

MANIPAL UNIVERSITY

MD (PATHOLOGY) DEGREE EXAMINATION – APRIL 2015

SUBJECT: PAPER I: GENERAL PATHOLOGY, PATHOPHYSIOLOGY, IMMUNOPATHOLOGY AND CYTOPATHOLOGY

Wednesday, April 01, 2015

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essay:**

1. Describe the pathogenesis and list the criteria for classification of systemic lupus erythematosus (SLE). Describe the morphologic changes seen in the kidney in SLE.

(4+5+ 6 = 15 marks)

2. Discuss the role of tumor suppressor genes in the development of cancer.

(15 marks)

3. **Write short notes on:**

3A. Cytological evaluation of malignant ascitis

3B. Cytocentrifugation

3C. Mechanisms of Cellular ageing

3D. Class I Major Histocompatibility Complex molecules

3E. miRNAs in oncogenesis

3F. Pathogenesis of tuberculosis

3G. Pathogenesis of septic shock

3H. Signalling mechanisms in cell growth

3I. Procoagulant activities of Endothelium

3J. Mediators of cellular events of acute inflammation

(7 marks × 10 = 70 marks)



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MD (PATHOLOGY) DEGREE EXAMINATION – APRIL 2015
SUBJECT: PAPER II: SYSTEMIC PATHOLOGY

Thursday, April 02, 2015

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essay:**

1. Discuss the pathogenesis of atherosclerosis. (15 marks)

2. Discuss the role of immunohistochemistry in the differential diagnosis of spindle cell soft tissue tumors. (15 marks)

3. **Write short notes on:**

- 3A. Pathology of Barrett's oesophagus
- 3B. Pathogenesis of complications of diabetes mellitus
- 3C. Pathology and differential diagnosis of Mycosis fungoides
- 3D. Differential diagnosis of Papillary lesions of the breast
- 3E. Microscopic colitis
- 3F. Testicular alterations in infertility
- 3G. Pathology of bronchioloalveolar carcinoma of lung
- 3H. Placental site trophoblastic tumor
- 3I. Pathology of focal segmental glomerulosclerosis
- 3J. Pleomorphic xanthoastrocytoma

(7 marks × 10 = 70 marks)



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MD (PATHOLOGY) DEGREE EXAMINATION – APRIL 2015

SUBJECT: PAPER III: HAEMATOLOGY, TRANSFUSION MEDICINE (BLOOD BANKING) AND LABORATORY MEDICINE

Saturday, April 04, 2015

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essay:**

1. Classify chronic myeloproliferative disorders. Discuss the laboratory diagnosis of these lesions.

(15 marks)

2. Discuss quality assurance in the blood bank.

(15 marks)

3. **Write short notes on:**

3A. Paroxysmal nocturnal hemoglobinuria

3B. Clinical features, types and diagnosis of antiphospholipid syndrome

3C. Pathology of refractory cytopenia

3D. Indications and uses of cryoprecipitate

3E. von Willebrand disease

3F. Transfusion- related acute lung injury

3G. Laboratory diagnosis and prognosis of Acute promyelocytic leukemia

3H. Laboratory diagnosis of malaria

3I. Paraproteinemia

3J. Automation in urinalysis

(7 marks × 10 = 70 marks)



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MD (PATHOLOGY) DEGREE EXAMINATION – APRIL 2015

SUBJECT: PAPER IV: RECENT ADVANCES AND APPLIED ASPECTS

Monday, April 06, 2015

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essay:**

1. Discuss recent advances in Hodgkin lymphoma. (15 marks)

2. Discuss recent advances in colorectal carcinogenesis. (15 marks)

3. **Write short notes on:**

3A. Microsatellite instability

3B. Lung cancer diagnosis in the era of targeted therapy

3C. Heparin in anemia of chronic diseases

3D. Bethesda system of reporting thyroid cytology

3E. Types and applications of PCR

3F. Low grade fibromyxoid sarcoma

3G. Mucinous lesions of appendix

3H. BRAF mutated tumors-BRAFomas

3I. Endothelial cells in hemostasis

3J. Recent advances in pathogenesis of chronic pancreatitis

(7 marks × 10 = 70 marks)

