

MANIPAL ACADEMY OF HIGHER EDUCATION
MD (PATHOLOGY) DEGREE EXAMINATION – OCTOBER 2022
PAPER I

Monday, October 03, 2022

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer all the questions:**

✍ **Long Essays:**

1. Discuss in detail the role of adhesion molecules in inflammation and healing.
(15 marks)
2. Give a detailed description of the pathophysiology involved in the manifestations of AIDS.
(15 marks)

3. **Short notes:**

- 3A. Pathology of Graft Versus Host disease
- 3B. Cytological work up of a case of solitary thyroid nodule
- 3C. VHL gene
- 3D. Squash technique in CNS tumors
- 3E. Liquid based cytology
- 3F. Pathogenesis of thrombus formation
- 3G. Mechanism of apoptosis
- 3H. Viral oncogenesis
- 3I. Classification of Amyloidosis
- 3J. Cell cycle

(7 marks × 10 = 70 marks)



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PAPER II

Tuesday, October 04, 2022

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer all the questions:**

✍ **Long Essays:**

1. Describe in detail the latest advances regarding the pathogenesis of Crohn disease and Ulcerative colitis

(15 marks)

2. Classify Ovarian neoplasms as per WHO guidelines. Discuss in detail mucinous ovarian tumors of borderline malignant potential.

(15 marks)

3. **Short notes:**

3A. IPSID

3B. Testicular biopsy interpretation in infertility

3C. Latest developments in the pathogenesis of Atherosclerosis

3D. Non-neoplastic Gestational trophoblastic disorders.

3E. REAL classification of Lymphomas

3F. Giant cell lesions of bone

3G. Pathogenesis of glomerulonephritis

3H. Discuss the different variants of papillary carcinoma thyroid

3I. Prognostic factors associated with carcinoma of the breast

3J. Papillary solid cystic tumor of the pancreas

(7 marks × 10 = 70 marks)



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PAPER III

Thursday, October 06, 2022

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer all the questions:**

✍ **Long Essays:**

1. Discuss laboratory diagnosis of anemia of chronic disease. (15 marks)

2. Classify plasma cell dyscrasias. Discuss the laboratory diagnosis of multiple myeloma. (15 marks)

3. **Write short notes on:**

- 3A. Types and complications of apheresis
- 3B. Detection of minimal residual disease in acute leukemia
- 3C. Hematological abnormalities associated with Monosomy-7 syndrome
- 3D. Blood basophil count and basophilia
- 3E. Chediak-Higashi syndrome
- 3F. Activated Protein-C resistance
- 3G. Urine sediment examination in upper urinary tract diseases
- 3H. Microscopic examination of Semen in infertility
- 3I. Lactate Dehydrogenase
- 3J. Coombs Test

(7 marks × 10 = 70 marks)



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PAPER IV

Friday, October 07, 2022

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ Answer all the questions:

✍ Long Essays:

1. Discuss the role of immunohistochemistry in small cell tumors of the mediastinum
(15 marks)

2. What are cytokeratins? Discuss the different cytokeratins and their role in differential diagnosis in tumor pathology.
(15 marks)

3. Short notes:

- 3A. Pathophysiology of ageing
- 3B. ALK
- 3C. Role of PTEN in endometrial neoplasia
- 3D. Recent developments in NAFLD
- 3E. PCR
- 3F. Karyotyping
- 3G. Role of electron microscopy in glomerulonephritis
- 3H. Gene therapy
- 3I. Recent developments in the classification of thymic tumours
- 3J. Peripheral hemangioblastomas

(7 marks × 10 = 70 marks)

