



UNIVERSITI MALAYSIA SARAWAK
Faculty of Medicine and Health Sciences

FINAL PROFESSIONAL EXAMINATION
MD Degree

Session 2005/2006

MODIFIED ESSAY QUESTIONS
(MEQs)

May 2006

Time: 2 hours 30 minutes

Date : Monday, 08 May 2006
Time : 8:30 a.m. – 11:00 a.m.
Venue : FPSK, UNIMAS, Lot 77, Kuching

INSTRUCTIONS:

1. There are FIVE (5) MEQs.
2. Write your answers clearly in the space provided. DO NOT write outside the space. Take care that handwriting is legible.
3. There are different parts in each MEQ and each part is in a different coloured sheet.
4. After completing one part (of one colour) leave it facing down in the box provided and go on to the next part of a different colour.
5. After opening the next part, DO NOT go back to the previous one.
6. Each subsequent part may be opened only after putting aside the previous one.
 Write down your Student No. on every page.
No part of this examination booklet should be taken away from the examination room.
 Please fill up your attendance sheet.

This examination paper contains 26 pages.

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UNIVERSITI MALAYSIA SARAWAK
Faculty of Medicine and Health Sciences

P.KHIDMAT MAKLUMAT AKADEMIK
UNIMAS



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Medicine Programme Session 2005/2006 Year 5
Final Professional Examination
Mon. 08/05/2006 [8:30 a.m. – 11:00 a.m.]

MEQs

Student No.: _____

Question 1

Part I

(6 minutes)

A 62-year-old man, a known case of hypertension for the past 20 years, complained of difficulty in walking recently. His height is 167 cm and weight 75 kg. He is on antihypertensive drugs like amlodipine and prazosin. He has an orthopaedic clinic appointment for his painful knees. Cheques signed by him have been rejected by the bank recently. Other details of his history were not available.

1. Based on the given scenario, list **THREE** possible causes for his difficulty in walking.

(3 marks)

- (i) _____
- (ii) _____
- (iii) _____

2. List **THREE** most relevant questions you would ask in order to find out the reasons for his difficulty in walking.

(3 marks)

- (i) _____
- (ii) _____
- (iii) _____

MEQs

Student No.: _____

Question 1 (Continued)

Part II

(8 minutes)

A 62-year-old man - hypertension 20 years - complained of difficulty in walking recently. - height is 167 cm and weight 75 kg - taking antihypertensive drugs like amlodipine and prazosin - orthopaedic clinic appointment for his painful knees - cheques signed by him rejected by the bank recently - other details of the history were not available.

On further questioning and examination, the following facts were revealed:

- He had the knee pains for a long time but was able to walk around even though it would aggravate the pain.
- He had experienced exertional dyspnoea and was unable to climb steps beyond one floor.
- Dizziness was not a major problem.
- He had tremors of both the hands which had been getting worse, but there was no rigidity.
- The weakness on the right side of the body was sudden in onset and was noticed the previous morning upon waking up.
- His speech was unaffected and he was right handed. No sensory deficit was detected.
- His blood pressure was 180/106 mm Hg, pulse regular and 80/min.
- There was hypotonia in his right limbs.
- Muscle power was 2/5 in the distal joints and 3/5 in the proximal joints on the right side and 5/5 on the left side.
- Tendon reflexes were absent on the right side, but normal on the left side.
- His plantar reflex was extensor on the right and flexor on the left.

3. Interpret the clinical features and give a comprehensive diagnosis.

(4 marks)

MEQs

Student No.: _____

Question 1 (Continued)

Part II (continued)

4. List **FOUR** most relevant investigations you would request with reasons. (2 marks)

	Investigation	Reason
(i)		
(ii)		
(iii)		
(iv)		

5. Briefly explain the hypotonia and the hand tremors in this patient. (2 marks)

MEQs

Student No.: _____

Question 1 (Continued)

Part III

(10 minutes)

