calling others for help [ ]

d) maintain consciousness [ ]

6. The main aims of first aid is to

a) preserve life [ ]

b) call for medical help [ ]

c) induce further harm [ ]

d) search for nearby health centre [ ]

## **FIRE AND BURNS**

7. Burns can cause

a) loss of appetite [ ]

b) impaired breathing [ ]

c) soft tissue inju [ ]

d) itching over skin [ ]

8. Types of burns **EXCEPT**

a) electrical burns [ ]

b) chemical burns [ ]

c) radiation burns [ ]

d) hypovolemic burns [ ]

9. Rescue the person from electrical shock through

a) the use of wooden stick to cut supply [ ]

b) pouring the water into the person [ ]

c) pulling the person with bare hand [ ]

d) shouting and calling other person [ ]

10. If acid is split on your hand, the first aid is to

a) wipe the acid with cloth [ ]

b) pour cool running water [ ]

c) wash with soap water [ ]

d) wash with hot water [ ]

## **FRACTURE**

11. Breakage in the continuity of bones are called

a) fracture [ ]

b) sprain [ ]

c) dislocation [ ]

d) bleeding [ ]

12. The common symptoms of fracture is

a) sprain [ ]

b) severe pain [ ]

c) Vomiting [ ]

d) constipation [ ]

13. The immediate care of client with fracture is

- a) immobilization [ ]
- b) clean the area [ ]
- c) apply ice pack [ ]
- d) shift to hospital [ ]

14. Splint means

- a) a rigid piece of wood or plastic material to prevent movement of the broken bone [ ]
- b) a long cloth to tie the broken bone [ ]
- c) an ointment to apply on broken bone [ ]
- d) a medicine to inject on fracture patient [ ]

15. Rules to be followed while applying bandage include

- a) apply tightly over the area of fracture [ ]
- b) bandaging should not be too tight and too loose [ ]
- c) bandaging should be too tight [ ]
- d) bandaging should be too loose [ ]

### **MINOR INJURY**

16. Injury means

- a) lack of respiratory function [ ]
- b) harm to the skin surface [ ]
- c) lack of eliminatory function [ ]
- d) lack of gastrointestinal function [ ]

17. Injury is caused, **EXCEPT** from the following,

- a) sharp edged object [ ]
- b) blunt edged object [ ]
- c) falling and hitting [ ]
- d) lying into the bed [ ]

18. Control the bleeding from small cut injury through the following,

**EXCEPT**

- a) elevate the site of injury [ ]
- b) apply pressure over the bleeding site [ ]
- c) keep the ice packs over the cuts [ ]
- d) hang down the injured site [ ]

19. Do's in cut injury

- a) apply coffee powder and chili powder [ ]
- b) press with cow dung, salt, blue in [ ]
- c) sucking the blood from the wound [ ]
- d) wash it under running water [ ]

20. Don't in cut injury

- a) cleaning the site under running water [ ]
- b) wipe with Antiseptic solution [ ]
- c) tie the wound with clean cloth [ ]
- d) apply saliva over the cut wound [ ]

21. Applicable vaccination for injury is

- a) triple vaccine [ ]
- b) oral polio vaccine [ ]
- c) tetanus toxoid vaccine [ ]
- d) hepatitis B vaccine [ ]

### **FOREIGN BODIES**

#### **I.NOSE:**

22. If a foreign objects becomes lodged in your nose

- a) Probe at the object with a cotton swab [ ]
- b) Try to inhale the object [ ]
- c) Blow out of your nose gently [ ]
- d) Forcefully try to remove the object [ ]

23.If minor bleeding occurs after the object remove,the first aid measures is to

- a) Firmly pinch the nose shunt for 10 minutes [ ]
- b) Ask the child to blow his/her nose [ ]
- c) Tilt back the head of the child [ ]
- d) Wash the nose with water [ ]

24. When to seek a health care provider

- a) When the object poses immediate danger [ ]
- b) When the object has been removed [ ]
- c) When the bleeding has been stopped [ ]
- d) When the child feels comfortable [ ]



## II. EAR

25. Remove object if

- a) You can't see the foreign body [ ]
- b) You can see the foreign body [ ]
- c) The foreign body stuck tightly [ ]
- d) foreign body can't be grasp easily [ ]

26. If a live insect enters

- a) Put a few drops of oil in the ear [ ]
- b) Put a water in the ear [ ]
- c) Used tweezer to remove it [ ]
- d) Hit the head forcefully [ ]

27. Common objects to be enter into ear include

- a) food material, toys and insects [ ]
- b) earwax [ ]
- c) pencil [ ]
- d) coin [ ]

## III. EYE

28. The first aid measures for small particles under the upper eyelid is

- a) Rinse the eye with clean water repeatedly [ ]
- b) Remove with the corner of a damp cloth [ ]
- c) Blow air to the eye [ ]
- d) Rub the eye repeatedly [ ]

29. For something in the corner of eye or under the lower lid, the first aid measures is

- a) Pull down the lower lid and remove with moistened cotton swab [ ]
- b) Apply pad over the eye [ ]
- c) Apply oil under the eyelid [ ]
- d) Use tweezers to remove it [ ]

30. Get medical help if the child

- a) Feels sleepy [ ]
- b) Has got light dizziness and headache [ ]
- c) Has abnormal pain and has changes in vision [ ]
- d) Has got abdominal pain [ ]

#### **IV. THROAT**

31. Common objects to be entered into children's throats are

- a) Coins, Buttons, Safety pins [ ]
- b) Chocolate, Candy [ ]
- c) Eraser [ ]
- d) Stone [ ]

32. First aid measures to be taken include

- a) Insert fingers and remove [ ]
- b) Hold the child's head downward and tap on the back of the neck [ ]

c) Ask the child to drink more water [ ]

d) Make the child to sit quietly [ ]

33. If the swallowed object blocks the airway and the child's condition worsens

a) Wait for the medical help [ ]

b) Ask help to other people [ ]

c) Give 5 back blows and 5 abdominal thrusts [ ]

d) Provide oxygen mask [ ]

### **SNAKE BITE**

34. The primary assessment and interventions of snake bite are

a) Assess airway breathing and circulation [ ]

b) Suck the site of the bite by mouth [ ]

c) Wash the area with antiseptic solution [ ]

d) Provide more water to the patient [ ]

35. The affected area of the snake bite should be

a) Immobilized [ ]

b) Mobilized [ ]

c) Massage with oil [ ]

d) wash with detergent [ ]

36. While waiting for medical help

a) Have the person lie down with wound below the heart [ ]

b) Apply tourniquet, ice or water [ ]

c) Give the person alcohol or caffeinated drinks [ ]

d) Attempt to suck out the venom [ ]

37. How will you make sure the snake bite was poisonous

a) If the patient feels pain and headache [ ]

b) If the area of the bite begins to swell and change colour [ ]

c) If the patient has weak pulse [ ]

d) If it is bleeding severely [ ]

### **DOG BITE**

38. What are the most common area to be bitten by dogs in children

a) Neck and facial area [ ]

b) Hands and legs [ ]

c) Chest and head [ ]

d) Buttock and thigh [ ]

39. The first step to treat a minor dog bite is

a) Apply salt and rub over the area [ ]

b) Clean the wound under running water [ ]

c) Apply ice cube over the area [ ]

d) Apply neem leaves over the wound [ ]

