Reg. No.										

MANIPAL UNIVERSITY

MD (PATHOLOGY) DEGREE EXAMINATION – APRIL 2014

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

Tuesday, April 01, 2014

Time: 14:00 – 17:00 Hrs. Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essay:**

1. Enumerate the antithrombotic and prothrombotic properties of the endothelium. Discuss the recent advances in thrombogenesis.

(15 marks)

2. Describe the squash technique and discuss its utility in the diagnosis of central nervous system tumors.

(15 marks)

3. **Write short notes on:**

3A. Angiogenesis in wound healing
3B. Atypical squamous cells of undetermined significance
3C. Role of free radicals in disease
3D. EBV associated diseases
3E. Pathogenesis of HIV infection
3F. Toll-like receptors
3G. Basic mechanisms of autoimmunity
3H. Chemokines
3I. Prion diseases in humans
3J. Role of adhesion molecules in inflammation

(7×10 = 70 marks)

Reg. No.										

MANIPAL UNIVERSITY

MD (PATHOLOGY) DEGREE EXAMINATION – APRIL 2014

SUBJECT: PAPER II: SYSTEMIC PATHOLOGY

Wednesday, April 02, 2014

Time: 14:00 – 17:00 Hrs. Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essay:**

1. Classify bone tumors. Describe the morphology of cartilage-forming tumors of bone.

(5+10 = 15 marks)

2. Classify glomerulonephritis. Describe the histopathology, ultrastructural features and immunofluorescence patterns in glomerular diseases presenting as nephritic syndrome.

(5+10 = 15 marks)

3. **Write short notes on:**

3A. Classification and histopathology of Metaplastic carcinoma of breast
3B. Morphology and prognosis of Borderline serous tumors of ovary
3C. Differential diagnosis of giant cell lesions of bone
3D. Classify tumors of the sella turcica. Describe the morphology of any 2 lesions.
3E. Histopathological and immunohistochemical features of parathyroid adenoma
3F. Definition of Tuberous sclerosis complex and histopathology of 2 associated lesions
3G. Histological patterns of HIV – related lymphadenopathy
3H. Pathology of Cystic diseases of the liver
3I. Pathology of Myoepithelial sialadenitis
3J. Immunohistochemical and ultrastructural features of malignant mesothelioma

(7×10 = 70 marks)

Reg. No.										

MANIPAL UNIVERSITY

MD (PATHOLOGY) DEGREE EXAMINATION – APRIL 2014

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

Thursday, April 03, 2014

Time: 14:00 – 17:00 Hrs. Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essay:**

1. Classify and discuss the lab diagnosis of lymphoproliferative disorders including flow cytometry findings.

(15 marks)

2. Discuss hematopoietic growth factors and their role in hematopoiesis.

(15 marks)

3. **Write short notes on:**

3A. Leukoerythroblastic reaction
3B. Preparation and indications of Fresh frozen plasma
3C. Glanzmann thrombasthenia
3D. Biologic waste management
3E. Pathogenesis of Aplastic anemia
3F. Lab diagnosis of Myeloma
3G. Activated protein C resistance
3H. Transfusion reactions
3I. Lab diagnosis of Hereditary Spherocytosis
3J. Neiman Pick disease

(7×10 = 70 marks)

Reg. No.										

MANIPAL UNIVERSITY

MD (PATHOLOGY) DEGREE EXAMINATION – APRIL 2014

SUBJECT: PAPER IV: RECENT ADVANCES AND APPLIED ASPECTS

Friday, April 04, 2014

Time: 14:00 – 17:00 Hrs. Max. Marks: 100

✍ **Answer ALL the questions:**

✍ **Long Essay:**

1. Describe the molecular genetics and immunohistochemistry of diffuse large cell lymphomas. Discuss aberrant expression of markers.

(15 marks)

2. Discuss the stromal microenvironment and carcinogenesis. Write briefly about epithelial – mesenchymal transition.

(9+6 = 15 marks)

3. **Write short notes on:**

3A. RNA analysis
3B. Obesity and cancer
3C. Cell adhesion proteins
3D. Pleomorphic dermal sarcoma
3E. Prognostic molecular biomarkers of prostatic carcinoma
3F. Precursor lesions of ovarian epithelial malignancy
3G. PEComas of gastrointestinal tract
3H. Nipple discharge cytology
3I. Familial paraganglioma syndrome
3J. Digital pathology

(7×10 = 70 marks)