

CSM—51/22

MEDICAL SCIENCE

PAPER—II

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Time : 3 Hours

Full Marks : 250

The figures in the right-hand margin indicate marks.
*Candidates should attempt **any 10 (ten)** questions of **GROUP—A** with word limit of 250 words and should attempt **any 5 (five)** questions from **GROUP—B** with word limit of 300 words.*

GROUP—A

Answer *any ten* questions :

15×10=150

1. A 19-year-old nursing student has been brought to the emergency in a confused state. She had been complaining of headache for the last few days and had vomited a few times the day before. Her roommate reports that she had fever for at least 10 days. Describe your immediate management and how you will investigate her. 15
2. A 72-year-old lady has been brought to the hospital as her family noticed her to be confused over the last few days. Preliminary investigations reveal normal complete blood count, liver function test and renal function. However, her sodium level is 119 mmol/L. Describe how you will manage her. 15
3. List the causes of fever with splenomegaly. Describe your approach to the patient and how you will investigate him/her to come to a diagnosis. Describe the management of visceral leishmaniasis. 5+5+5=15
4. Describe how to interpret an arterial blood gas report. What is anion gap? Mention the important causes of metabolic acidosis with normal and increased anion gas respectively. 4+3+4+4=15

5. A 22-year-old student has been presented with a three day history of bilateral lower limb weakness. Describe how your clinical examination will help you to distinguish between upper motor neuron and lower motor neuron weaknesses. Give two examples of each. What is the typical presentation of Guillain-Barré syndrome? What investigations will help you to confirm this diagnosis? Describe its treatment. 4+2+4+3+2=15

6. A 72-year-old chronic smoker presents with 2 months history of gradually worsening shortness of breath. Examination reveals reduced vocal resonance, dullness on percussion and absent breath sounds on the lower half of right side of the chest. How will you investigate him further? 15

7. A seventeen-year-old girl has been brought to the emergency by her parents in a confused state. They report that she had been feeling very thirst for a few weeks and was very lethargic for the last few days. She had vomited twice earlier today. On initial assessment, her blood pressure is 92/52 mm Hg, heart rate is 116/minute, oxygen saturation is 98% on room air and respiratory rate is 34/minute. Her capillary blood glucose is 472 mg/dL. What is the likely diagnosis? How will you confirm your diagnosis? Describe her immediate and long-term management. 2+4+5+4=15

8. Describe the management of dyspepsia. 15

9. Describe the diagnosis and management of acute cholecystitis. 15

10. Describe the treatment of plaque psoriasis. 15

11. Several cases of early onset of dementia have been reported from a neighbouring district. It is suspected that this may be due to the high prevalence of ganja smoking in that district. Another suggestion is that it may be due to exposure to a locally manufactured pesticide being used by several farmers in that area. Suggest, how you can investigate whether either of these factors is associated with the condition. 15

12. What are the components of tetralogy of Fallot? Describe its clinical features and management. 4+5+6=15

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GROUP—B

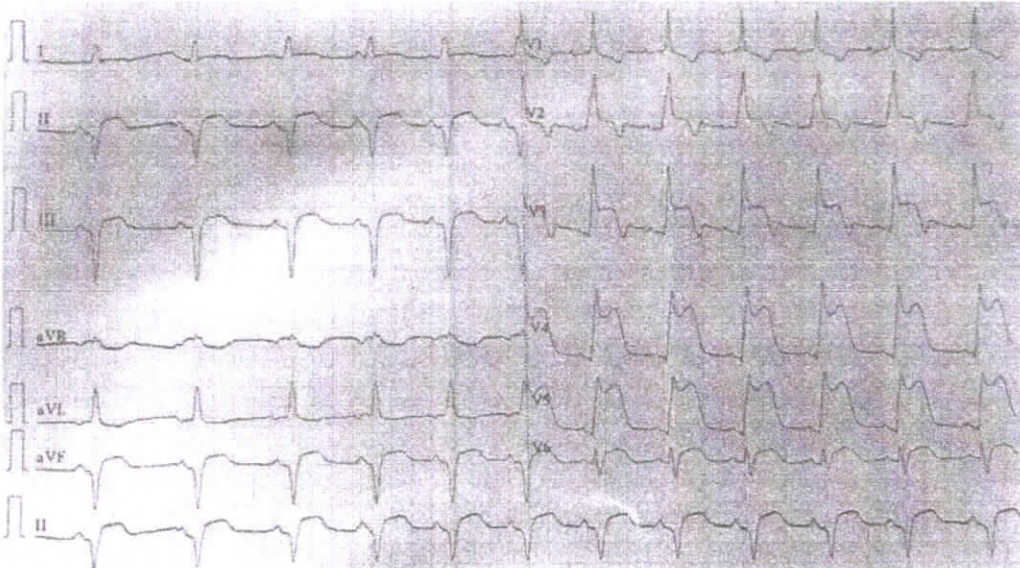
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Answer any **five** questions :

20×5=100

- 13.** You are posted at a district hospital. The nearest PCI enabled centre is six hours away. A 68-year-old man with type II diabetes has been presented with three hour history of central chest discomfort which he describes as a heavy weight on his chest. There is no radiation. His vitals are : Blood pressure 150/90 mm Hg, heart rate 82/minute, respiratory rate 22/minute and oxygen saturation 93%.

Cardiorespiratory examination is unremarkable. Abdomen is soft and non-tender. His ECG is given below :



Describe the ECG. What is the diagnosis? Describe the immediate management. What complications can he develop? Describe the long-term management. 4+2+5+4+5=20

- 14.** What are the commonly used formulations of insulin and insulin analogues? Briefly mention the salient features of their pharmacokinetics and their clinical utility. What are the commonly prescribed insulin regimes for the management of diabetes? Mention their relative advantages and disadvantages. List the common problems encountered in insulin therapy. 2+8+2+4+4=20
- 15.** What do you understand by type 1 and type 2 respiratory failure respectively? Describe the management of acute exacerbation of asthma. 8+12=20

- 16. (a)** A 50-year-old truck driver with a history of alcohol excess has been brought to the emergency with two episodes of haematemesis. On examination : BP 88/40 mm Hg, heart rate 116/minute, mild icterus and shifting dullness in abdomen. Describe his management. 10
- (b)** What are the precipitating factors for Hepatic Encephalopathy (HE) in a patient with chronic liver disease? Outline the management of HE. 10
- 17.** What are the risk factors and neurological complications of severe unconjugated hyperbilirubinaemia in neonates? 10+10=20
- 18.** What is the role of antenatal steroids in the management of preterm birth? What are the commonly used steroid regimens? What are its side effects and contraindications? 8+4+4+4=20

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