40. How will you know if the dog bite has become infected

a) Fluid or pus leaking from the bite [ ]

b) Bleeding from the bite [ ]

c) Patient drinks more water [ ]

d) Patient vital signs are normal [ ]

## CONVULSION

41. What are the initial efforts as a first aider to protect the child from injuring himself or herself

- a) Remove harmful objects from the area [ ]
- b) Put spoon in the child's mouth [ ]
- c) Pour water in child's face [ ]
- d) Leave the child alone [ ]

42. Most common cause of convulsion in children is

- a) sudden rise in body temperature [ ]
- b) Accidents [ ]
- c) Tiredness [ ]
- d) Examination tension [ ]

43. Do's while waiting for medical help

- a) place the child on floor on his/her side [ ]
- b) Tighten the clothing surrounding the head and neck [ ]
- c) Put anything in child's mouth [ ]
- d) Restrain child's movement [ ]

44. First aid measures for febrile convulsion include

- a) Remove outer clothing [ ]
- b) Administer medications through mouth [ ]
- c) Deep the child in bath tub [ ]
- d) Call other people for help [ ]

## **FOOD POISONING:**

45. Food poisoning means

- a) Foods contaminated with viruses, bacteria, parasites or toxins. [ ]
- b) Foods containing high salt [ ]
- c) Foods found in jungle [ ]
- d) Foods containing high calorie [ ]

46. Symptoms include

- a) Nausea, Vomiting, Diarrhoea [ ]
- b) Chest pain [ ]
- c) Leg pain [ ]
- d) Numbness [ ]

47. First aid measures include

- a) Rest and drink plenty of water [ ]
- b) Consume caffeinated drink [ ]
- c) Take anti-histamine drug [ ]
- d) Drink dairy products [ ]

48. First aid measures to prevent vomiting is

- a) Provide fried, greasy, spicy food [ ]
- b) Provide sipping soda [ ]
- c) Provide anti nausea drug [ ]
- d) Provide sweet foods [ ]

## gFjp ? II

1/ KjYjtp vd;gJ

m) kUj;Jt cjtpf;F Kd; mtru cjtp bfhLg;gJ { }

M) kUj;Jt cjtpf;F Kd;g[ Mjut[ bfhLg;gJ { }

,) kUj;Jt cjtpf;F Kd;g[ Kiwahf epiyg;gLj;Jjy; { }

<) KjYjtpf;F Kd;g[ kUj;Jtkidapy; rpfpr;ir mspj;jh; { }

2/ KjYjtp bgl;oapd; epwk; kw;wk; rpd;dk;

m) rhk;gy; epw gpd;gFjpa[ld; epyepw Tl;ly; Fwp { }

M) k";ry; epw gpd; gFjpa[ld; epy epw Tl;ly; Fwp { }

,) gr;ir epwgpd; gFjpa[ld; bts;is epw Tl;ly; Fwp { }

<) bts;is epwgpd; gFjpa[ld; rpf;g[ epw Tl;ly; Fwp { }

3/ KjYjtp bgl;lfj;jpy; ,Ug;git

m) E}y; Jzp. g";R . kUe;J. fl;Lfs; { }

M) fk;gsp. nghh;it. Jiyaiz. jiyaiz ciw { }

,) gt[lh;. vz;bza;. nrhg;g[. rPg;g[ kw;Wk; gw;bghe { }

<) ,uj;jk;. ,uj;j TWfs;. kw;Wk; euk;g[ Crp ,izg;g[ { }

4. ABC vd;gJ

m) Rthrg;ghij. Rthrpj;jy;. ,uj;j Xl;lk; { }

M) g[iunaWjy;. ,uj;j frpt[. ,uj;j Xl;lk; { }

,) Rthrg;ghij. ,uj;jfrt[. xj;Jnghjy; { }

<) g[iunaWjy;. Rthrpj;jy;. ,uj;j Xl;lk; { }

5. KjYjtpapd; Kjw; bfhs;if

m) ABC ik guhkhpj;jy; { }

M) epue;ju rpfpr;ir { }

,) cjtpr;fhf mLj;jtiu miHj;jy; { }

<) Raepidnt rPuhfitj;jy; { }

6. KjYjtpapd; Kf;fpakhd neh;fk;

m) thH;f;ifia ghJfhj;jy; { }

M) kUj;Jt cjtpra miHj;jy; { }

,) jP';F tpidtpj;jy; { }

<) mUfhikapy; cs;s kUj;Jtikaj;ij njLjy; { }

7/ jP kw;Wk; jPf;fha';fs;. jPf;fha';fspdh; cz;lhFk; tpist[fs;

m) grPapz;ik { }

M) K;r;Rj;jpzwy; { }

,) bkd;ik jpR fhaikiljy; { }

<) njhspd; nky; mhpg;gl { }

8. ,tw;wpy; vJ jpf;fhaj;jpw;F bghUe;jhj tif

m) kpd;rhuj;jpdhy; jPf;fhak; { }

M) ,urhadj;jpdhy; jPf;fhak; { }

,) fjph;tP;r;rpdh; jPf;fhak; { }

<) ,uj;j xl;l Fiwtpdh; Vw;gLk; fhak; { }

9. kpd;rho mjphr;rpapdh; xU egiu vjd; K:yk; fhg;ghw;WtJ

m) Rthrg;ghij. Rthrpj;jy;. ,uj;j Xl;lk; { }

M) g[iunaWjy;. ,uj;j frpt[. ,uj;j Xl;lk; { }

,) Rthrg;ghij. ,uj;jfrt[. xj;Jnghjy; { }



<) g[iunaWjy;. Rthrpj;jy;. ,uj;j Xl;lK; { }

10. ,urhadg; bghUs; iffspy; bjwpj;jt[ld; bra;a ntz;oa KjYjtp

m) Jzpia itj;J mkpyj;ij Jilf;fntz;Lk; { }

M) XLk; Fsph;e;j ePhpy; ifia itj;jy; { }

,) nrhg;gl jz;zPhpy; fHt[jy; { }

<) bte;ePhpy; fHt[jy; { }

### **vYk;gl Kwpt[**

11. Jz;of;fg;gl;l ePz;l vYk;ig vt;tpjk; miHg;gha;

m) vYk;gl Kwpt[ { }

M) rijgpog;gl { }

,) ,lk; khWjy; { }

<) ,uj;j frpt[ { }

12. vYk;gl Kwpt[f;fhd epiyahd mwpFwp vd;d >

m) rijgpog;gl { }

M) jPuhj typ { }

,) the;jp { }

<) kyr;rpf;fy; { }

13. vYk;gl Kwpt[f;fhd cldo rpfpr;ir vd;d >

m) efuhik { }

M) ,lj;ij Rj;jk; bra;jy; { }

,) gdpf;fl;o itj;jy; { }

<) kUj;Jtkidf;F miHj;jy; { }

14. !;gphpz;l; vd;why; vd;d>

- m) kuj;Jz;L my;yJ gpsh!;of; bghUl;fs; bfhz;L vYk;g[ { }
- Kwpe;j gFjpia mirahky; jLj;jy;
- M) vYk;g[ Kwpe;j gFjpia ePz;l Jzpitj;J fl;Ljy; { }
- ,) vYk;g[ Kwpe;j gFjpf;F Oliment jlt[jy; { }
- <) vYk;g[ Kwpe;j nehahspf;F kUj;J mspj;jy; { }

15. fl;LnghLk; nghJ gpd;gw;w ntz;oa tHpKiwfs;

