

April-2001

[KD 113]

Sub. Code : 2010

M.D. DEGREE EXAMINATION.

Branch III — Pathology

(Common to OR/NR/Revised Regulations)

Paper I — GENERAL MEDICAL AND SURGICAL
PATHOLOGY INCLUDING APPLIED ASPECTS

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss the pathology of free radical injury (25)
2. Discuss the aetiopathogenesis, pathology of hypertension. (25)
3. Write briefly on : (5 × 10 = 50)
 - (a) Salivary gland tumours.
 - (b) Immunofluorescence in Diagnostic Pathology.
 - (c) Helico-Bacter Pylori.
 - (d) Hepatitis-C infection.
 - (e) Mesothelioma.

November-2001

[KE 113]

Sub. Code : 2010

M.D. DEGREE EXAMINATION.

(Common to New/Revised Regulations)

Branch III — Pathology

Paper I — GENERAL MEDICAL AND SURGICAL
PATHOLOGY INCLUDING APPLIED ASPECTS

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Describe briefly the various methods of DNA recombinant techniques and their diagnostic applications in histopathology. (25)
 2. Discuss the aetiopathogenesis of septic shock and pathology of different types of shock. (25)
 3. Write briefly on : (5 × 10 = 50)
 - (a) Pathogenesis of Myocardial Infarction.
 - (b) Aetiopathogenesis of peptic ulcer.
 - (c) Microalbuminuria.
 - (d) Paraneoplastic syndromes.
 - (e) Radiation Injury.
-

March-2002

[KG 113]

Sub. Code : 2010

M.D. DEGREE EXAMINATION

(Common to OR/NR/Revised Regulations)

Branch III — Pathology

Paper I — GENERAL MEDICAL AND SURGICAL
PATHOLOGY INCLUDING APPLIED ASPECTS

Time : Three hours , Maximum : 100 marks

Answer ALL questions.

1. Discuss the Pathology and Pathogenesis of Diabetes mellitus. (25)
 2. Discuss renal transplant pathology (25)
 3. Write short notes on : (5 × 10 = 50)
 - (a) Cerebral Malaria.
 - (b) Endomyocardial Biopsy.
 - (c) Haemolytic jaundice.
 - (d) Carcinoid Syndrome.
 - (e) Urine Microscopy.
-

September-2002

[KH 113]

Sub. Code : 2010

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch III — Pathology

Paper I — GENERAL MEDICAL AND SURGICAL
PATHOLOGY INCLUDING APPLIED ASPECTS

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss the various causes of Malabsorption Syndrome. What are the various investigation required and their interpretation? (25)
 2. Discuss the pathogenesis and pathology of acquired immuno deficiency syndrome. (25)
 - 3 Write briefly on : (5 × 10 = 50)
 - (a) Applications of insitu hybridization
 - (b) Viral inclusions
 - (c) Cysts of jaw
 - (d) Hyalinizing trabecular adenoma of thyroid
 - (e) Muscle biopsy.
-

April-2003

[KI 113]

Sub. Code : 2010

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch III — Pathology

Paper I — GENERAL MEDICAL AND SURGICAL
PATHOLOGY INCLUDING APPLIED ASPECTS

Time : Three hours

Maximum : 100 marks

1. Classify jaundice. Give aetiology of various types. Describe briefly laboratory tests done in evaluation of jaundice case. (25)
 2. Define shock. Classify shock. Discuss briefly pathogenesis of various types of shocks and morphological changes seen in various organs. (25)
 3. Write briefly on : (5 × 10 = 50)
 - (a) Disposal of laboratory wastes
 - (b) Nontuberculous mycobacterial infections
 - (c) Pneumocystis carinii
 - (d) Respiratory viruses
 - (e) Systemic mycoses.
-

[KJ 113]

Sub. Code : 2010

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch III — Pathology

**Paper I — GENERAL MEDICAL AND SURGICAL
PATHOLOGY INCLUDING APPLIED ASPECTS**

Time : Three hours . Maximum : 100 marks

Theory : Two hours and Theory : 80 marks
forty minutes

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

M.C.Q. must be answered SEPARATELY on the
Answer Sheet provided as per the instructions on the
first page.

Answer ALL questions.

Draw suitable diagrams wherever necessary.

1. Discuss the role of intestinal biopsy in diagnosis of
malabsorption syndromes. (15)

2. Discuss an over view of quality control in
histopathology services. (15)

3. Write short notes on : (10 × 5 = 50)

- (a) Eosinophil in health and disease.
- (b) Basis of autoimmune disease.
- (c) Haematoxylin in surgical pathology practice
- (d) Melanin and its demonstration.
- (e) Pulmonary lesions in AIDS.
- (f) Cystic disease of kidney.
- (g) Role of helicobacter in gastro-duodenal
disease.
- (h) Prognostic indications of carcinoma breast.
- (i) Mechanism of invasion and metastasis.
- (j) Respiratory distress syndrome in new born.