A 62-year-old man - hypertension 20 years - difficulty in walking recently. – height 167 cm and weight 75 kg - taking antihypertensive drugs like amlodipine and prazosin - orthopaedic clinic appointment for painful knees - cheques signed by him rejected by the bank recently - had the knee pains for a long time but was able to walk though aggravate the pain - exertional dyspnoea - unable to climb steps beyond one floor - dizziness not a major problem - tremors of both the hands getting worse - no rigidity – sudden onset of weakness on right side body and noticed the previous morning on waking up - speech unaffected - right handed - no sensory deficit - blood pressure 180/106 mm Hg - pulse regular and 80/min - hypotonia right limbs- muscle power 2/5 in distal joints and 3/5 in proximal joints on the right side and 5/5 on the left side -tendon reflexes absent on the right side, but normal on the left side - plantar reflex extensor right and flexor left.

The CT brain on admission did not show any haemorrhage in the brain. There was no midline shift. The neurological diagnosis was a lacunar infarct. His echocardiogram showed concentric left ventricular hypertrophy. No thrombus was detected in the cardiac chambers. ECG was consistent with the echo findings of a normal sinus rhythm.

His fasting blood glucose on two occasions were 7.2 mmol/L and 7.9 mmol/L. His fasting lipid profile was total cholesterol 6.4 mmol/L, triglycerides 2.4 mmol/L, HDL cholesterol 0.8 mmol/L and LDL cholesterol 3.2. His blood pressure remained moderately elevated.

6. Define lacunar infarct.

(1 mark)

7. What is the most likely aetiopathology of the stroke in this patient?

(1 mark)

MEQs

Student No.: _____

Question 1 (Continued)

Part III (continued)

8. (a) Briefly explain why this patient, in spite of being right-handed and having suffered a left brain infarct, escaped aphasia.

(1 mark)

- (b) What kind of lesion would have produced aphasia?

(1 mark)

MEQs

Student No.: _____

Question 1 (Continued)

Part III (continued)

9. Briefly explain the possible mechanism of exertional dyspnoea in this patient. (2 marks)

10. Outline the pharmacological treatment of this patient. (2 marks)

11. Had you seen the patient six months before this incident what could you have possibly done to prevent the present problems? (2 marks)

MEQs

Student No.: _____

Question 1 (Continued)

Part IV

(6 minutes)

A 62-year-old man - hypertension 20 years - difficulty in walking recently. - height 167 cm and weight 75 kg - taking antihypertensive drugs like amlodipine and prazosin - orthopaedic clinic appointment for painful knees - cheques signed by him rejected by the bank recently - had the knee pains for a long time but was able to walk around it would aggravate the pain - exertional dyspnoea - unable to climb steps beyond one floor - dizziness not a major problem - tremors of both the hands getting worse - no rigidity - weakness right side body was sudden in onset and was noticed the previous morning on waking up - speech unaffected - right handed - no sensory deficit - blood pressure 180/106 mm Hg - pulse regular and 80/min - hypotonia right limbs- muscle power 2/5 in distal joints and 3/5 in proximal joints on the right side and 5/5 on the left side - tendon reflexes absent on the right side, but normal on the left side - plantar reflex extensor right and flexor left.

The CT brain showed no haemorrhage – no midline shift – diagnosed as lacunar infarct-Echocardiogram showed left concentric hypertrophy- no thrombus in cardiac chambers-ECG – normal sinus rhythm- fasting blood sugar-7.2 mmol/L and 7.9mmol/L on two occasions- Fasting lipid profile:- total cholesterol 6.4 mmol/L, Triglycerides 2.4 mmol/L, HDL cholesterol 0.8 mmol/L and LDL cholesterol 3.2. His blood pressure – moderately elevated.

After discharged from the hospital, the patient experienced insomnia, loss of appetite, irritability, worrying thoughts and withdrawn behaviours.

12. List **FOUR** possible differential diagnoses.

(2 marks)

- (i) _____
- (ii) _____
- (iii) _____
- (iv) _____

13. What would be the consequences of untreated psychiatric disorder in this patient?

(4 marks)

MEQs

Student No.: _____

Question 2

Part I

(6 minutes)

A 48-year-old female patient who is a mother of five children, came to the Sarawak General Hospital (SGH) with the complaints of itchininess of the skin, dark urine and pale stools for two weeks.