- m) vYk;g[Kwpt[ gFjppad; nky; ,Wf;fkhf fl;Ljy; { }
- M) fl;LnghLk; nghJ kpf ,Wf;fkht[k; kpf
- jsh;r;rpahft[k; ,Wf;f TlhJ/ { }
- ,) kpf ,Wf;fkhf fl;LnghLjy; { }
- <) kpf jsh;r;rpahf fl;LnghLjy; { }

## **rpwpa fhak;**

16/ fhak; vd;gJ

- m) Rthr bray;fs; ghjppj;jy; { }
- M) njhy; gFjpapy; tpist[fs; Vw;gLjy; { }
- ,) fHpt[ePh; bray;fs; ghjppj;jy; { }
- <) czt[FHy; bray;fs; ghjppj;jy; { }

17. gpd;tUgitfs; vJ jP';F tpistpg;gJ my;y

- m) Th;ik Kida[ld; Toa bghUs; { }
- M) Th;ikaw;w bghUs; { }
- ,) tPH;jy; kw;Wk; ,oj;jy; { }
- <) g";R bkj;ijapd; kPJ gLj;jy; { }

18. ,tw;wpy; vJ rpwpa fhaj;jpdhy; Vw;gLk; ,uj;jfrpit jLf;Fk; Kiw my;y/

- m) fhakile;j gFjpia nkny J}f;Fjy; { }
- M) fhakile;j gFjppapd; nky; mGj;jk; bfhLj;jy; { }
- ,) fhakile;j gFjppapd; nky; gdpf;fl;oia itj;jy; { }
- <) fha kile;j gFjpia bjh’;F tpLjy; { }

19. fhakile;j gFjppapy; bra;a ntz;oait

- m) fhgp. J}s; kw;Wk; kpsfha;J}s; itj;jy; { }
- M) rhzk;. cg;gl kw;Wk; epy ikia itj;J mGj;Jjy; { }
- ,) fhaj;jpypUe;J tUk; ,uj;jj;ij cwp”;Rjy; { }
- <) XLk; ePhpy; fGt[jy; { }

20. fhakile;j gFjppapy; bra;a Tlhjit/

- m) XLk; ePhpy; fhakile;j gFjpia fGt[jy; { }
- M) fpUkpehrdp bfhz;L Jilj;jy; { }
- ,) fhakile;j gFjpia Rj;jkhd Jzpia itj;J fl;Ljy; { }
- <) fhakile;j gFjppapy; ckpH;ePiu itj;jy; { }

21/ fhakile;jjw;fhd jLg;g{rp

- m) Kj;jLg;gl Crp { }
- M) nghypna brhl;L kUe;J { }
- ,) bgl;ld!; lhf;!ha;L jLg;g{rp { }
- <) k”;rs; fhkhiy jLg;g{rp { }

**neha;fpUkp**

**I Kf;F**

22. Kf;fpy; j’;fptpl;lh;

- m) g”;R Rw;wpa Fr;rpia cgnahfpj;J { }

- M) Kaw;rp bra;J neha;fpUkpfis cs;s ,Gj;jy; { }
- .) Kf;fpy; css; fpUkpfis rpe;jp btspnaw;Wjy; { }
- <) mjpntfkhf neha;fpUkpfis btspnaw;Wjy; { }

23. neha;fpUkpfspd; btspnaw;wj;jpw;F gpd; Vw;gLk; ,uj;jf;frptpw;F KjYjtp vd;d >

- m) 10 epkpl';fs; K:f;if mGj;jp gpof;ft[k; { }
- M) FHe;ijfspk; K:f;fpid rpe;j brhy;Yjy; { }
- .) FHe;ijapd; jiyia gpd;g[wkhf rha;j;jy; { }
- <) jz;zPiu itj;J Kf;fpid fGt[jy; { }

24. vg;bghGJ cly;epiy ghJfhtyiu mDFtJ

- m) neha;fpUkpfshy; tpist[fs; Vw;gLk; nghJ { }
- M) neha;fpUkpfis btspnaw;wpat[ld; { }
- .) ,uj;jf;frpt[ epd;wt[ld; { }
- <) FHe;ij rt[fhpakhd epiyia czUk; nghJ { }

## **ihJ**

25/ neha;fpUkpfis btspnaw;Wjy; vd;gJ

- m) cd;dhy; neha;fpUkpfis ghh;f;f Koahj epiy { }
- M) cd;dhy; neha;fpUkpfis ghh;f;Fk; nghJ { }
- .) neha;fpUkpfis; cs;ns khl;of; bfhz;lughJ { }
- <) neha;fpUkpfis kpf vpjhf btspnaw;wg;glhj epiy { }

26/ capUs;s g{r;rp cs;ns EiHa[k; nghJ

- m) fhjpy; rpy brhl;L vz;bza; tpLjy; { }
- M) fhjpy; jz;zPh; tpLjy;/ { }
- .) ,Uf;fkhd fUtpia bfhz;L vLj;jy; { }

<) jiyia ntfkhf Kl;Ljy; { }

27/ fhjpDs; EiHf;Toa bghJthd rpy bghUl;fs;

m) czt[ bghUl;fs;. rpwa bghk;ikfs; kw;Wk; g{r;rpfs; { }

M) fhJ FLk;gp { }

,) vGJnfhy; { }

<) rpy;yiw { }

## **fz:**

28/ nky; ,ikapd; cl;ghfj;jpy; rpwpa bghUl;fs; ,Uf;Fk; nghJ bra;a Tla KjYjtp.

m) J}a jz;zPuhy; fz;fis jpUk;g jpUk;g fGt[jy; { }

M) <uJzpia bfhz;L fz;fspd; Xug;gFjpapy; btspnaw;Wjy; { }

,) fz;fspy; J}rpia CJjy; { }

<) jpUk;g jpUk;g fz;fis Jilj;jy; { }

29/ fz;zpd; Xuk; kw;Wk; fPH; ,ikfspy; bghUl;fs; ,Uf;Fk; nghJ bra;antz;oa KjYjtp

m) fPH; ,ikia ,Gj;J. epid;j g”;ir bfhz;L

bghUl;fis btspnaw;Wjy; { }

M) fz;zpd; nk;g[wj;jpy; g”;rp bkj;ijia itj;jy; { }

,) fz;zpd; fPH; ,ikapy; vz;bza; itj;jy; { }

<) ,Uf;fkhd fUtpia bfhz;L vLj;jy; { }

30/ FHe;ijf;F kUj;Jt cjtp njitg;gLk; neuk;

m) FHe;ijf;F J}f;fk; tUk; nghJ { }

M) jiytyo kw;Wk; kaf;fkila[k; nghJ { }

,) fz;ghh;it khWjy; kw;Wk; tpj;jpahrkhd typ { }

<) tapW typ Vw;gLk; nghJ { }

## **bjhz;il**

31/ FHe;ijapd; bjhz;ilf;Fs; EiHa[k; bghJkhd bghUl;fs;