[KK 113]

Sub. Code : 2010

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch III — Pathology

**Paper I — GENERAL MEDICAL AND SURGICAL
PATHOLOGY INCLUDING APPLIED ASPECTS**

Time : Three hours Maximum : 100 marks

Theory : Two hours and Theory : 80 marks
forty minutes

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

A. Essay. (2 × 15 = 30)

(1) Discuss briefly about common fungal
Respiratory Infections. (15)

(2) Describe the mechanism of wound healing
and factors which influence wound healing. (15)

B. Write short notes on : (10 × 5 = 50)

- (1) SARS pathology
- (2) Septicemic shock
- (3) Acute Renal failure

- (4) Viral meningitis
 - (5) Hepatic Jaundice
 - (6) Primary Immune deficiency
 - (7) Collagen types and structure
 - (8) Pulmonary Infarction
 - (9) Neuro Syphilis
 - (10) Chlamydial infections.
-

[KM 113]

Sub. Code : 2010

II. Write short notes on :

(10 × 5 = 50)

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch III — Pathology

Paper I — GENERAL MEDICAL AND SURGICAL
PATHOLOGY INCLUDING APPLIED ASPECTS

Time : Three hours

Maximum : 100 marks

Theory : Two hours and
forty minutes

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

I. Essay :

(2 × 15 = 30)

(1) A female patient with fever, arthritis and butterfly rash referred to pathology for investigations. What is the diagnosis? Discuss the etiopathogenesis, pathology and laboratory investigations in such a case.

(15)

(2) Discuss COPD.

(15)

(a) Cardiomyopathy.

(b) Paraneoplastic syndromes.

(c) Myopathy of small intestine.

(d) Alcoholic hepatitis.

(e) Thymoma.

(f) Prion diseases.

(g) Recent advances in endometrial carcinoma.

(h) Applications of Immuno-Fluorescence
Techniques.

(i) Cutaneous lymphomas.

(j) Follicular Neoplasms of Thyroid.

[KO 113]

Sub. Code : 2010

M.D. DEGREE EXAMINATION.

Branch III — Pathology

**Paper I — GENERAL MEDICAL AND SURGICAL
PATHOLOGY INCLUDING APPLIED ASPECTS**

Time : Three hours Maximum : 100 marks

**Theory : Two hours and Theory : 80 marks
forty minutes**

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary

I. Essay questions: (2 × 15 = 30)

**1. Discuss the classification and diagnosis of
cutaneous lymphoproliferative disorders.**

**2. Discuss the role of predictive and prognostic
markers in carcinoma breast.**

II. Write short notes on : (10 × 5 = 50)

**(a) Opportunistic infections in acquired immune
deficiency syndrome (AIDS)**

(b) Tumour Markers.

- (c) Flourescent in situ Hybridisation (FISH)**
 - (d) Gastro intestinal stromal Tumours (GIST)**
 - (e) Cystic Lesions of Kidney**
 - (f) Pseudo malignant Lesions of prostate**
 - (g) Autopsy in maternal death**
 - (h) Tissue Arrays – construction and application**
 - (i) Cytokeratin immuno profiles in diagnosis**
 - (j) Quality control in cytology.**
-

[KP 113]

Sub. Code : 2010

II. Write short notes on :

(6 × 5 = 30)

M.D. DEGREE EXAMINATION.

Branch III — Pathology

Paper I — GENERAL MEDICAL AND SURGICAL
PATHOLOGY INCLUDING APPLIED ASPECTS.

Time : Three hours

Maximum : 100 marks

Theory : Two hours and
forty minutes

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay questions :

(1) Discuss the role of electron microscopy and
immuno fluorescence in the diagnosis of glomerular
lesions of kidney. (20)

(2) Discuss viruses causing haemorrhagic fever.
(15)

(3) Discuss the pathology of neuro degenerative
diseases. (15)

(f) Anti - neutrophilic - cytoplasmic antibody
(ANCA) and its role in various disease states.

[KQ 111]

Sub. Code : 2010

M.D. DEGREE EXAMINATION.

Branch III — Pathology

GENERAL MEDICAL AND SURGICAL PATHOLOGY
INCLUDING APPLIED ASPECTS IN PATHOLOGY

Common to :

Paper I — (Old/New/Revised Regulations)

(Candidates admitted from 1988 – 1989 onwards)

and

Paper I — (For candidates admitted
from 2004 – 2005 onwards)

Time : Three hours Maximum : 100 marks

Theory : Two hours and
forty minutes Theory : 80 marks

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay Questions :

1. Discuss the etiopathogenesis, pathology and complications of diabetes mellitus. (20)

2. Classify and discuss pathology of malabsorption syndrome. (15)

3. Discuss "Squash" technique and squash cytology in C.N.S. Tumors. (15)

II. Write Short notes on : (6 × 5 = 30)

(a) Fish

(b) Role of NO (Nitric Oxide) in shock

(c) Laboratory diagnosis of meningitis

(d) Utility of Immunofluorescence in skin biopsy

(e) Autopsy findings in a case of cerebrovascular accident

(f) Wegener's Granulomatosis.

