

**SS/MBBS-II/PATHO-I/12-24****2024****(December)****PATHOLOGY****Paper-I****Full Marks: 90****Time: 2 hours 50 minutes****The figures in the margin indicate full marks for the questions****Answer all questions**

1. Define inflammation. What are the different types of inflammation? Discuss the sequence of vascular events in acute inflammation. 2 + 2 + 4 = 8

2. A 62-year-old woman attended the Clinical Haematological Department with weakness, neurological complaint of tingling, numbness and glossitis. On routine blood examination, her haemoglobin was 7 gm% and MCV was 115 fl.

1 + 4 + 3 = 8

(a) What is your provisional diagnosis?

(b) Describe the PBS and bone marrow finding in this case.

(c) What are the other laboratory tests you can do to confirm your diagnosis?

**3. Write short notes on the following:**

**5 × 8 = 40**

(a) Indications of bone marrow biopsy

(b) Autophagy

(c) Type II hypersensitivity reaction

(d) Mitochondrial (intrinsic) pathway of apoptosis

(e) Difference between dystrophic and metastatic calcification

- (f) Clinicopathologic category of systemic amyloidosis
- (g) Klinefelter's syndrome
- (h) Role of empathy in patient care

**4. Write on/Answer the following in short:****2 × 9 = 18**

- (a) Amniotic fluid embolism
- (b) List the stains and staining characteristics of amyloid.
- (c) Components of Crohn's complex
- (d) Classify cytogenetic disorder.
- (e) Enlist the differential diagnosis of childhood round cell tumour.
- (f) Methodology of exfoliative cytology and its utility
- (g) Mutations in thalassemia
- (h) Two roles of MHC (Major Histocompatibility Complex) in immunity
- (i) Name at least four components made from one unit of blood.

5. Classify the haemolytic anaemias. Describe the pathogenesis and laboratory investigations for sickle cell disease.

**3 + 3 + 2 = 8**

6. A 22-year-old boy driving his car at 130 km/hour without a fastened seat belt met with a road traffic accident and was brought in emergency and admitted to ICU. He was found to be agitated and was complaining of abdominal pain. On examination, his abdomen was markedly distended, blood pressure was 90/60 mm of Hg and pulse rate was 130/minute. His hands and feet were cold and his legs mottled.

**1 + 3 + 4 = 8**

- (a) What is your probable diagnosis?
- (b) Describe the etiopathogenesis of the condition.
- (c) Discuss the pathological changes in the lungs and heart.

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