m) rpy;yu. gl;ld;fs;. Crpfs; { }

M) rhf;byl; { }

,)ug;gh; { }

<) fy; { }

32/ bghUl;fis btsdna vLg;gjw;fhd KjYjtp

m) tpuy;fis cs;ns EiHj;J bghUl;fis btsdnaw;Wjy; { }

M) FHe;ijapd; jiyia jiyfPHhf ftpoj;J { }

,) FHe;ijia mjpf jz;zPh; Fof;fbra;jy; { }

<) FHe;ijia mikjpahf cl;fhu bra;jy; { }

33/ Rthrg;ghijapy; bghUl;fis tpG';fpat[ld; FHe;ijapd; epiy

m) kUj;Jt cjtpia miHj;jy; { }

M) mLj;jth;fis cjtpf;F miHj;jy; { }

,) 5 Kiw KJfpy;jl;o 5 Kiw tapw;iw mGj;Jjy; { }

<) fhw;Wg;igia mspj;jy; { }

## **ghk;g[f;fo**

34/ ghk;g[ foj;jt[ld; Kjypy; mspf;f ntz;oa kw;Wk; mwpe;J bfhs;s ntz;oa

m) fhw;Wg;ghij Rthrg;ghij kw;Wk; ,uj;j Xl;l ghijia Muha;jy; { }

M) thia itj;J foj;j ,lj;ij cwp";Rjy; { }

,) foj;j ,lj;ij neha; vjph;g;g[ jput';fs; bfhz;L fGt[jy; { }

<) mjpf jz;zPiu mspj;jy; { }

35/ ghk;g[ foj;J ghjpf;fg;gl;l ,lj;ij vg;go itg;gJ

m)mirahky; { }

M) mirj;J { }

,) vz;bza;itj;J jltp bfhLj;jy; { }

<) nrhg;g[ gt[liu itj;J fGt[jy; { }

36/ kUj;Jt cjtpf;fhf fhj;jpUf;Fk; nghJ bra;a ntz;oaIt

m) mikjpahf gLj;Jf;bfhz;L cly; ghf';fis

,Ujaj;jpw;f;F nkny TlhJ/ { }

M) fl;L fl;Ljy;. gdpfl;o my;yJ jz;zPh; itj;jy; { }

,) kJ kw;Wk; nghij fye;j jput';fis bfhLj;jy; { }

<) tp&j;ij btspbaLf;f Kaw;rp bra;jy; { }

37/ ghk;g[fo tp&j;jd;ik tha;e;jJ vd;gij vt;thW mwptJ

m) nehahspapd; typ czh;r;rp kw;Wk; jiytyp { }

M) foj;j ,lj;jpy; tP;';Fjy; kw;Wk; epwk; khwr; bra;jy; { }

,) ehoj;Jog;g[ Fiwjy; { }

<) mjpf ,uj;jg;nghf;F Vw;gLjy; { }

38/ bghJthf FHe;ijfis eha;fs; fof;Fk; ,lk;

m) fGj;J kw;Wk; Kfg;gFjp { }

M) if kw;Wk; fhy; gFjp { }

,) jiy kw;Wk; khh;g[g; gFjp { }

<) bjhil kw;Wk; ,Lg;g[g; gFjp { }

39/ eha; foj;jt[ld; Kjypy; bra;a ntz;oaJ

- m) foj;j ,lj;jpy; cg;ig itj;J nja;j;J tpLjy; { }
- M) foj;j ,lj;ij XLk; ePhpy; itj;J fGt[jy; { }
- ,) gdpf;fl;oia itj;jy; { }
- <) foj;j ,lj;jpd; nky; ntg;g ,iyia itj;jy; { }

40/ eha;fo fpUkp tha;e;jJ vd;gij vg;go bjhpe;Jf;bfhs;tJ

- m) foj;j ,lj;jpy; ,Ue;J jputk; kw;Wk; rPH; btspnaWjy; { }
- M) ,uj;jf;frpt[ Vw;gLjy; { }
- ,) mjpf jz;zPh; Foj;jy; { }
- <) nehahspapd; { }

## typg:gl

41/ KjYjtp bfhLg;gth; Kjy; cjtpap;d; nghJ FHe;ijf;F Kj;dikahf

bfhs;s ntz;oait

- m) jP';F tpistpf;f Toa bghUl;fis mg;g[wg;gLj;j ntz;Lk;{ }
- M) thapy; fuz;oia itg;gJ { }
- ,) Kfj;jpy; jz;zPiu bjspg;gJ { }
- <) FHe;ijia jdpikahf tpLtJ/ { }

42/ bghJthf typg:gl Vw;gLtjw;F Kf;fpa fhuzpfs;

- m) cly; btg;gepiy mjpfhpj;jy; { }
- M) tpgj;J { }
- ,) nrhh;t[ { }
- <) ghPl;irf;fhd kdmGj;jk; { }

43/ kUj;J cjtpf;F fhj;jpUf;Fk; nghJ bra;antz;oait

- m) FHe;ijia jiuapy; tpLjy; { }



M) jiy kw;Wk; fGj;J gFjpia ,Wf;fp gpoj;jy; { }

) FHe;ijapy; thapy; VjhtJ nghLtJ { }

<) FHe;ijapd; merit fl;LgLj;Jjy; { }

44/ cly; btg;gepiy typg;g[ Vw;gLk; nghJ bra;antz;oa KjYjtp

m) nkW;g[w Milia mfw;WtJ { }

M) thapd; tHpahf kUe;J bfhLj;jy; { }

) Fspay; bjhl;oy; FHe;ijia K:H;f bra;jy; { }

<) kw;wth;fis cjtpf;F miHj;jy; { }

### **cztl er;Rj;jd;ik**

45/ cztl er;Rj;jd;ik vd;why;

m) cztl itu!;. ghf;Ohpah. Xl;Lz;zpfs; my;yJ er;Rj;jd;ikahy;

ghjpf;fg;gLtJ { }

M) cztpy; mjpf cg;g[ { }

) fhL;oy; fpilf;Fk; cztl { }

<) cztpy; mjpf fnyhhp { }

46/ fPH;fz;l mwpFwpfs;

m) bfhkl;ly;. the;jp. ngjp { }

M) khh;g[ typ { }

) fhy;typ { }

<) mhpg;g[ { }

47/ Kjy; cjtp fhuzpfs;

m) Xa;t[ kw;Wk; jz;zPiu mUe;Jjy; { }

M) nghij bghUl;fis mUe;Jjy; { }

,) myh;\$pfhd kUe;ij cl;bfhs;Sjy; { }

<) ghy;tif bghUl;fis mUe;Jjy; { }

48/ the;jpia jLf;f KjYjtp

m) tWj;j fhuzkhd czit bfhlj;jy; { }

M) nrhlh cg;ig bfhlj;jy; { }

,) Fkl;ly;fhd kUe;ij bfhlj;jy; { }

<) ,dpg;gl tif czit bfhlj;jy; { }

**PART-III**  
**KEY ANSWER**

Sample no	Keys
1	A
2	C
3	A
4	A
5	A
6	A
7	C
8	D
9	A
10	B
11	A
12	B
13	A
14	A
15	B
16	B
17	D
18	B
19	D
20	D
21	B
22	C
23	A
24	A
25	B
26	A
27	A
28	A
29	A
30	C
31	A
32	B
33	C

38	A
39	B
40	A
41	A
42	A
43	A
44	A
45	A
46	A
47	A
48	B

## UôQ®«u ®|dLTYm

YÏl×	:	M.Sc (So <sup>3e</sup> ) CWiPôm BiÓ
TôPm	:	ùU¥dLp No´Ls So <sup>3e</sup>
RûXl×	:	£BLôVeLpdLô] ØRÛR®
áhPm	:	BWmTTs° B£-VoLs
CPm	:	AWÑ BWmT Ts°. Af£BITôdLm
úSWm	:	1 U' úSWm
UôQYo B£-Vo	:	ÄhPm ùUúXô- úR®
Lt©dĭm Øû\	:	Lt©jRp Utßm T;orP
ETLWQeLs	:	LÚmTXûL. Nôoh. ûL ER®ùTôÚs

## Uj\$V àTôÚs

BWmT Utßm NØRØV áPeL°p UØQ®VoLÞdĭ £ßLØVeLÞdLØ] ØRÛR® Tt±V A±ûYÛm. §\û]Ûm. Bt\ûXÛm Y[o]Rp.