[KR 113]

Sub. Code : 2010

M.D. DEGREE EXAMINATION.

Branch III — Pathology

GENERAL MEDICAL AND SURGICAL PATHOLOGY
INCLUDING APPLIED ASPECTS IN PATHOLOGY

Common to :

Paper I — (Old/New/Revised Regulations)
(Candidates admitted upto 2003–2004)

and

Paper I — (For candidates admitted from 2004–2005
onwards)

Time : Three hours Maximum : 100 marks

Theory : Two hours and Theory : 80 marks
forty minutes

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

Draw diagrams if necessary.

I. Essay questions:

(1) Discuss the classification, histopathology,
diagnosis and features of Hansen's Disease. (20)

(2) Discuss the causes, pathogenesis and
histopathology of non-alcoholic fatty liver disease. (15)

(3) Discuss the pathogenesis and
clinico-pathological features of coronary artery disease. (15)

II. Write short notes on: (6 × 5 = 30)

(a) Quality control in histopathology

(b) Accreditation and reaccreditation of
pathologists

(c) Laboratory diagnosis of autoimmune
diseases

(d) Chemokines and chronic idiopathic
inflammatory bowel disease

(e) Diabetic microangiopathy.

(f) Screening for haemoglobinopathies.

MARCH 2008

[KS 113]

Sub. Code : 2010

M.D. DEGREE EXAMINATION.

Branch III — Pathology

GENERAL MEDICAL AND SURGICAL PATHOLOGY INCLUDING
APPLIED ASPECTS IN PATHOLOGY

Common to all candidates

Q.P.Code : 202010

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

Draw suitable diagram's wherever necessary.

- I. Long Essay : (2 × 20 = 40)
 1. Discuss etiopathogenesis of acute renal failure following obstetrical intervention and write the role of laboratory management of the same.
 2. Discuss the morphology and clinico pathological syndromes of viral hepatitis.
 - II. Write short notes on : (10 × 6 = 60)
 1. Approach to Autopsy in AIDS.
 2. Isoenzymes.
 3. Laboratory diagnosis of cancer.
 4. Gene therapy.
 5. Cell adhesion proteins.
 6. Paroxysmal nocturnal hemoglobinuria.
 7. Direct DNA diagnosis.
 8. Role of prothrombin time in monitoring the effects of oral anticoagulant therapy.
 9. Laboratory diagnosis of hemolytic anemia.
 10. Chemokines.
-

September 2008

[KT 113]

Sub. Code: 2010

M.D. DEGREE EXAMINATIONS

Branch III – Pathology

**Paper I - GENERAL MEDICAL AND SURGICAL
PATHOLOGY INCLUDING APPLIED
ASPECTS IN PATHOLOGY**

(Common to all candidates)

Q.P. Code : 202010

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions :

(2 X 20 = 40)

1. Discuss the causes, pathogenesis and morphology of cardiomyopathies.
2. Define Neoplasia. Discuss staging, grading systems and types of spread of tumors. Discuss the pathogenesis, initiation, induction and promotion of neoplasia by chemical carcinogens.

II. Write short notes on :

(10 X 6 = 60)

1. Structure of endoplasmic reticulum.
 2. Cytokines.
 3. Ochronosis.
 4. Discuss the 4 types of transplantation grafts.
 5. Familial adenomatous polyposis.
 6. Fragile chromosomes.
 7. Describe hard and soft tubercle.
 8. Lepromin test.
 9. pathology of steatosis.
 10. Asbestosis.
-

March 2009

[KU 113]

Sub. Code: 2010

M.D. DEGREE EXAMINATION

Branch III – PATHOLOGY

(Common to all candidates)

**Paper I – GENERAL MEDICAL AND SURGICAL PATHOLOGY
INCLUDING APPLIED ASPECTS IN PATHOLOGY**

Q.P. Code : 202010

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions :

(2 x 20 = 40)

1. Discuss causes, pathogenesis and morphology, complications of H.pylori infection.
2. Discuss etiopathogenesis and morphology of childhood tumors.

II. Write short notes on :

(10 x 6 = 60)

1. Histopathologist and law.
2. Pathology of collagen.
3. Glycogen storage disorder.
4. Albinism.
5. Pathological calcification.
6. Chemical mediators.
7. Anaphylaxis.
8. Granulomas.
9. Pathology of vitamin A deficiency.
10. HLA system.

September 2009

[KV 113]

Sub. Code: 2010

M.D. DEGREE EXAMINATION

Branch III – PATHOLOGY

(Common to all candidates)

**Paper I – GENERAL MEDICAL AND SURGICAL PATHOLOGY
INCLUDING APPLIED ASPECTS IN PATHOLOGY**

Q.P. Code : 202010

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions :

(2 x 20 = 40)

1. Discuss the morphology, etiopathogenesis, clinical features, course and diagnosis of idiopathic inflammatory bowel disease.
2. Define regeneration and healing. Discuss the various mechanisms which control normal cell proliferation.

