

Question Paper

Exam Date & Time: 17-Feb-2025 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND PROFESSIONAL YEAR MBBS DEGREE EXAMINATION - FEBRUARY 2025

SUBJECT: PATHOLOGY - PAPER I

(CBME BATCH - REPEATERS)

Marks: 100

Duration: 180 mins.

Section Duration: 20 mins

All questions are compulsory.

Illustrate your answers with diagrams flow charts, tables etc. wherever necessary.

1. A 28-year-old pregnant lady complained of extreme tiredness, tingling and numbness of the extremities. On examination she appeared pale and had sore and red tongue. Lab investigations revealed abnormalities in blood and biochemical parameters.

- 1A) What is the hematological condition in this patient? Justify your diagnosis. (3)
- 1B) Discuss the laboratory investigations and interpretations of the tests that will help in confirming the diagnosis. (7)
- 2) Discuss the etiology, pathogenesis, and fate of a thrombus. (10)
(2+5+3 = 10 marks)

3. Short Notes:

- 3A) Describe the light microscopic and ultrastructural findings in reversible cell injury. (4)
- 3B) Discuss the role of telomerase in ageing. (4)
- 3C) With the aid of a suitable diagram explain the mechanism of apoptosis. (4)
- 3D) Discuss the pathogenesis of Amyloidosis. (4)
- 3E) Illustrate the pathophysiology of Disseminated Intravascular Coagulation with the help of a flow chart. (4)
- 3F) Morphology granuloma in tuberculosis with a suitable diagram. (4)
- 3G) List and interpret the various investigation in sickle cell anemia. (4)
- 3H) Tabulate the differences between transudate and exudate with suitable examples. (4)
- 3I) Enumerate FOUR tumors with its tumors markers. (4)
- 3J) Describe THREE syndromes associated with Wilms tumor. (4)

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| 3K) | Classify the types of acute myeloid leukemia. | (4) |
| 3L) | Types of autoantibodies in systemic lupus erythematosus. | (4) |
| 3M) | Discuss metaplasia with the help of TWO suitable examples. | (4) |
| 3N) | Types of anticoagulants in hematology and its utility in various tests. | (4) |
| 3O) | Classify Hodgkin lymphoma based on morphology. | (4) |

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SUBJECT: PATHOLOGY - PAPER I

(OR 2018-19 & PRIOR BATCH - REPEATERS)

Marks: 100

Duration: 180 mins.

Section Duration: 20 mins

Answer all the questions.

Illustrate your answers with diagrams wherever necessary.

- 1) Describe the metastatic cascade with the aid of a suitable diagram. (10)

2. A 16-year-old girl presented with complaints of easy fatiguability and breathlessness on exertion. She also complained of increased bleeding during menstruation. On examination, she had pallor and spoon shaped nails.
 - 2A) What is the most probable diagnosis? (2)
 - 2B) Discuss the etiopathogenesis of this disease. (4)
 - 2C) Discuss the laboratory diagnosis of this condition. (4)

3. Write short notes on:
 - 3A) Clinical features and chromosomal abnormality in Turner syndrome. (4)
 - 3B) In a tabular format enumerate the differences between benign & malignant tumors. (4)
 - 3C) Enumerate paraneoplastic syndrome with suitable examples. (4)
 - 3D) With the aid of diagram, discuss the features of a granuloma. (4)
 - 3E) List the complications in tissue repair. (4)
 - 3F) Discuss the principal actions of Arachadonic acid metabolites in inflammation. (4)
 - 3G) Describe the clinical features of Sick cell anemia. (4)
 - 3H) Discuss the Transfusion associated acute lung injury. (4)
 - 3I) Discuss the pathogenesis of Beta-thalassemia. (4)
 - 3J) Discuss the stages of Chronic myeloid leukemia. (4)
 - 3K) Enumerate the causes of Thrombocytopenia. (4)
 - 3L) Tabulate the difference between Dystrophic and Metastatic calcification. (4)
 - 3M) With the aid of a suitable diagram describe briefly the intrinsic pathway of apoptosis. (4)

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| 3N) | Describe the factors affecting wound healing. | (4) |
| 3O) | Clinical features and morphology of Gaucher disease. | (4) |

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MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND PROFESSIONAL YEAR MBBS DEGREE EXAMINATION - FEBRUARY 2025

SUBJECT: PATHOLOGY - PAPER II

(CBME BATCH - REPEATERS)

Marks: 100

Duration: 180 mins.