## TeúLt©tLø] àTôÚs

UØ]ØdL[Øp

- \* ØRÛR® Gu\Øp Gu]
- \* ØRÛR®«u ùTôÚs Gu]
- \* ØRÛR®«u ùThPLj\$Ûs[ ùTØÚhLû[ Y-ûNITÓjÕL,
- \* ØRÛR®«u YiQm Utßm Ĩ±ÂÓLû[ áßL,
- \* ØRÛR®«u ØRuûU ùLØsûLLû[ ®Y-dL
- \* ¾dLØVm Utßm ARu ØRÛR®ûV ®[dĭL,
- \* GÛm×Ø±Û Utßm ARu ØRÛR®ûV T;oRp
- \* £ßLØVm Utßm ARu ØRÛR®ûV ®Y-dL,
- \* ùY°ÛXL ùTôÚs ÖûZRp ARu ØRÛR®ûV ®Y-dL,
- \* Tøm×LŸ Utßm ARu ØRÛR®ûV ®[dĭL,
- \* SønLŸ Utßm ARu ØRÛR®ûV T;oRp
- \* Yl× úSøn Utßm ARu ØRÛR®ûV ®Y-dL,
- \* EQÛ SfÑjRuûUÛm ARu ØRÛR®ûVÛm ®[dĭL,

<b>Y. Gi</b>	<b>İ±đúLôs</b>	<b>úSWm</b>	<b>ùTôÚ[PdLm</b>	<b>Lt©jRY~u ùNVp</b>	<b>İÝ®u UôQYoL°u ùNVp</b>
1	<b>ØRÛR® YûWVû\</b>	1 **aPm	ØRÛR® GuTÕ JÚ U²R²u LôVUûPkR Tİşdı RtLôLUôL Utßm EP]¥ £;fûNLô] Aû]jÕ YN§LÐm (A) ùTôÚhLÐm UÚjÕY £;fûNdİ Øu A°dLITP úYi¥V UÚjÕY ER®,  <b>úSôdLm</b> → YôrdûLûV TôÕLôjÕd ùLôsÞRp	®[dLm	LY²jRp
2,	<b>YûWVßdLThP úSôdLeLs</b>	1 **aPm	→ A§LIT¥Vô] EPp ETôûRLs HtTPôUp TôojÕd ùLôs[ → A¥IthPYÚdı ùN[L~VjûR ùLôÓjÕ A§LIT¥Vô] G]o'ûV TôÕLôjRp, → EP]¥VôL LôVUûPkRYûW UÚjÕYPu AûZjÕ ùNpÛRp  <b>ØRÛR® ùThPLm :-</b> ØdúLôQ Y¥Y úTiúPw. NÛs Y¥Y úTiúPw. TgÑ. úTiúPw Õ'. LiLYNm. L«ß. UÚkÕLs.	®[dLm	LY²jRp
3,	ØRÛR® ùThPL ETLôWQeLû[ Y-ûN TójÕRp	1 **aPm	<b>İ±ÂÓLs :-</b> ØRÛR® ùThPLjşu İ±ÂÓ ùYsû[^\ áhPp İ±ÂÓLs ùLôiPÕ, ©u×\m TfûN ~\m ùLôiPÕ,	®[dLm	LY²jRp

4,	ØRÛR® ùThPLj§u `m Utßm Ĩ±ÂÓ	1 "aPm	<p><b>ØRÛR®«u BWmT Ød;VjÕYm</b></p> <p>ØRÛR®«u Ød;VjÕYm LôtßTôûR. ÑYôNI TôûR. CWjR Ñtß KhPm N-ùNnRp</p>	®[dLm	LY?jRp
5,	ØRÛR®«u Ød;VjÕYj§u ®[dLm	5 "aPm	<p><b>ØRÛR®«u ®§Oû\Ls</b></p> <p>→ AûU§ LôjRp  → Ñtßl×\jûR TôÕLôITôL Es[Rô Guß TôojÕ ùLôsPRp  → úSôVô°dĭ GkR®RUô] £;fûN AYÉVm Guß <b>úSôdĭeLs.</b>  → BßRp A°ÙeLs  → ØÕĭRi¥úXô ApXÕ LYj§úXô A¥IthÓ CÚkRôp  AYoLû[ AûNdLô¾oLs  → ØRÛR® ùNnÛm Øu ûLLû[ ÑjRUôL LY® ûLÛû\ A,kÕ  £;fûN ùNnVÛm,  → A¥IthP CPjûR ÑjRUôL LY®. £;fûN ùNnVÛm,  → LiQô¥ ŌiÓLs Utßm ©ùTôÚhLû[ UÚjÕY-Pm  ùLôÓdLÛm,  → N-Vô] LhÓLhÓm Øû\Lû[ ©uTt\Ûm,  → ØRÛR® ùTh¥«p CÚkÕ TVuTÓj§V ùTôÚhLû[ N-VôL  §Úl© ûYdLÛm,</p> <p><b>¾dLôVm</b></p>	®[dLm	LY?jRp