II. Write short notes on :

(10 x 6 = 60)

1. Cytoskeletal abnormalities
2. Free radicals
3. Lysosomal storage diseases
4. Graft versus host reaction
5. Tumour antigens
6. Neonatal respiratory distress syndrome
7. Vascular pathology in hypertension
8. Desquamative interstitial pneumonia
9. Thrombotic microangiopathies
10. Muscle biopsy

March 2010

[KW 113]

Sub. Code: 2010

M.D. DEGREE EXAMINATION

Branch III – PATHOLOGY

(Common to all candidates)

**Paper I – GENERAL MEDICAL AND SURGICAL PATHOLOGY
INCLUDING APPLIED ASPECTS IN PATHOLOGY**

Q.P. Code : 202010

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions :

(2 x 20 = 40)

1. Discuss the pathology of multiple organ failure syndrome.
2. What procedure is adopted to establish diagnosis of jaundice with regard to its type and cause in a child of one year? Discuss the principles and fallacies of various tests if any.

II. Write short notes on :

(10 x 6 = 60)

1. Biochemical waste management - present scenario.
2. Infections in immuno-compromised patients.
3. Asbestos related neoplasia.
4. Role of immunofluorescence in understanding glomerulonephritis.
5. Current concepts of obesity.
6. Polymerase chain reaction – application in diagnostic pathology.
7. Perinatal autopsy.
8. Barr body.
9. Complications of repair reaction.
10. Electrophoresis.

September 2010

[KX 113]

Sub. Code: 2010

M.D. DEGREE EXAMINATION

Branch III – Pathology

**Paper I - GENERAL MEDICAL AND SURGICAL PATHOLOGY
INCLUDING APPLIED ASPECTS IN PATHOLOGY**

(Common to all candidates)

Q.P. Code : 202010

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions :

(2 X 20 = 40)

1. Discuss the role of endothelial cells in health and disease.
2. Discuss the etiopathogenesis of Hepatic failure.

II. Write short notes on :

(10 X 6 = 60)

1. Neuropathology of hypoxia.
2. Recent concepts of Alzheimer's disease.
3. Role of mucosal biopsies in diagnosis of malabsorption syndrome.
4. Mechanism of irreversible cell injury.
5. Pathology in various organs in Diabetes mellitus.
6. Multiple organ failure.
7. Idiopathic inflammatory bowel disease.
8. Muscle Biopsy.
9. ARDS.
10. Graft versus host reaction.

M.D. DEGREE EXAMINATION
BRANCH III – PATHOLOGY
GENERAL MEDICAL AND SURGICAL PATHOLOGY INCLUDING
APPLIED ASPECTS IN PATHOLOGY
Q.P. Code : 202010

Time : 3 hours
(180 Min)

Maximum : 100 marks

Answer ALL questions in the same order.

	Pages (Max.)	Time (Max.)	Marks (Max.)
I. Essay:			
1. Discuss the role of free radicals in Ischemic reperfusion injury.	6	15	10
2. Classify Tumours of prostate. Describe tissue sampling and biopsy interpretation in Prostatic Adeno carcinoma in TURP specimens. Mention the prognostic factors.	6	15	10
II. Short Questions:			
1. Signet ring cell lymphoma.	3	8	5
2. Neuro Endocrine neoplasms of uterine cervix.	3	8	5
3. Interpretation of synovial biopsy.	3	8	5
4. Architectural pattern in soft tissue tumors.	3	8	5
5. Prions disease.	3	8	5
6. Application of Immunomarkers by algorithmic approach to diagnose unclassified tumors.	3	8	5
7. Grading of cellular rejection in cardiac transplant biopsies.	3	8	5
8. Hirschsprung disease.	3	8	5
III. Reasoning Out:			
1. 40 year old chronic smoker, sand blaster by occupation died of road accident. At autopsy gross examination of the lungs, shows discrete hard coalescent nodules and with foci of cavitation. Hilar nodes are calcified a) What is the possible diagnosis? b) What is the histopathology of the lesion? c) Describe the pathogenesis. d) Mention the associated lung disease.	4	10	5
2. 45 year old bus driver a chronic smoker with H/O several episodes of chest pain died while on duty. At autopsy, the time of death reveals within 6 hr. Heart examination shows nil grossly abnormal findings. Post mortem angiogram shows zone of myocardial hypoperfusion in the posterior left and right			

(PTO)

