

Master Copy

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (PSYCHIATRY) – JUNE 2017

Date :- 28th June 2017

Time :- 1.00 p.m. – 4.00 p.m.

Answer all ten (10) questions.

Answer each question in a separate book.

ESSAY PAPER

1. A 70-year-old woman on treatment for hypertension and diabetes presents with progressive loss of appetite, weakness of the body, insomnia and social withdrawal of three weeks duration. She is on propranolol, enalapril, hydrochlorothiazide, gliclazide, and diazepam. She is commenced on fluoxetine 20mg a day. She is brought 4 days later with confusion. On examination she is drowsy and disorientated (Glasgow Coma Scale: E3, V4, M6 = 13/15), and mildly dehydrated. She has no fever, neck stiffness, altered muscle tone or involuntary movement.

1.1. List two (02) likely reasons for her presentation. (10 marks)

1.2. List five (05) urgent investigations you would perform on admission. (20 marks)

The house officer starts her on IV rehydration and a broad-spectrum antibiotic. The next day she is found to be more confused.

1.3. What is the IV fluid that would most likely have been given to her? (10 marks)

1.4. Describe two (02) possible ways in which this IV fluid may have caused worsening in her level of consciousness, giving pathophysiological mechanisms. (30 marks)

1.5. What changes to the long-term medications would you consider in this patient? (30 marks)

Contd..../2-

2.

- 2.1. Draw and label a diagram to illustrate blood supply to hypothalamus and pituitary gland. (30 marks)
- 2.2. Describe anatomical relationships of pituitary gland with clinical significance of those relationships. (40 marks)
- 2.3. List the signs and symptoms of pituitary adenoma. (30 marks)

3. Write notes on the following

- 3.1. Primary delusions (40 marks)
- 3.2. Loss of ego boundaries (30 marks)
- 3.3. Confabulation (30 marks)

4.

- 4.1. Outline the classification of disorders of thinking. (30 marks)
- 4.2. Briefly describe three features of formal thought disorder as given by Schneider. (40 marks)
- 4.3. Write on the following disorders of speech (30 marks)
 - 4.3.1. Talking past the point
 - 4.3.2. Neologisms
 - 4.3.3. Mutism

5. Explain the psychological basis of forgetting in the following situations

- 5.1. Sarath cannot recall the reasons for photosynthesis because he was day dreaming when it was discussed in class. (25 marks)
- 5.2. Nimali hates her job at the hospital as a nurse and often forgets when she is scheduled to work. (25 marks)
- 5.3. Rani studied history on Sunday morning and sociology on Sunday evening. On Monday morning she struggled with her history paper because she keeps mixing up her history facts with sociology facts. (25 marks)
- 5.4. During an exam you cannot recall the name of a medicine that you are sure you know. You feel you are on the verge of remembering it but you cannot quite come up with it despite knowing the letter it starts with. Later, on your way home, the name of the medicine suddenly comes to your mind. (25 marks)

Contd...../3-

6. Explain the psychological basis of the following situations

- 6.1. People tend to eat more and many types of food when they are presented with a variety of food at a buffet rather than when only one or two types of food are available (30 marks)
- 6.2. Preschool children were interviewed repeatedly and asked to remember if their fingers had ever been caught in a mousetrap. They were asked to think hard about the event and to visualize the scene. When a different interviewer asked them 10 weeks later, 60% of the children provided false narratives, telling a story about getting their fingers caught and behaving as if it really happened. (40 marks)
- 6.3. It has been found across 37 cultures that men will be interested in mating younger women, whereas women will be interested in mating with older men. (30 marks)

7. Describe the following –

- 7.1. Neuronal biosynthesis and metabolism of acetylcholine. (50 marks)
- 7.2. Receptor subtypes and the distribution of acetylcholine. (20 marks)
- 7.3. The cholinergic hypothesis of memory dysfunction. (30 marks)

8. Describe the adverse effects arising due to the following drug interactions and explain the pharmacological basis of the interaction (25 marks each)

- 8.1. Lithium and thiazide diuretics
- 8.2. Clomipramine and selective serotonin reuptake inhibitors (SSRI)
- 8.3. Lamotrigine and sodium valproate
- 8.4. Donepezil and benzhexol

9. Describe the pharmacological basis for the action of the following drugs in the given conditions

(25 marks each)

9.1. Memantine in dementia

9.2. Atomoxetine in attention deficit hyperactivity disorder (ADHD)

9.3. Selective serotonin reuptake inhibitors (SSRI) in depressive disorder

9.4. Lithium in bipolar disorder

9.5. Melatonin in jet lag

10. Explain what is meant by the following statements in journal articles.

(25 marks each)

10.1. Compared with non-smokers, the smokers have a risk ratio of 2.4 for developing gastritis.

10.2. Prevalence of diabetes among females was 11.4% (95% CI 1.6-21.1) and in males 16.7% (95% CI 6.7-26.4).

10.3. The median is reported rather than the mean as the data is skewed to the right.

10.4. This randomised controlled trial used intent-to-treat analysis with last observation carried forward.