6,	¾dLôVm YûWVû\ Utßm ØRÛR® Øû\	6 "ªPm	<p>§ÑdL°p HtTÓm ¾dLôVeLpdlô] LôW'LS ÑÓm RuûU CßdLUôL ©¥jRp. ºuNôWm. L§oÁfÑdLs. ApXÕ CWNôVQeLs,</p> <p><b>TX®RUô] ¾dLôVeLs</b></p> <p>RÝm×Ls : Cq®RUô] ¾dLôVm úRôpTĩ§«p ùRôPo×ûPVÕ, CÕ ÑÓm §WY ùTôÚhL[ôp EiPô]ûY, GÓ : ÑÓmço. ÑÓm EQÛ</p> <ul style="list-style-type: none"> <li>• ùRôttß¾dLôVm : ÑÓm ùTôÚhL[ôp EiPô]ûY</li> <li>• CWNôVQ ¾dLôVm: CWôNôVQ ùTôÚPL[ôp EiPô]ûY (GÓ) úRôu úUpTÓYRôp EiPô]ûY,</li> <li>• ºuNôW ¾dLôVm : JÚYÚđĬ LôVm AûPkÕ Ut\Yo LôItôt\ ùNu\ôÛm AYôLú[ AYôLú[ ©¥jÕ ùLôsYRôp HtTÓi\Õ,</li> <li>• L§oÁfÑ ¾dLôVm : L§oÁfÑ êXUôL HtTÓTûY (GÓ) úYûX ãr"ûX</li> </ul> <p><b>ºuNôW ¾dLôVj§p Tô§dLIthPYÚdLô]</b></p> <p><b>ØRÛR®«u Y`Oû\Ls :</b></p> <ul style="list-style-type: none"> <li>→ ØRp TôodLÛm. ùRôPdápôÕ,</li> <li>→ ºuNôWm ùRôPôUp AYûW ALt\ úYiÓm,</li> <li>→ ºuNôW ùTh¥ûV AûQdLÛm,</li> <li>→ ºuNôWm RôdLIthPYûW UWjÕiûP ûYjÕ Lônkr Tĩ§đĬ</li> </ul>	®[dLm	LY?jRp
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		<p>Al×\ITÓjRÛm, → DWUδ] ùTôÚhLû[ ApXÕ EúXδLjûR ALt\ úYiÓm, → <sup>a</sup>uNôWm RôdLITHPYûW R<sup>2</sup>ûUTÓj§. AYûW T-úNô§jÕ AY→Pm úTN úYiÓm,</p> <p><b>¾dLôVj§tLô] ØRÛR® A±ÛûWLS :</b></p> <p>¾dLôVj§u úTôÕ RtLôl× AYÉVm</p> <ul style="list-style-type: none"><li>• ùSÚlúT AûQdLÛm ò§jÕ – AûQdLÛm</li></ul> <p>A<sup>a</sup>Xm : Ì°okR çûW Ft§Rp, <sup>a</sup>uNôWm : <sup>a</sup>uNôWjûR AûQdLÛm</p> <p>CWNôVQ LôVm :</p> <p>G→Ûm CWNôVQl ùTôÚhLû[ ALt\ úYiÓm, ©u× çûW ûYjÕ ÑjRm ùNnV úYiÓm, EP]¥ ØRÛR® êXm ¾@WUô] LôVjûR ĨûdL ùNnRp, → KÓm Ĩ°okR çûW 20 – 30 °PeLs ¾LôVj§u úUp ûYdL úYiÓm, → DWjÕ'ûV çdL úYiÓm úRôu ÁÕ ùLôl×[m úTôPôÕ, → SûLLû[ LZt\ úYiÓm, ¾dLôVjRôp ÅdLm Utßm CWjR KhPm LôQITÓm, → ¾dLôVjûR ÑjRUô] Øû\«p LhÓTÓjÕRp → AYNW ER®ûV AûZdLÛm → 20% A§LUô] ¾dLôVj§tĭ UÚjÕYûW AÔĭRp</p>		
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**ùNnVdáPôRûY**

- ùYiùQn. GiùQn úRôp éNdáPôÕ
- IvLhÿûV ETúVô;dLd áPôÕ,
- Ĩ°okR çûW ĨZkûRdĭ Ft\áPôÕ,

**“û]@p ùLôs]úYiYVûY :**

- ÑÓRi½ûW Al×\TÓjRúYiÓm,
- ĨZkûRûV R²VôL @PdáPôÕ
- ĨZkûR TôšITûPkRôp 108 AYNW FojšûV AûZdLÜm,
- Ĩ°VXû«p 80°C ùYIT“ûXûV Ĩû\TRu êXm RÝmûT RÓdLXôm,
- AšLTÿVô] ùYIT“ûX 37 ØRp 38°C CÚdL úYiÓm,

**GÛm×Ø±Û :-**

@Tjšû úTôÕ GÛm×ùRôPof£«p HtTÓm Ø±úY  
GÛm×Ø±Û,

**YûLLs :**

š\kR GÛm×Ø±Û : úRôp j̄YRôp HtTÓm LôVm  
êÿV GÛm×Ø±Û : úRôp j̄VôUp LôVUûPRp  
TfûN ùLôm× GÛm× Ø±Û : ĨZkûRL°u C[m GÛm×Ls