	Pages (Max.)	Time (Max.)	Marks (Max.)
ventricles, with absent filling capillaries.			
a) What is the cause of death?			
b) What stain was used to demonstrate the lesion in the heart?			
c) Describe the Biochemical basis and microscopic features.			
d) Enumerate the serological assay to diagnose the lesion.	4	10	5
3. 20 year old foot-ball player with history of joint pain following injury and relieved after aspirin.			
a) Mention the inflammatory response.			
b) Describe the pathological events and the site of action of aspirin.			
c) What is the risk of repeated ingestion of the drugs?	4	10	5
4. 7 year old child admitted with hepatosplenomegaly with anemia and leucopenia. On hematological examination, his bone marrow biopsy revealed clusters of large cells with crumpy tissue paper like cytoplasm.			
a) Name the diagnostic cell.			
b) Describe the biochemical basis of the lesion.			
c) Mention the pattern of inheritance.			
d) Describe the morphological features and how to demonstrate the diagnostic lesion.	4	10	5
IV. Very Short Answers :			
1. Enumerate Cystic neoplasms in Pancreas.	1	4	2
2. Super Antigens.	1	4	2
3. Enlist any four trace elements and their deficiency syndromes.	1	4	2
4. Mention various mesothelial cell morphology in Pleural / peritoneal fluid cytology.	1	4	2
5. Enumerate four 'Blastemal' Tumors with its cytogenetics and immunostain.	1	4	2
6. Limitation in molecular diagnostic techniques.	1	4	2
7. What is blocking of tissue and which paraffin wax is ideal for blocking tissue?	1	4	2
8. Enumerate obesity associated diseases.	1	4	2
9. Enlist the classes of Proteases in tumor cell invasion.	1	4	2
10. What is chromaffin reaction? Mention its application.	1	4	2

**M.D. DEGREE EXAMINATION
BRANCH III – PATHOLOGY
GENERAL MEDICAL AND SURGICAL PATHOLOGY INCLUDING APPLIED
ASPECTS IN PATHOLOGY
Q.P. Code : 202010**

**Time : 3 hours
(180 Min)**

Maximum : 100 marks

Answer ALL questions in the same order.

	Pages (Max.)	Time (Max.)	Marks (Max.)
I. Essay:			
1. Classify endometrial epithelial metaplasia. Describe clinical association, possible etiopathogenesis and microscopic features for each type.	9	15	10
2. Define atherosclerosis. Describe risk factors, pathogenesis, pathology and consequences of atherosclerosis	9	15	10
II. Short Questions:			
1. Discuss Lymphocyte-Macrophage interaction underlying resistance to Mycobacterium tuberculosis.	3	8	5
2. Define GERD and briefly outline its pathophysiology.	3	8	5
3. Discuss briefly about key to successful macrophtography.	3	8	5
4. Summarize predictive and prognostic molecular markers in breast carcinoma.	3	8	5
5. Discuss etiopathogenesis and pathology of hemodynamic pulmonary edema.	3	8	5
6. Tabulate the spectrum of chronic obstructive pulmonary diseases.	3	8	5
7. What are the initiating and contributing factors for the development of ascites in patients with cirrhosis of the liver.	3	8	5
8. Briefly outline the pathogenesis of ARDS.	3	8	5
III. Reasoning Out:			
1. A 40 year old man with a 15 year history of Type I Diabetes Mellitus has microaneurysms and retinal hemorrhages. Which of the following is the pathogenesis of the retinal lesions? a) Inflammation of the optic nerve b) Microangiopathy c) Non enzymatic glycosylation. d) Osmotic damage	5	10	5
2. A 35 year old man presented with fever, night sweats and weight loss. An opacity in the apex of the right lung was biopsied which showed granulomatous (PTO)			

inflammation with central necrosis and peripheral lymphocytes and Langhan's Giant cells. Which of the following describes the type of necrosis that was present?

- a) Caseous necrosis
 - b) Coagulation necrosis
 - c) Enzymatic fat necrosis
 - d) Liquefactive necrosis
- 5 10 5

3. A 26 year old man with AIDS has experienced progressive loss of visual acuity in both eyes for the past 4 months. Intraocular pressure was normal. The CD4 T cell count was 48 cells / cu mm. Retinal examination showed white areas with indistinct borders. Which of the following pathogen is the most likely causal agent?

- a) Candida albicans
 - b) Cytomegalovirus
 - c) Toxoplasma gondii
 - d) Human Immunodeficiency Virus
- 5 10 5

4. A 2 year old boy with Bruton's agammaglobulinemia has recurrent pneumonia caused by Streptococcus pneumonia. Which of the following factors is the most likely cause of increased susceptibility to bacterial infections?

- a) Leukocyte adhesion molecule defect
 - b) Neutrophil chemotactic defect
 - c) Neutrophil microbicidal defect.
 - d) Neutrophil opsonization defect
- 5 10 5

IV. Very Short Answers:

- 1. What are the cystic lesions that occur in the neck? 1 4 2
- 2. What is necrotizing enterocolitis? 1 4 2
- 3. What is Krukenberg Tumour? 1 4 2
- 4. What are the pathologic findings seen in the muscle biopsy in myopathic disorders? 1 4 2
- 5. What are the factors strongly associated with and contributing to the pathogenesis of NAFLD? 1 4 2
- 6. What is a stag horn calculus? 1 4 2
- 7. What is Budd Chiari syndrome? 1 4 2
- 8. What are the extra pulmonary sites most commonly involved in Tuberculosis? 1 4 2
- 9. What are true & pseudo rosettes? 1 4 2
- 10. What are leukoplakia and erythroplakia? 1 4 2

[LB 113]

OCTOBER 2012

Sub. Code: 2010

**M.D. DEGREE EXAMINATION
BRANCH III – PATHOLOGY
GENERAL MEDICAL AND SURGICAL PATHOLOGY INCLUDING APPLIED
ASPECTS IN PATHOLOGY**

Q.P. Code : 202010

**Time : 3 hours
(180 Min)**

Maximum : 100 marks

Answer ALL questions in the same order.