1. List **THREE** differential diagnoses.

(3 marks)

(i) _____

(ii) _____

(iii) _____

2. List **THREE** investigations to support your diagnosis mentioned in Q1.

(3 marks)

(i) _____

(ii) _____

(iii) _____

MEQs

Student No.: _____

Question 2 (Continued)

Part II

(7 minutes)

A 48-year-old female patient - mother of five children, complaints of itchiness of the skin, dark urine and pale stools for two weeks.

The result of the investigations, showed that the patient had multiple gall stones in the gall bladder and a 1 cm stone causing obstruction in the common bile duct (CBD) and an operation was scheduled.

3. List **TWO** complications of prolonged obstructive jaundice.

(1 mark)

(i) _____

(ii) _____

4. List pre-operative management measures to prevent complications of the operation.

(4 marks)

5. List the different options of operative procedures for this patient.

(2 marks)

MEQs

Student No.: _____

Question 2 (Continued)

Part III

(11 minutes)

48-year-old female patient, mother of five children, came to SGH with the complaints of itchiness of the skin, dark urine and pale stool for two weeks. Investigations, showed multiple gall stones in gall bladder and 1 cm stone obstructing CBD.

She underwent open CBD exploration and T-tube was inserted.

6. What is the purpose of inserting T-tube?

(2 marks)

7. List post operative T-tube management procedures.

(3 marks)

8. List **TWO** likely postoperative psychiatric complications and give your possible reasons in this patient.

(3 marks)

	Psychiatric complications	Reason
(i)		
(ii)		

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MEQs

Student No.: _____

Question 2 (Continued)

Part III (continued)

9. Outline the general measures you would take to reduce post-operative psychiatric complications in this patient.

(3 marks)

MEQs

Student No.: _____

Question 2 (Continued)

Part IV

(6 minutes)

48 years old female patient with obstructive jaundice secondary to CBD stone had undergone open CBD exploration and T-tube insertion.

During the postoperative period, it was noted that the drainage from the T-tube was constantly high, about 200 to 300 mls per day. She was however not getting more jaundiced, had no fever and no complaint of abdominal pain.

10. Give ONE possible reason for the new findings?

(2 marks)

11. Name investigation/s you would like to do to confirm the reason stated in Q10.

(1 mark)

12. How would you treat this condition?

(3 marks)

MEQs

Student No.: _____

Question 3

Part I

(6 minutes)

Mdm MY, a 48-year-old Malay lady was referred to the gynaecological clinic for abnormal cervical smear. The results of the cervical smear are as below: -

Specimen is adequate for evaluation.

Abnormal cells were noted as presence of high-grade squamous intraepithelial lesion (HGSIL). Occasional squamous cell carcinoma was noted.

There is presence of human papilloma virus (HPV) infection.

1. What relevant questions regarding the following aspects of her history would you like to ask?

(3 marks)

Current history:

Past Obstetrics history:

Past gynaecological history:

2. Outline your immediate management for this patient?

(3 marks)

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MEQs

Student No.: _____

Question 3 (Continued)

Part II

(6 minutes)

48-year-old Malay lady - abnormal cervical smear - cervical smear result shows: - presence of high-grade squamous intraepithelial lesion (HGSIL) - occasionally squamous cell carcinoma - presence of human papilloma virus (HPV) infection.

On further questioning, Mdm MY had eight deliveries previously and her last pregnancy was eight years ago. She took oral contraceptive pills since her last childbirth.

She had no abnormal menses and her last menstruation was three weeks ago. She denied having post-coital bleeding. Her last cervical smear was last year and was reported as normal.

On examination, no abnormality was detected. The vaginal examination revealed normal cervix and no growth or ulcer was noted.

She was given an appointment for colposcopy in one week's time.

3. Define colposcopy examination.

(2 marks)

4. What information would you be able to obtain from the examination?

(2 marks)

5. What advice would you give to the patient prior to the examination?

(2 marks)

MEQs

Student No.: _____

Question 3 (Continued)

Part III

(6 minutes)

48-year-old Malay lady with abnormal cervical smear colposcopy done.