7,	<p>GŪm× Ø±Ū Utßm ARu ØRŪR@ŭV T;ojRp</p>	6 "aPm	<p><b>A±İ±Ls</b>  → ¾@WY  → AŭNŪL°u LŸ]jRuŭU  → ÅdLm  → úRnRp  → AZjRu úTôÕ GtTÓm ÅdLm,  <b>ØRŪR@ :</b>  → Ø±kR TİşŭV AŭNVôUp ŭYjşÚjRp  → £;fŭNdİ Øu× CWjRL£ŭY LhÓTÓjÕRp  → ÑYôNjŭR LY²jRp  → Y Utßm ÅdLjŭR İŭvL T²LhŸŭV ŭYjRp  → UÚjÕYŭW AÔİRp  KnŪ :- úRŭYVtŭYLŭ[ R@ojRp  T²LhŸ :- ÅdLm Utßm YŭV İŭvRp  SLWôşÚjRp : LhÓLhÓRu êXm SLWfŭNnRp</p> <p><b>ŭYhÓIThP LôVjşŭ ŭNnVáŸVŭY :</b>  LôVITHP CPjŭR ÑjRUô] ģŭW ŭYjÕ LZY úYiÓm,  ÑjRUô] ŐŭV ŭYjÕ LhÓRp</p> <p><b>CWjRL£ŭY RÓdİm Øŭ\Ls</b>  → LôVUŭPkR TİşŭV EvojÕRp  → T²LhŸŭV ŭYjRp</p>	@[dLm	LY²jRp
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		<p>→ WQù_u² RÓléÉûV EP]¥VôL ùLôÓjRp</p> <p>→ BßUôRjştı́ JÚØû\ ùRôPofÉVôL RÓléÉ ùNnV úYiÓm,  ùNnVáPôRûY :</p> <p>→ úRndL áPôÕ,</p> <p>→ Ø±kR Tı́şûV úSWôdİRp</p> <p>→ Yôny¯VôL EQÜ Utßm çWôLôWm áPôÕ,</p> <p><b>RÓdİm Øû\Ls</b></p> <p>→ RûXLYNm Aı́VúYiÓm</p> <p>→ TôÕLôl× Y¯Øû\Lû[ LtßùLôÓjRp,</p> <p><b>ßBLôVeLs</b></p> <p>→ áoûUVt\ BÜRjûR TVuTÓjÖYRôp HtTÓm LôVm,  → İZkûRLbdİm. ØşúVôoLbdİm HtTÓm,</p> <p><b>ØRÛR® :</b></p> <p><b>ùY°ÙXL ùTôÚs ÖûZRp</b></p> <p>ùY°ÙXL ùTôÚs ÖûZRp GuTÕ JÚ ùTôÚs ùY°«ÚkÕ  EPÛdİs FÓÚYÕ,</p> <p>AÕ Eh×İkÕ G-fNXûPV ùNnı́\Õ, G-fNXûPYRôp ùRôttß  ApXÕ RÝm×Lû[ EiPôdİı́\Õ, ùRôttßYRôp EPÛs[ Gşol×  NdşLs EPûX TôÕLôdı́\Õ,</p> <p>ùY°ÙXL ùTôÚs ÖûZRp ùNpÛm Y¯«p HtTÓm AûPl×</p>		
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8,	<p>ΕΒΛôVeLðm ARu ØRÛR®Ùm</p> <p>ùY°ÜXL ùTôÚs ÖûZRp ARu ØRÛR®ûV ®Y-dL</p>	<p>6 <sup>aa</sup>Pm</p> <p>10 <sup>aa</sup>Pm</p>	<p>ARu A[Û Utßm RÝmûT ùTôÚjRÖ, ΕXYûL SfÑRuûU EûPVÖ,</p> <p><b>LôŞàs</b></p> <p>ùTôÖYôL LôŞàs Es[ ùY°ÜXL ùTôÚs BTjRt\Ö, LôûX«p (A) ùRôPokÖ ¿dL ùNnV úYiÓm, ùTôÖYôL LôŞàs LôQlTÓm ùTôÚhL°p ΕXYûL EQÛ ùTôÚhLs. ØjÖdLs. ùTômûULs Utßm éf£Ls,</p> <p><b>ØRÛR® £jûN :</b></p> <p>¿eL ùY°ÜXL ùTôÚs LiP±kRÛPu G°RôL ùY°úV GÓdLÛm, úYLUôL ùTôÚhLû[ ùLôiÓ ùY°úV GÓdLáPôÖ, RûXûV Jú×\UôL RôrjRÛm, E«Ús[ éf£VôL CÚkRôp LôŞàs Jú ùNôhÓ GiùQn Utßm RôYw GiùQn ®hPôp G°RôL ùY°úVt\ Ø¥Ûm, ùTôÚhLû[ TôodL Ø¥Vô®hPôp (A) G°RôL ALt\ Ø¥Vô®hPôp (A) ALtßRu úTôÖ Y HtThPôp AÚ;Ûs[ BúWôjV SXu ®Úm©ûV AÔLÛm,</p> <p><b>GlùTôÝÖ SXu®Úm©ûV AÔL úYiÓm :</b></p> <p>EeL[ôp ùY°ÜXL ùTôÚs ùY°úVt\ Ø¥Vô®hPôp (A) LôŞàs ÁRùTôÚs Rej®hPôp</p>	<p>®[dLm</p>	<p>LY?jRp</p>
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9,		<p>Y ¾@WUôL CÚkRôp  Y. LôÕ úL[ôûU. AN§Atß. ùRôPokÕ  ùTôÚhLû[ ùY°úVt\Üm</p> <p><b>êd;ip</b>  ÏZkûRLs ùUpXUôL £ßùTôÚhLû[ êd;ip @ÓRp. Êd;ip  Re;@P áŸV ùTôÚs EQÛ. @ûR. LônkR ThPô',  £ßùTômûULs. ;WVôiv. A TÔu. TgÑ Utßm ØjÕLs,</p> <p><b>ORÛR@ £;ûN</b>  → YônY VôL ÑYô£jRp  → ÁRØs[ ùTôÚsL°u ùY°úVtßYRtĭ ûL @WpêXm (A)  Õ'ÖiTİşûV ûYjÕ ĩûPRp úYiÓm,  → Eh×\UôL EkÕRp áPôÕ  → Eh×\UôL ùTôÚs CÚkRôp AûPIThP êdûL JÚ ûL@WXôp  AûPdLÜm,  <b>,r×\UôL LYjşu @u×\mTôL RhPÜm,</b>  → ÁuØs ùRôiuP«p £d;dùLôipôp AûUŞTÓjş@hÓ  UÚjÕYûW SôPúYiÓm,  → Áre;V ùTôÚ[ôp ÑYôNd ĨZô«p AûPl× HtThPôp AYûW  LYûX;PUôL CÚITôo @u×\m 5 Øû\ RhÓRp Utßm Y«tß  TİşûV 5 Øû\ RhPÜm,</p>	@[dLm	LY²jRp
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		<p><b>LiL°p</b></p> <p>ùY°×\UôL CÚkÕ Li'u Y¯úV Esú[ ÖûZkRôp  ;Ú°Lû[ ùY°ÙÛL ùTôÚs ÖûZRp ùTôÕYôL ùTôÚhLs  Esú[ ÖûZkRôp. A§LT¥VôL Tô§ITûPYÕ LÚ®¯. Utßm  ®¯ùYiTPXm,</p> <p><b>ORÛR®</b></p> <p>LiûQ ÑjRUô] El×Ri½Wôp (A) ç¬]ôp LYÛm,  Li®¯LpďĀ AÚ;p ç£ LôQIThPôp Li®¯ûV ,rTôLUôL  CZdLÛm,  ÑjRUô] Ô!ûV TgûO ûYjÕ ç£ûV Li'u JÚTdLUôL ùLôiÓ  ALt\ úYiÓm,  → AYûW AûPl×s[ êd;s Tİ§ûV ùLôiÓ ÑYô£dL ùNnV  úYiÓm, ARu êXm ùTôÚû[ ùY°úVt\Xôm,  → £±R[Û CWjRL£Û HtThPôp 10 ¨ªPm AÝj§ ©¥dL  úYiÓm,</p> <p><b>BúWô;V SXu®Úm©ûV AÔL úYiÓm.</b></p> <p>→ SmUôp ùTôÚû[ ùY°úVt\ô®hPôp (A) ÁRØs[ ùTôÚs  Re;®hPôp,  → ùTôÚû[ôp BTjÕ EiPôĪm ¨ûX,  → êd;p CWjRL£ûY LhÓTÓjRô®hPôp,</p>		
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		<p>ùRôiuP«p  ùRôiuP Y<sup>-</sup>VôL HúRàm £ßùTôÚhLû[ ®<sup>-</sup> eËRp,  ùTôÕYôL ®ZeLITÓm ùTôÚhLs. £pXûW. £ßùTômûULs.  Õ F£. F£Ls Utßm RûXF£. úUtLiP ùTôÚhL[ôp úUp  EQÛÏZôn Utßm ÑYôNd ÏZônL<sup>o</sup>p AûPl× HtThÓ  BTjRûP;\\Õ,</p> <p><b>ORÛR® :</b>  EX ùT-V. Y¥Yt\ ùTôÚhLs Uôh¥d ùLôiPôp,  TôodLá¥V ùTôÚhL[ôL CÚkR ®Wp ER®ÛPu  ùY°úVt\Ûm,  ÏZkûRVôL CÚkRôp RûXûV Ìl×\TÓjR</p> <p><b>GlùTôYÓ BWô;V SXm ®Úm©ûV AÔLúYiÓm</b>  → ÑjRm ùNnVIThP ©\Ìm ç£ Li p CÚITÕ úTôuß úRôu±]ôp  → Li p EÚjÕRp (A) Y. TôouY«p UôteLs HúRàm  ùRuThPôp  → ÑjRm ùNnR ©\Ìm Li p çoY¥Rp HtThPôp  → ×ûLêPm úTôX LôQlThPôp,</p> <p><b>Tôm×LY:</b>  Tôm×LY«]ôp HtTÓm LôVm Tôm×LY Gu;úôm,</p>		
