

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (PSYCHIATRY)
JUNE 2015

Date:- 26th June 2015

Time : 1.00 p.m.-4.00 p.m.

Answer all 10 questions.

Answer each question in a separate book.

ESSAY PAPER

1. A 50 year old man presents with impaired level of consciousness for 3 days. He also has cough and fever for one week. He has been diagnosed as having diabetes mellitus and hypertension for the last one month and is on captopril and tobutamide.

On examination he is disoriented and unable to obey commands. His pulse rate is 80 per minute and blood pressure is 100/70 mmHg. Crepitations and bronchial breathing are heard over the left lower chest. There are no focal neurological signs. His respiratory rate is 30 per minute and oxygen saturation is 95%.

Investigations are shown below. (Reference range is shown within brackets)

White Blood cells	18,000/mm ³	(4,000-11,000)
Neutrophils	84%	
Lymphocytes	14%	
Haemoglobin	13.9 g/dl	(13 - 16)
Platelets	330 x 10 ⁹ /l	(150- 450)
Blood urea	2.2mmol/l	(2.5 - 6.5)
Serum creatinine	0.7 mg/dl	(0.7-1.1)
Serum sodium	118 meq/l	(135-145)
Serum potassium	3.8 meq/l	(3.5-5.5)
Random blood sugar	150 mg/dl	(70-140)
Chest X ray	left lower zone consolidation	

- 1.1. What is the most likely cause for impairment of consciousness ?
(10 marks)
 - 1.2. State two (02) likely precipitants for the condition mentioned in 1.1. of this patient, giving reasons. (20 marks)
 - 1.3. List three (03) other investigations necessary to evaluate the condition mentioned in 1.1. giving reasons. (15 marks)
 - 1.4. How do you assess the severity of the chest condition ? (10 marks)
 - 1.5. How do you manage this patient within the first 24 hours of admission ? (45 marks)
2. Write notes on ;
- 2.1. Diagnosis of acute coronary syndrome. (40 marks)
 - 2.2. Metabolic syndrome. (30 marks)
 - 2.3. Vitamin B12 deficiency. (30 marks)
3. Describe the psychological basis of the following ;
- 3.1. Mr. Fernando is due to fill his tax return. He is tempted to falsify information for financial benefits. However he doesn't want to do so.
 - 3.2. A patient who was on medication for schizophrenia had developed a wound on his left buttock and found it difficult to sit because of the discomfort caused by the wound. However, some of the staff members interpreted this behavior as "part of his illness".
 - 3.3. Ramani read a description about a man she didn't know. The first paragraph was on desirable qualities and the second was on his undesirable qualities. Ramani interpreted that he was a desirable character. Later she was asked to read a similar description, with an interruption of thirty minutes in between the two paragraphs where she was asked to do some sums. Then her interpretation was that the person was an undesirable individual.

4. Write notes on ;
 - 4.1. Theories of cognitive development in childhood. (60 marks)
 - 4.2. Attachment (40 marks)

5. Write notes on ;
 - 5.1. Gardner's theory of multiple intelligences. (40 marks)
 - 5.2. Emotional intelligence. (30 marks)
 - 5.3. Sternberg's Triarchic theory of intelligence. (30 marks)

6.
 - 6.1. Describe the action of nicotine at the nicotinic receptors. (30 marks)
 - 6.2. Explain how craving and withdrawal symptoms occur in a chronic smoker. (30 marks)
 - 6.3. Describe the mechanism of action of bupropion in cessation of smoking. (40 marks)

7. A case control study is designed to investigate the relationship between cigarette smoking and myocardial infarction.
 - 7.1. Describe the inclusion and exclusion criteria that you would use to select the cases and controls. (30 marks)
 - 7.2. Describe the types of bias that can occur in this study. (30 marks)
 - 7.3. The study found that among 100 cases, 40 were smokers while among 400 controls, 100 were smokers. Calculate the odds ratio in this study. (40 marks)

8.
 - 8.1. Describe consciousness and its assessment. (20 marks)
 - 8.2. Describe different dimensions of unconsciousness. (30 marks)
 - 8.3. Describe signs and symptoms of delirium. (30 marks)
 - 8.4. List five (05) causes of delirium. (20 marks)

9.
 - 9.1. Describe the biosynthesis and regulation of glutamate. (40 marks)
 - 9.2. Describe the glutamate pathways in the brain. (60 marks)

10.
 - 10.1. Draw and label the visual pathway. (40 marks)

 - 10.2. Mark the possible sites of lesions that cause visual field defects on the pathway drawn in 10.1. (20 marks)

 - 10.3. Draw and name the corresponding visual field defects recognised in 10.2. (40 marks)