The results of the colposcopy examination are as follow: -

Vulva and vagina were normal. The transformation zone was clearly seen. There was aceto-white area noted after application of acetic acid. This corresponded with the area of negative Lugol's iodine. Biopsy was taken from the affected side and was sent for urgent histopathological examination (HPE).

A week later, the HPE result was reviewed and the results as follows: -

Specimen was received in three blocks. All the specimens showed increase in cellular activities. The majority of the cells were immature. The nucleus-cytoplasmic ratio was increased. The basement membrane was breached.

Impression: Squamous cell carcinoma of the cervix.

6. Describe briefly the pathophysiology of aceto-white and negative ugol's iodine area. (3 marks)

(i) Aceto-white area: _____

(ii) Negative Lugol's iodine area: _____

7. Outline the management of this patient. (3 marks)

MEQs

Student No.: _____

Question 3 (Continued)

Part IV

(6 minutes)

48-year-old Malay lady - abnormal cervical smear colposcopy examination done - and HPE noted as squamous cell carcinoma of the cervi.

She underwent clinical staging i.e. Examination Under Anaesthesia (EUA) and the disease was stage as staged I A1.

She was told about the nature of her illness and the choice of treatment was discussed. Unfortunately, she broke down during the discussion. She was tearful and appeared to be sad.

8. List SIX factors which may increase the risk of psychiatric complications in this patient.

(3 marks)

- (i) _____
- (ii) _____
- (iii) _____
- (iv) _____
- (v) _____
- (vi) _____

9. Describe measures to reduce psychiatric complications in this patient.

(3 marks)

MEQs

Student No.: _____

Question 3 (Continued)

Part V

(6 minutes)

48-year-old Malay lady a case of squamous cell carcinoma of the cervix stage IA1 and in depression. However, she was mentally stable after referred to psychiatrist.

Mdm MY opted for Werthiem's hysterectomy after a discussion at all the benefits and complications of the difficult treatments available. The operation was performed successfully and she was discharged home one week after the operation.

10. List **TWO** benefits of Werthiem's hysterectomy.

(2 marks)

(i) _____

(ii) _____

11. List **TWO** post-operative complications of Wertheims operation.

(2 marks)

(i) _____

(ii) _____

12. List the different groups of pelvic lymph nodes sampled in Werthiem's hysterectomy.

(2 marks)

MEQs

Student No.: _____

Question 4

Part I

(4 minutes)

Raymond, a five-year-old Iban boy was brought by his parents to the Out-Patient Department of Serian District Hospital with complaints of fever, malaise and anorexia for six days. He had completed his immunisation for his age. He has four siblings. He lives with his parents and grandparents in a single story wooden house.

1. List with reasons, **FOUR** relevant questions that you would ask Raymond's parents that would help you to arrive at a diagnosis.

(4 marks)

	Questions	Reasons / diagnosis considered
(i)		
(ii)		
(iii)		
(iv)		

MEQs

Student No.: _____

Question 4 (Continued)

Part II

(8 minutes)

Raymond - five-year-old Iban boy – fever, malaise and anorexia for six days - completed immunisation for his age – four siblings – lived with his parents and grandparents in a single storey wooden house.

On examination, he looked lethargic and ill but was conscious and cooperative. His temperature was 39⁰C. ENT examination was normal. He had no cyanosis, jaundice, clubbing or oedema. His capillary refill was less than two seconds. He had no meningeal signs.

His liver was palpable 3cm below the right costal margin in the mid - clavicular line. His spleen was palpable 3cm below the left costal margin. Traube space was dull on percussion. He had no ascites. Bowel sounds were normal. Rest of the physical examination was unremarkable.