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		<p><b>ORÛR® Š;ŕŕN :</b></p> <ul style="list-style-type: none"> <li>* AŭUŠTÓjÖRp</li> <li>* LŏVITHp Tĭš«u úUp Es[ Yŭ[VjŭR ApXŎ CßdLUŏ]</li> <li>ùTŏÚhLŭ[ Al×\TÓjRp,</li> <li>* LŕjR TĭšŭV AŭNVŏUp CÚjRp,</li> <li>* LŏVjŭR ŇjRTÓjR úYiÓm, B]ŏp KÓm ěŭW TVuTÓjR</li> <li>áPŏŎ,</li> <li>* ŇjRUŏ] EXokR Ő ŭV ŭYjŎ LhÓRp</li> </ul> <p><b>UÚjŎY ER@dLŏL LŏjŠÚdĭm úTŏŎ :</b></p> <ul style="list-style-type: none"> <li>* LŕThp CPjšp CÚkŎ AYŭW Al×\TÓjR úYiÓm,</li> <li>* CRV Tĭš«u ,rLŏVm HtThŕÚkRŏp ,rúSŏd; TŎdL ŭYdL</li> <li>úYiÓm,</li> <li>* LŕjR CPjšu úUp LhÓúTŏP úYiÓm,</li> <li>* LŏVjŭR ěßŎ ŭV ŭYjŎ ěPfŭNnRp,</li> </ul> <p><b>ŭNnVáPŏRŭY :</b></p> <ul style="list-style-type: none"> <li>* LŏVmThp CPjŭR ùYhÓRŭX RŏodLŭm,</li> <li>* ®`jŭR E±gŇRŭX RŏojRp,</li> <li>* LhÓYúRŏ. T Lhŕ (A) Ĩ°ŏŏ ETúVŏ; TŭR RŏojRp,</li> <li>* úTŏŭRùTŏÚs Utßm UŎ úTŏu\Ytŭ\ ùLŏÓITŭR</li> </ul>		
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	<p>Tôm×L¥ Utßm ARu ØRÛR®ûV ®[dĭL</p>	<p>6 ¨ªPm</p>	<p>R®odLÜm,  <b>SônLY:</b>      ùTôÕYôL TX SônLs L¥jÕ ÆßLôVeLs HtTÓmPúTôÕ      ØRÛR®«u êXm ùRôttßYûR R®odLXôm,  <b>ØRÛR® £;táN:</b>      * LôVjûR ÑjRm ùNnÕ KÓmç¬p LZYúYiÓm,      * LôVjßp CÚkÕ CWjRjûR ùY°úVt\Üm. (A) ©¬kÕ GÓdL      úYiÓm,      * Y ¨YôW'ûV ùLôÓdLÜm,    <b>SônLY ùRôttßdLô] A±ĭ±Ls :</b>      * LôVeL°p Y ¨ĭkÕ LôQITÓm,      * L¥jR CPjßp ¥YkÕ Åe; LôQITÓm,      * L¥jR CPjßp °r Utßm çouLôojÕ LôQITÓm,      * EPpùYIT¨ûX A§L¬dĭm,      *¨Qço Sô[eLs ÅdLUûPRp,    <b>YI×úSôn :</b>      YI×úSôn GuTÕ JÚ U²R²u EPp LhÓTÓjR Ø¥VôÕ, A§L      ùYIT¨ûX«p EiPôĭm YI× ùTôÕYôL ĨZkûRL°Pm LôQXôm,</p>		
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10		<p><b>YI×úSôndLô] ØRÛR® :</b></p> <p>→ CRu Ød;VjÕYm LôVm YWôUp RÓITÕ,  → úSôVôûV TôÕLôITô] CPj§p TÓdL ûYjRp,  → ¾eİ®ûX®đĩm Utßm áoûUVô] ùTôÚhLû[ Aq®Pj§p  CÚkÕ Al×\TÓjRp,  → CÚdLUô] EûPLû[ R[ojRp  → ØRÛR® A°ITY~u TdLm §ÚITÛm,  → ĨZkûRûV Ri½Wôp ÕûPjÕ ĨZkûR«u ùYIT~ûXûV  ùUÕYôL ĨûjRp,  → ĨZkûR«u Õ'Lû[ ALt\Ûm,  → úSôVô° ĨQm AûPÛmYûW AYoLs AÚ;úXúV CÚdLÛm,</p> <p><b>ùNnVd áPôRûY :</b></p> <p>→ úSôVôûV Ñt± TôÕLôl× YûXVm AûUjRp,  → TtLpđĩ CûP«p HúRàm ùTôÚhLû[ ûYjRp,  → BTjRô] ~ûX«p úSôVô°ûV AûNdL áPôÕ  → Yôn Y~VôL GûRÛm ùLôÓdL áPôÕ,</p> <p><b>EQÛ SfÑRuûU</b></p> <p>EQÛ SfÑRuûU GqYôß YÚ;u\Õ Gu\ôp Rôu Euàm  EQ®úX ApXÕ Ĩ°oTô]j§úX ûYWv. Tôd¼~Vô. JhÓi'  HtTÓm ®`RuûUûV EQÛ SfÑRuûUđĩ LôWQm,</p>	®[dLm	LY²jRp
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11	<p>SônLŸ Utßm ARu ØRÛR®ûV TjRp</p> <p>Yl× úSôn Utßm ARu ØRÛR®ûV ®Y-dL</p>	5 "aPm	<p><b>LôW Ls :</b>  → Tôd¼-Vô. ûYWvLs  → JhÓi Ls  → JqYôR EQÜLs</p> <p><b>A±İ±Ls</b>  → İUhPp  → Yôkş  → Y«tßúTôđĩ  → LônfnP  → RûXY  → Y«tßY  → EPp ç-u A[Ü İû\jRp,</p> <p><b>EQÜ SfÑRuûUdLô] ØRÛR®</b>  → İUhPp Utßm YôkşûV LhÓTÓjÖRp  → Yôkş "tĩm YûW şWY EQûY R®odLÜm,  → ço BLôWm Utßm TZeLs. NôRm. ùWôhŸûV EQ®p  úNojÖd ùLôs[Üm,  → EQ®p úNôPôûY úNoITRôp YôkşûV RÓdLXôm,  → YÚjR Utßm LôWUô]. C²ITô] EQ®û] R®odLÜm,  → UÚjÖY-u BúXôNû] Cu± İUhPp Utßm Y«tß úTôđ;tLô]  UÚkÖLs EhùLôsYûR R®odLÜm,</p> <p><b>EPu ço A[Ü İû\RûX RÓdĩm Öû\Ls :</b></p>	®[dLm	LY²jRp
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12		<p>6<sup>aa</sup>Pm</p> <p>→ KnÜ Utßm A§LUô] çûW EhùLôpÛRp  → 24 U' úSWjstİs Yôk§ Utßm Y«tßlúTôdİ "tL®pûX Gu\ôp  NodLûW Utßm El× Ri½ûW ùLôÓjRp,  → Jú Pm[o A[Ü (200ml) LôVûYjR °RUô] ç¬p Jú Ô°  AÛ°fûN TZNôWjûRÛm Utßm Jú EhÿûL NodLûW Utßm  El× LXkR çûW AÚİRp,</p> <p><b>R®odL úYiYV Y°Öû\Ls :</b></p> <p>→ Ñj§L-dL TPôR Tôp Utßm Tôp NôokR  EQÛLû[ R®ojRp,  → ETúVôjđİm Øu Utßm Yôeİm Øu EQ®u LôXYûW  úRoûY N¬TôojRp,  → ÖoSôt\m Es[ EQÛ Utßm ùLhÓlúTô] EQûY R®ojRp,  → İÓûY Ut\m úLuLp Es[ EQûY R®ojRp,</p> <p><b>GlúTôÖ UÚjÖY¬u ER® úRûY ?</b></p> <p>→ êuß SôhLþđİ úUp A±İ± CÚkRôp,  → LPp EQÛ ApXÖ égûNLs EhùLôpÛm úTôÖ,  → Lônfnp A±İ± CÚđİmúTôÖ,  → UXj§p CWjR L£Û LôQlThPôp  → ùRôPof£VôL Yôk§ CÚkRôp  → ço A[Ü İû\YRtLô] A±İ± LôQlThPôp,</p>	®[dLm	LY²jRp
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13,	EQŮ SfÑjRuûUÛm ARu ØRÛR®ûVÛm ®[dĬL	6 ¨ªPm		®[dLm	LY²jRp
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