

MANIPAL ACADEMY OF HIGHER EDUCATION
MD (PATHOLOGY) DEGREE EXAMINATION – JUNE 2024

PAPER I

Monday, June 10, 2024

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ Answer all the questions:

✍ Long Essays:

1. Discuss microbial carcinogenesis (15 marks)

2. Discuss the role of endothelium in the regulation of homeostasis (15 marks)

3. **Write short notes on:**

3A. IUD associated cellular changes in cervical cytology

3B. Ischemia –reperfusion injury

3C. Immune complex associated vasculitis

3D. Cytologic features of medullary carcinoma thyroid & its differential diagnosis

3E. Chemokines.

3F. PTEN

3G. Mechanism of recognition & rejection of allografts

3H. Mechanism of T cell immunodeficiency in HIV infection

3I. Fixatives in cytology

3J. Cancer cachexia

(7 marks × 10 = 70 marks)



Reg. No.

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PAPER II

Tuesday, June 11, 2024

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

1. Discuss the role of colonic mucosal biopsy in the evaluation of patients with suspected inflammatory bowel disease (15 marks)

2. Discuss the role of kidney biopsy in the evaluation of a patient with rapidly progressive glomerulonephritis (15 marks)

3. **Write short notes on:**

3A. Salivary duct carcinoma

3B. Morphology of lesions in leprosy

3C. Vegetative endocarditis

3D. Mantle cell lymphoma

3E. Mesothelioma variants

3F. Small cell carcinoma of esophagus

3G. Non neoplastic intestinal polyps

3H. Endometrial hyperplasia

3I. Epithelioid trophoblastic tumor.

3J. Liver morphology in extra hepatic biliary atresia

(7 marks × 10 = 70 marks)



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PAPER III

Wednesday, June 12, 2024

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

1. Discuss the quality control protocols in a coagulation lab.

(15 marks)

2. Enumerate the differential diagnosis of micro angiopathic hemolytic anemia. Discuss the clinical and lab approach to differentiate them

(15 marks)

3. **Write short notes on:**
 - 3A. Lab diagnosis of ALL – Burkitt type
 - 3B. Automated reticulocyte parameters and its clinical significance
 - 3C. Single donor platelet transfusion
 - 3D. Immunodeficiency in children
 - 3E. Lab approach to marked eosinophilia
 - 3F. Role of viruses in hematologic disorders
 - 3G. Prolymphocytic leukemia
 - 3H. Newer methods of monitoring a patient with diabetes mellitus
 - 3I. Molecular diagnosis of Myeloproliferative disorders
 - 3J. Semen analysis

(7 marks × 10 = 70 marks)



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PAPER IV

Thursday, June 13, 2024

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

1. Discuss the recent concepts in cancer invasion and metastasis. (15 marks)

2. Discuss the pathology of regenerative and neoplastic hepatic nodules. (15 marks)

3. **Write short notes on:**
 - 3A. Automation in cytology
 - 3B. Medical imaging informatics
 - 3C. Non invasive /minimally invasive autopsy
 - 3D. Limitations of molecular diagnostic techniques
 - 3E. Serrated lesions of the colon and rectum
 - 3F. Microbiome
 - 3G. Mammographic screening
 - 3H. Xenobiotics
 - 3I. Turn Around Time in surgical biopsy diagnosis
 - 3J. Microwave technology in the laboratory

(7 marks × 10 = 70 marks)