2. List **TWO** differential diagnoses giving points for and against for each of them.

(4 marks)

	Diagnoses	Points for	Points against
(i)			
(ii)			

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MEQs

Student No.: _____

Question 4 (Continued)

Part II (continued)

3. List with reasons, **FOUR** most relevant investigations that you would do to establish the diagnosis.

(4 marks)

	Investigations	Reasons / diagnosis considered
(i)		
(ii)		
(iii)		
(iv)		

MEQs

Student No.: _____

Question 4 (Continued)

Part III

(18 minutes)

Raymond - five-year-old Iban boy – high fever with no indication of chills in pads I and II, malaise and anorexia six days - completed immunisation for his age – four siblings – lived with his parents and grandparents in a single storey wooden house - on examination – looked lethargic, ill - conscious - cooperative - temperature 39⁰C - ENT examination normal - no cyanosis, clubbing, jaundice or oedema - capillary refill, less than two seconds - no meningeal signs - liver palpable 3cm below the right costal margin in the mid - clavicular line - spleen palpable 3cm below the left costal margin - Traube space dull on percussion - no ascites - bowel sounds normal - rest of the physical examination, unremarkable.

The following are the results of his laboratory investigations:
Haemoglobin 11g / dL.
WBC TC 4000/cmm, DC – N 60% L34% M1% E 5%.
Platelet count – 110,000/cmm.
Blood smear – normocytic, normochromic RBCs, platelets adequate.
Blood culture – *Salmonella typhi* grown on culture, sensitivity report awaited.

He was diagnosed to have typhoid and was started on appropriate treatment. Further questioning revealed that Raymond ate rice from a food stall in his school two weeks prior to this illness.

4. Describe briefly the microscopic pathological findings you expect in the G.I.Tract, liver and spleen of Raymond.

(3 marks)

G.I. Tract: _____

Liver: _____

Spleen: _____

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Question 4 (Continued)

Part III (continued)

5. (a) Name **ONE** serological test that could be used to diagnose typhoid in Raymond.
(b) State the most appropriate time to do this test.

(1 mark)

Serological test	Appropriate time to do the test

6. (a) List **TWO** antibiotics that may be used to treat Raymond.

(1 mark)

- (i) _____
(ii) _____

- (b) State the duration of antibiotic treatment.

(1 mark)

7. List **FOUR** likely complications of typhoid that Raymond might develop.

(4 marks)

- (i) _____
(ii) _____
(iii) _____
(iv) _____

8. State the measures that should be taken before his discharge from the hospital to ensure the safety of his contacts.

(1 mark)

MEQs

Student No.: _____

Question 4 (Continued)

Part III (continued)

9. Discuss briefly, the control measures that the Communicable Disease Team of the Ministry of Health should perform in Raymond's house.

(3 marks)

10. Discuss the actions that the Food Quality Control Team could take against the owner of the food stall in Raymond's school.

(2 marks)

11. If a food handler in the food stall is found to be a chronic carrier for typhoid, how would you treat her/him?

(2 marks)

MEQs

Student No.: _____

Question 5

Part I

(8 minutes)

A 6-year-old boy was admitted to the ward with a history of pain and swelling of the right leg associated with fever of two days' duration.

1. State **THREE** likely causes.

(3 marks)

(i) _____

(ii) _____

(iii) _____

2. State **THREE** relevant *local signs* that you would want to elicit in this patient.

(3 marks)

(i) _____

(ii) _____

(iii) _____

3. State with reasons **TWO** *firstline* blood investigations that you would ask for as well as the expected results for each.

(2 marks)

	Blood Investigations	Reasons	Expected Result
(i)			
(ii)			

MEQs

Student No.: _____

Question 5

Part II

(15 minutes)

6-year-old boy - pain and swelling right leg - fever for two days.

A provisional diagnosis of acute haematogenous osteomyelitis was made.

4. How is the diagnosis confirmed?

(2 marks)

5. Describe the pathogenesis of acute haematogenous osteomyelitis.

(8 marks)

6. Discuss the principles of antibiotic therapy in this patient.

(5 marks)

MEQs

Student No.: _____

Question 5

Part III

(7 minutes)

6-year-old-boy - pain and swelling right leg - fever for two days - acute haematogenous osteomyelitis

Acute haematogenous osteomyelitis is one of the nosocomial infections which is prevalent in many countries.

7. (a) List **FOUR** common organisms that cause nosocomial infections. (2 marks)

- (i) _____
- (ii) _____
- (iii) _____
- (iv) _____

(b) Briefly discuss the reasons why nosocomial infections are current important public health problems. (5 marks)
