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MANIPAL ACADEMY OF HIGHER EDUCATION
MD (PATHOLOGY) DEGREE EXAMINATION – JUNE 2020
SUBJECT: PAPER I: GENERAL PATHOLOGY, PATHOPHYSIOLOGY,
IMMUNOPATHOLOGY AND CYTOPATHOLOGY

Wednesday, June 03, 2020

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essay:**

1. Describe the pathogenesis of septic shock.

(15 marks)

2. Describe the role of free radicals in cell injury.

(15 marks)

3. **Write short notes on:**

3A. Mechanism of T cell immunodeficiency in HIV infection

3B. Microsatellite instability

3C. Pancreatic cytology

3D. Mechanisms of apoptosis

3E. Inflammatory actions of eicosanoids

3F. Role of retinoblastoma gene in neoplasia

3G. Functions of transforming growth factor in wound healing and repair

3H. Pathogenesis of amyloidosis

3I. Graft versus host disease

3J. Tumor markers

(7 marks × 10 = 70 marks)



MANIPAL ACADEMY OF HIGHER EDUCATION
MD (PATHOLOGY) DEGREE EXAMINATION – JUNE 2020
SUBJECT: PAPER II: SYSTEMIC PATHOLOGY

Thursday, June 04, 2020

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essay:**

1. Discuss the role of endoscopic biopsies in ulcerative colitis.

(15 marks)

2. Classify ovarian tumors. Describe the pathology and immunohistochemistry of sex cord stromal tumors.

(4+7+4 = 15 marks)

3. **Write short notes on:**

- 3A. Non-neoplastic polyps of the colon
- 3B. Histopathology of proliferative breast disease
- 3C. Non neoplastic neuroendocrine proliferations of lung
- 3D. Pathogenesis of Alzheimer's disease
- 3E. Estrogen receptors
- 3F. Sequelae of Hepatitis B infection
- 3G. Granulomatous prostatitis
- 3H. Pathogenesis of thyroid cancers
- 3I. Pathology of mesenchymal tumors of kidney
- 3J. Acute hemorrhagic pancreatitis

(7 marks × 10 = 70 marks)



MANIPAL ACADEMY OF HIGHER EDUCATION
MD (PATHOLOGY) DEGREE EXAMINATION – JUNE 2020
SUBJECT: PAPER III: HAEMATOLOGY, TRANSFUSION MEDICINE (BLOOD
BANKING) AND LABORATORY MEDICINE

Friday, June 05, 2020

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essay:**

1. Discuss blood component preparation and their uses.

(15 marks)

2. Discuss childhood leukemias. Add a note on laboratory approach to childhood leukemias.

(15 marks)

3. **Write short notes on:**

3A. Automation in urine examination

3B. Pathologic features of Waldenstrom macroglobulinemia

3C. Paroxysmal nocturnal hemoglobinuria

3D. Applications of RBC indices

3E. WHO classification of Myelodysplastic syndrome

3F. Advantages and disadvantages of different methods for malaria detection

3G. Type 2 von Willebrand disease

3H. Sideroblastic anemia

3I. Richter Syndrome

3J. Inhibitors in congenital coagulation disorders

(7 marks × 10 = 70 marks)



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MANIPAL ACADEMY OF HIGHER EDUCATION
MD (PATHOLOGY) DEGREE EXAMINATION – JUNE 2020
SUBJECT: PAPER IV: RECENT ADVANCES AND APPLIED ASPECTS

Saturday, June 06, 2020

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essay:**

1. Discuss Adult stem cells and transdifferentiation. Discuss the role of stem cells in tissue homeostasis.

(15 marks)

2. Discuss the role of immunohistochemistry in the differentiation of prostatic carcinoma from its mimics.

(15 marks)

3. **Write Short notes on:**

3A. Minimal residual disease

3B. Histopathological techniques in the detection of fungal infections

3C. Basal - like breast carcinoma

3D. Cytogenetics and prognostic features of rhabdomyosarcoma

3E. PCR and detection of DNA sequence alterations

3F. Transfusion related acute lung injury (TRALI)

3G. Familial tumor syndromes

3H. EBV related lymphoproliferative disorders

3I. BRAF mutations and related tumors

3J. Serrated pathway in colorectal cancers

(7 marks × 10 = 70 marks)