Answer all the questions.

Section Duration: 20 mins

Answer all the questions.

Illustrate your answers with diagrams wherever necessary.

1. A 50-year-old male presented with anaemia, fatigue and weight loss. He also complained of altered bowel habits. Stool test for occult blood was positive. The barium enema revealed filling defect. Endoscopic evaluation revealed an ulceroproliferative mass in the sigmoid colon. Biopsy confirmed the clinical diagnosis and left hemicolectomy was performed.

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| 1A) | What is your diagnosis? | (1) |
| 1B) | Differentiate the gross features of lesions in the right and left colon. | (2) |
| 1C) | Describe the microscopic features with a suitable diagram. | (2) |
| 1D) | Briefly discuss the etiopathogenesis. | (4) |
| 1E) | List the preneoplastic lesions. | (1) |
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| 2) | Describe the etiology, types, pathogenesis and morphology of pulmonary tuberculosis.
(1+1+4+4 = 10 marks) | (10) |
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3. Short Notes:

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| 3A) | Compare the major forms of cardiac valvular vegetations. | (4) |
| 3B) | Explain the complications following acute myocardial infarction. | (4) |
| 3C) | Describe the morphology of asbestosis in lung. | (4) |
| 3D) | Illustrate the stages of pneumonia with diagrams. | (4) |
| 3E) | Explain the morphology of alcoholic liver disease. | (4) |
| 3F) | List the causes of obstructive uropathy. | (4) |
| 3G) | Discuss the urine examination findings in a case of nephrotic syndrome. | (4) |
| 3H) | Discuss the etiopathogenesis of prostatic hyperplasia. | (4) |
| 3I) | A 25year old female presented with vaginal bleeding in the 4 th month of pregnancy. Ultrasound shows a "snow storm" appearance and absent heartbeat. Beta-HCG levels were markedly | (4) |

elevated. Describe the pathogenesis of this condition.

- 3J) Describe the morphology of seminoma. (4)
- 3K) Discuss the differences in CSF findings between pyogenic and viral meningitis. (4)
- 3L) Describe the pathogenesis of nodular colloid goiter. (4)
- 3M) An 18-year-old boy presents with pain and swelling about the left knee since 1 month. Xray shows lifting of the periosteum and a spiculated "sunburst" pattern in the distal femur. What is the diagnosis? Draw the microscopy of this lesion. (4)
- 3N) Describe the morphology of fibroadenoma. (4)
- 3O) List four differences between type I & type II endometrial carcinoma. (4)

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All questions are compulsory.

Illustrate your answers with diagrams, flow charts, tables etc. wherever required.

- 1) Classify the types of Emphysema. Describe the pathogenesis, gross and microscopic features of this disease with suitable diagrams. (10)
(2+3+5 = 10 marks)
- 2) A forty year old obese female presents with recurrent episodes of colicky pain in the right hypochondrium precipitated by intake of fatty food. On examination tenderness was elicited in the epigastrium and right hypochondrium. No mass was palpable. (10)
 - a) What is your diagnosis?
 - b) Describe the morphology of the target organ and pathogenesis of this condition.(2+4+4 = 10 marks)

3. Write short notes on the following:

- 3A) PAP smear. (4)
- 3B) Gross and microscopic features of Basal cell carcinoma. (4)
- 3C) Morphology of atherosclerotic plaque. (4)
- 3D) Tabulate the differences between complete and partial mole. (4)
- 3E) Morphology of infiltrating ductal carcinoma of breast. (4)
- 3F) Pathogenesis of Hashimoto's thyroiditis. (4)
- 3G) Krukenberg tumour. (4)
- 3H) Morphology of the heart in Rheumatic fever. (4)
- 3I) Microscopic features of Wilms tumor. (4)
- 3J) Paget's disease of nipple. (4)
- 3K) Morphology of meningioma. (4)
- 3L) Gross and microscopy features of ulcerative colitis. (4)
- 3M) Malignant nephrosclerosis. (4)
- 3N) Differences between vegetations in Bacterial and Libman-Sacks endocarditis. (4)

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Pathogenesis of *H. pylori* infection.

(4)

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