**Pages Time Marks
(Max.) (Max.) (Max.)**

I. Essay:

- | | | | |
|---|---|----|----|
| 1. Classify Diabetes Mellitus. Discuss pathogenesis of Types I and II Diabetes Mellitus. Describe morphology of the various organs affected by the disease. | 9 | 15 | 10 |
| 2. Define Osteomyelitis. Discuss etiopathogenesis, Pathology, clinical course and complications of Pyogenic and tuberculous Osteomyelitis. | 9 | 15 | 10 |

II. Short Questions:

- | | | | |
|--|---|---|---|
| 1. Discuss usefulness of radiographs in fetal, perinatal and pediatric autopsies. | 3 | 8 | 5 |
| 2. What is the mechanism of Tumour angiogenesis? | 3 | 8 | 5 |
| 3. Describe the gross & histopathological changes in Radiation injury to the Gastrointestinal tract. | 3 | 8 | 5 |
| 4. What are the sickle cell syndromes? | 3 | 8 | 5 |
| 5. What are the classification criteria for the diagnosis of SLE? | 3 | 8 | 5 |
| 6. Tabulate the clinical & epidemiologic features of Viral Hepatitis. | 3 | 8 | 5 |
| 7. Classify major mechanisms of glomerular injury. | 3 | 8 | 5 |
| 8. What are the most common opportunistic infections in the renal transplant recipient? | 3 | 8 | 5 |

III. Reasoning Out:

- | | | | |
|--|---|----|---|
| 1. A 10 year old boy with a family history of seasonal allergies develops erythema, itching and swelling of the skin after an insect bite. Which of the following chemical mediators is most responsible for this skin reaction?
a) Bradykinins
b) Complement
c) Histamine
d) Nitric Oxide | 5 | 10 | 5 |
| 2. A 60 year old man with alcoholic cirrhosis has ascites and pitting pedal edema in the lower legs. The cause | | | |

- of the fluid accumulation is
- a) Decreased plasma oncotic pressure
 - b) Increased plasma hydrostatic pressure
 - c) Increased vascular permeability due to Histamine.
 - d) Lymphatic obstruction with lymphedema 5 10 5
3. A 21 year old man shows bilateral raised yellow patches on the eyelids and a Xanthoma of the Tendoachilles. He has a family history of death due to myocardial infarction and stroke by 30 to 40 years of age. Which of the following mechanism best explains the pathogenesis of the tendon and skin lesions?
- a) Decreased activation of capillary lipoprotein lipase.
 - b) Deficiency of apolipoprotein C-H
 - c) Deficiency of apolipoprotein E
 - d) Deficiency of low density lipoprotein (LDL)receptor. 5 10 5
4. A 60 year old female on treatment for a NHL developed a vesiculo bullous lesion spread over the skin of the L2 dermatome, Which of the following best characterizes the pathogenesis of the lesion?
- a) Photosensitive reaction to a drug
 - b) Reactivation of a latent virus in the sensory dorsal Root ganglion.
 - c) Skin invasion by malignant CD4 T cells.
 - d) Toxin producing strain of Streptococcus pyogenes 5 10 5

IV. Very Short Answers:

1. What are the Jones' criteria for Rheumatic fever? 1 4 2
2. Name clinical conditions / situations where liver biopsy is of proven value. 1 4 2
3. What is pseudo gout? 1 4 2
4. Reed Sternberg Cell. 1 4 2
5. What are the isolates usually identified as etiological factors in hospital acquired pneumonias? 1 4 2
6. Name the various sites / organs in which adenoid cystic carcinomas can occur. 1 4 2
7. What is Solitary rectal ulcer syndrome? 1 4 2
8. How is the muscle to be biopsied selected? 1 4 2
9. What is Mallory Weiss syndrome? 1 4 2
10. Write briefly about the hyper plastic conditions of the endometrium. 1 4 2

(LC 113)

APRIL 2013

Sub. Code: 2010

**M.D. DEGREE EXAMINATION
BRANCH III – PATHOLOGY
GENERAL MEDICAL AND SURGICAL PATHOLOGY INCLUDING
APPLIED ASPECTS IN PATHOLOGY**

Q.P. Code : 202010

Time: Three Hours

Maximum: 100 marks

I. Essay:

(2X10=20)

1. Write about Dendritic cells in normal and in diseases.
2. Write in detail about Bilirubin metabolism and discuss about the pathophysiology of Jaundice.

