

Question Paper

Exam Date & Time: 06-12-2022 (10:20 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION SECOND MBBS DEGREE (CBME) EXAMINATION – DECEMBER 2022 SUBJECT: PATHOLOGY - PAPER I

Marks: 80

Duration: 160 mins.

All questions are compulsory.

Illustrate your answers with diagrams flowcharts, tables, etc., wherever necessary.

1. Define neoplasia. With the help of a schematic diagram describe the metastatic cascade involving the hematogenous spread of a tumour. Enlist the pathways of spread of a tumour (2+6+2 = 10 marks)

2. A 6-year-old female child presented to the pediatric OPD with easy fatigability and breathlessness on exertion, delay in developmental milestones and progressive jaundice for the past 2 years. The mother also gave a history of multiple blood transfusions in the past year. On examination, she had severe pallor and icterus, with mild clubbing. A moderate splenomegaly was also demonstrated. The blood work-up revealed the following parameters: RBC count - 1.2million/cu.mm, Total WBC count-12,200/cu.mm, platelet count-0.75 lac/cu.mm, hemoglobin-6.4gm% and reticulocyte count of 11.8%. The total and indirect bilirubin were markedly elevated.
 - 2A. What is the possible diagnosis in this case? (2)
 - 2B. With the aid of a suitable diagram, describe the pathophysiology of this clinical condition. (6)
 - 2C. Describe the laboratory test for confirmation of this condition with relevant findings (2)

3. **Short Notes:**
 - 3A. Describe the Reed-Sternberg cell (RS cell) and its variants (4)
 - 3B. Discuss the morphology of tuberculous lymphadenitis (4)
 - 3C. Contrast the favorable and unfavorable prognostic factors in acute lymphoblastic leukemia (4)
 - 3D. Discuss the pathogenesis of chronic myeloid leukemia (4)
 - 3E. Explain the salient laboratory investigation findings in Hemophilia A (4)
 - 3F. Enumerate ANY FOUR complications of mismatch blood transfusion (4)
 - 3G. Tabulate the pathologic features of dry and wet Gangrene (4)
 - 3H. Describe the features of dystrophic calcification with suitable examples (4)
 - 3I. Explain ANY TWO complications of tissue repair (4)
 - 3J. Describe the fate of a thrombus (4)
 - 3K. Describe the pathophysiology of Gaucher's disease (4)
 - 3L. Classify amyloidosis (4)
 - 3M. Illustrate the sequence of events in chemical carcinogenesis (4)
 - 3N. Explain the morphology of Fatty liver (4)
 - 3O. Enumerate the salient clinical features in Rickets (4)



Question Paper

Exam Date & Time: 08-12-2022 (10:20 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION SECOND MBBS DEGREE (CBME) EXAMINATION – DECEMBER 2022 SUBJECT: PATHOLOGY - PAPER II

Marks: 80

Duration: 160 mins.

All questions are compulsory.

Illustrate your answers with diagrams flowcharts, tables, etc., wherever necessary.

- 1) A 60-year-old man with history of alcohol abuse, complained of loss of weight and appetite, weakness and increasing abdominal girth. He also gave history of vomiting blood a week ago. On examination, the patient had jaundice, ascites and hemorrhoids. Lab investigations revealed increased bilirubin and aminotransferase levels. Ultrasound abdomen showed a shrunken liver and splenomegaly.
 - 1A. What is the diagnosis? (1)
 - 1B. Describe the etiopathogenesis of this condition. (4)
 - 1C. Describe the gross and microscopic features of the liver in this condition. (5)

2. Define atherosclerosis. Enumerate the risk factors. Describe the pathogenesis. List the gross lesions of atherosclerosis. (2+2+4+2 = 10 marks)

- 3) **Short notes**
 - 3A. Describe the evolution of microscopic changes in myocardial infarction. (4)
 - 3B. List the complications of Diabetes Mellitus. (4)
 - 3C) A 60-year-old man, a heavy smoker, presented with productive cough. On examination, he was thin, had a ruddy complexion and a barrel-shaped chest. He sat leaning forward with his lips pursed to facilitate his breathing. What is the diagnosis? Enumerate the types of this condition. (4)
 - 3D) Illustrate the adenoma- carcinoma sequence of carcinoma colon (4)
 - 3E) Describe the gross and microscopic features of renal cell carcinoma. (4)
 - 3F) Define aneurysm and discuss the types of aortic aneurysms (4)
 - 3G) Describe the morphology of carcinoma penis (4)
 - 3H) Gross and microscopy of serous cystadenoma of ovary (4)
 - 3I) Illustrate the outcomes of primary pulmonary tuberculosis (4)
 - 3J) List eight prognostic factors for carcinoma breast (4)
 - 3K) Describe the pathogenesis of chronic pyelonephritis (4)
 - 3L) Briefly discuss the risk factors of endometrial carcinoma. (4)
 - 3M) A 35-year-old woman presented with amenorrhea and weight loss despite increased appetite. Examination revealed exophthalmos, fine resting tremor, tachycardia, and warm, moist skin. Lab tests showed decrease in TSH levels. What is the diagnosis? Describe the pathogenesis of this condition. (4)
 - 3N) Describe the pathogenesis of pyogenic osteomyelitis (4)
 - 3O) Explain the role of androgens in the etiopathogenesis of prostatic carcinoma (4)

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