II. Short Questions:

(8X5=40)

1. Mediators of Type I Hypersensitivity reaction
2. Collagens and its uses
3. Immunological mechanism of non infectitious vasculitis
4. Functions of Vitamin A
5. Nerve biopsy
6. Porcelain gall bladder
7. Hypertensive cerebrovascular disease
8. Psuedogout

III. Reasoning Out:

(4X5=20)

1. A 44 year old male underwent renal transplantation. After one month, he was admitted with fever, anemia, and oliguria. His serum creatinine was 2.2
 - a. What is your diagnosis?
 - b. Describe the morphology of the lesion in this case.
2. A 40 yr. old female presented with post coital bleeding for 4 months. Pap smear was done followed by cervical biopsy.
 - a. Discuss the differential diagnosis
 - b. Write the morphology of the lesion
3. A 62 year old male developed abscess in the leg for which incision and drainage was done. The wound took long time to heal.
 - a. Discuss the cause for delayed healing.
4. A 56 yr. old male admitted with pain over epigastric region and subscapular area, nausea, vomiting. Serum bilirubin was 2.5 mg/dl, serum amylase was 3288 U/L
 - a. Describe the etiopathogenesis
 - b. Write about the morphology of the organ involved in the lesion.

IV. Very Short Answers:

(10X2=20)

1. Granules of eosinophils
2. Risk factors of angiosarcoma Liver
3. Amyloid proteins
4. Doughnut granuloma
5. Blue doom cyst of Bloodgood
6. Bcl -2 gene
7. Pulmonary meningioma
8. Atypical leiomyoma
9. Diagnostic criteria of prostatic intraepithelial neoplasia
10. Wolman disease

[LD 113]

OCTOBER 2013

Sub. Code: 2010

M.D. DEGREE EXAMINATION

BRANCH III – PATHOLOGY

GENERAL MEDICAL AND SURGICAL PATHOLOGY

INCLUDING APPLIED ASPECTS IN PATHOLOGY

Q.P. Code : 202010

Time: Three Hours

Maximum: 100 marks

I. Essay:

(2 x 10 = 20)

1. Discuss the pathogenesis, pathology and epidemiology of gastric carcinoma.
2. Briefly describe the histological appearances of the malignant round cell tumours of childhood including the immunohistochemical stains you would use to categorise each.

II. Short Questions:

(8 x 5 = 40)

1. Craniopharyngioma.
2. Histopathology of polyarteritis nodosa.
3. Adenomatoid tumour.
4. Histological patterns in testicular biopsies of infertile men.
5. Use and limitations of electron microscopy.
6. Grading of Carcinoma breast.
7. Membranous glomerulonephritis – clinical and microscopic features.
8. Staining methods to detect fungi in tissue sections.

III. Reasoning Out:

(4 x 5 = 20)

1. A 10-year-old boy with a family history of renal disease has auditory nerve deafness, corneal dystrophy, and ocular lens dislocation and microscopic hematuria. Renal biopsy shows irregular basement membrane thickening and attenuation of glomerular capillaries with splitting of the lamina densa, increased mesangial matrix and foamy epithelial cells. The most likely diagnosis is

- a. IgA nephropathy
- b. Alport syndrome
- c. Renal dysplasia
- d. Goodpasture's syndrome

2. A 60-year-old woman presented with diffuse abdominal pain for the past 2 months. Investigations show a 3 cm adrenal mass composed of cells closely resembling adrenal cortex. The presence of which of the following features would suggest that this mass is malignant?

- a. Nuclear pleomorphism
- b. Increased mitotic activity
- c. Vascular invasion
- d. Necrosis

[PTO]

3. A primigravida was admitted with hypotension due to severe vaginal bleeding associated with a low-lying placenta. Postpartum, she was unable to breast-feed her baby and complained of pronounced fatigue. Laboratory findings include hyponatremia, hyperkalemia, and hypoglycemia. Which of the following is she most likely to have had?
- Adrenal haemorrhage
 - Pituitary necrosis
 - Bacterial infection
 - Shock
4. At autopsy, the lungs of a 55 year-old showed greatly dilated bronchi and bronchioles filled with yellowish secretions. The bronchioles could be followed upto the pleural surface. The findings were most marked in the lower lobes. The most likely diagnosis is:
- Chronic bronchitis
 - Bronchiectasis
 - Bronchial asthma
 - Emphysema

IV. Very Short Answers:

(10 x 2 = 20)

- Gliosis.
- Angiomyolipoma.
- Two examples of heterotopia.
- Hydrosalpinx.
- Metachromasia.
- Leukemoid reaction.
- Effects of drying on a Papanicolaou smear.
- Staining methods for amyloid.
- Fine needle aspiration cytology findings in Hashimoto's thyroiditis.
- Carcinoma associated with woodworkers.

[LE 113]

APRIL 2014

Sub. Code: 2010

**M.D. DEGREE EXAMINATION
BRANCH III – PATHOLOGY
GENERAL MEDICAL AND SURGICAL PATHOLOGY INCLUDING
APPLIED ASPECTS IN PATHOLOGY**

Q.P. Code :202010

Time : Three hours

Maximum : 100 marks

I. Essay:

(2X10=20)

1. Define emphysema. What are the types of emphysema? Discuss in detail the pathogenesis, morphology and complications of emphysema.
2. What is obesity? Discuss in detail the mechanism by which obesity is associated with cancer risk.

II. Write short notes on:

(8X5=40)

1. Write a note on Rathke cleft cyst?
2. Mechanism of tissue fibrosis in SLE?
3. Write briefly on seborrheic keratosis?
4. Enumerate the marrow tumors and describe morphology of Ewings sarcoma.
5. What are the common molecular alterations in breast cancer?
6. What is the role of cytology in diagnosis of ovarian carcinoma?
7. What is osteosclerotic myeloma? What is the syndrome associated with it?
8. What is the pathogenesis of gas gangrene?

III. Reasoning Out:

(4X5=20)

1. 60 yr old male who is a known hypertensive presented with anaemia , fatigue and ebema & died of renal failure. What will be the appearance of kidney on autopsy?
 - a. Leathery granularity on surface
 - b. Symmetrically contracted
 - c. Flea bitten kidney
 - d. Irregularly scarred kidney
2. 40 yr old male presented with mass in right testis. Histopathology showed tumor with cells positive for c-kit & placental alkaline phosphatase. What is the tumor?
 - a. Embryonal carcinoma
 - b. Seminoma
 - c. Yolk sac tumor
 - d. Teratoma

3. 25 yr old male presented with a solitary nodule of left lobe of thyroid with cervical lymphadenopathy. What will be the probable cytology of the lymphnode?
 - a. Reactive lymphadenitis
 - b. Follicular carcinoma deposit
 - c. Papillary carcinoma deposit
 - d. Benign epithelial inclusion

4. 3 yr old female child presented with a rapidly growing orbital mass with loss of vision. Microscopy showed small round cells and spindle cells with myxoid intercellular areas. What is your diagnosis?
 - a. Alveolar rhabdomyosarcoma
 - b. Schwannoma
 - c. Embryonal rhabdomyosarcoma
 - d. Retinoblastoma

IV. Very Short Answers:

(10X2=20)

1. Which is the most common primary malignant tumor of salivary gland?
2. What is the special stain for HbsAg?
3. Who defined tumor?
4. What is pseudo epitheliomatous hyperplasia?
5. Name the CNS tumors that show eosinophilic granular bodies
6. Name 5 tumors with psammoma bodies.
7. Which is the ideal fixative for bone marrow biopsy?
8. Cytogenetics of Downs syndrome
9. What causes bread and butter pericarditis?
10. What is the diagnostic microscopic feature of primary biliary cirrhosis?

[LF 113]

OCTOBER 2014

Sub. Code: 2010

M.D. DEGREE EXAMINATION

BRANCH III – PATHOLOGY

PAPER I - GENERAL MEDICAL AND SURGICAL PATHOLOGY
INCLUDING APPLIED ASPECTS IN PATHOLOGY

Q.P. Code :202010

Time : Three hours

Maximum : 100 marks

I. Essay:

(2 x 10 = 20)

1. Describe in detail the classification and etiopathogenesis of diabetes mellitus. Add a note on its complications.
2. Discuss the mechanisms of autoimmune diseases. Describe the etiopathogenesis, pathology and lab diagnosis of SLE.

II. Write short notes on:

(8 x 5 = 40)

1. Triple negative breast cancer.
2. Prognostic factors in testicular tumors.
3. Radiation induced changes.
4. Metabolic syndrome.
5. Asbestosis.
6. Malignant melanoma.
7. Infective endocarditis.
8. Crescentic glomerulonephritis.

III. Reasoning Out:

(4 x 5 = 20)

1. 25 year old female presented with ovarian mass and elevated serum AFP.
 - A. What is your diagnosis?
 - B. What are the other tumors in the same classification?
 - C. What is the morphology of this tumor?
2. 20 year old female presented with neck rigidity and CSF examination revealed Cob web appearance on standing and lymphocytic pleocytosis.
 - A. What is your diagnosis?
 - B. What is the mode of infection?

- C. What are the complications?
 - D. How do you confirm the diagnosis?
3. 60 year old female presented with pain and swelling in the right knee. Xray revealed narrowing of joint space and osteophytes.
- A. What is your diagnosis?
 - B. What is the pathogenesis of the disease?
 - C. What is the morphology?
4. 35 year old male presented with paroxysmal episodes of hypertension, palpitation, headache and sweating. Imaging revealed retroperitoneal mass. Urinary VMA was elevated.
- A. What is your diagnosis?
 - B. What are the genetic syndromes associated?
 - C. What is the morphology?
 - D. What are the prognostic factors?

IV. Very Short Answers:

(10 x 2 = 20)

1. Homer wright rosettes.
2. Denys drash syndrome.
3. Nevus flammeus.
4. Kawasaki disease.
5. Collar button lesion is seen in _____tumor. What is it?
6. Gross test to confirm myocardial infarct.
7. Papillary cystadenoma lymphomatosum.
8. Metastatic Crohn's disease.
9. PSA velocity.
10. VIPoma.
