

April-2001

[KD 114]

Sub. Code : 2011

M.D. DEGREE EXAMINATION.

Branch III — Pathology

(Common to OR/NR/Revised Regulations)

Paper II — GENERAL PATHOLOGY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss the healing process and modern concepts with brief note on healing of specific organ. (25)
 2. Discuss H.L.A. system in health and disease. (25)
 3. Write briefly on : (5 × 10 = 50)
 - (a) Apoptosis.
 - (b) Graft versus host reaction.
 - (c) Granulomatous lesions.
 - (d) Gangrene.
 - (e) Chemical mediators.
-

November-2001

[KE 114]

Sub. Code : 2011

M.D. DEGREE EXAMINATION.

(Common to New/Revised Regulations)

Branch III — Pathology

Paper II — GENERAL PATHOLOGY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss about Leukocyte functions in relation to inflammation and describe the leukocyte function tests and clinical conditions with defects in leukocyte functions. (25)
 2. Discuss the current trends in the etiopathogenesis and pathology of atherosclerosis. (25)
 3. Write briefly on : (5 × 10 = 50)
 - (a) Fibronectins.
 - (b) Oncogenes.
 - (c) Basement membrane.
 - (d) Stains for fungal elements.
 - (e) Ochronosis.
-

March-2002

[KG 114]

Sub. Code : 2011

M.D. DEGREE EXAMINATION

(Common to OR/NR/Revised Regulations)

Branch III — Pathology

Paper II — GENERAL PATHOLOGY

Time : Three hours

2—Maximum : 100 marks

Answer ALL questions.

1. Classify chemical mediators of inflammation. Discuss the role of recently discovered chemical mediators in inflammation. (25)
 2. Discuss the aetiopathogenesis and pathology of tissue calcifications. (25)
 3. Write short notes on : (5 x 10 = 50)
 - (a) Antinuclear antibodies.
 - (b) Pulmonary oedema.
 - (c) Free radicals in diseases.
 - (d) Fat necrosis.
 - (e) Haemosiderin associated diseases
-

September-2002

[KH 114]

Sub. Code : 2011

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch III — Pathology

Paper II — GENERAL PATHOLOGY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss the role of histiocyte in health and disease. (25)
 2. Discuss the role of viruses in cancer. (25)
 3. Write briefly on : (5 × 10 = 50)
 - (a) PRIONS
 - (b) Apoptosis
 - (c) Ochronosis
 - (d) Blooms syndrome
 - (e) Disseminated intravascular coagulation.
-

[KI 114]

Sub. Code : 2011

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch III — Pathology

Paper II — GENERAL PATHOLOGY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Classify chemical mediators of inflammation. Describe briefly the mechanism of action of each. (25)
 2. Discuss briefly about primary immune deficiencies. (25)
 3. Write briefly on : (5 × 10 = 50)
 - (a) Amyloid
 - (b) Apoptosis
 - (c) Cytokines
 - (d) Immune Complex Reactions
 - (e) Tumour Markers.
-

[KJ 114]

Sub. Code : 2011

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch III — Pathology

Paper II — GENERAL PATHOLOGY

Time : Three hours *SEP 2003* Maximum : 100 marks

Theory : Two hours and
forty minutes Theory : 80 marks

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 molecular biology of biological carcinogenesis. (15)
2. Discuss in detail the pathogenesis and pathology of Thrombosis. (15)

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

- (a) Interferons and its role in disease
- (b) Automation in pathology
- (c) Tumor markers
- (d) Free radicals and their effects
- (e) DNA finger printing and its utility
- (f) Antioncogenes and its role in cancer production
- (g) Chemotaxis and phagocytic function tests
- (h) Pathophysiology of apoptosis
- (i) Graft versus host reaction
- (j) Pathogenesis of pulmonary oedema.

[KK 114]

Sub. Code : 2011

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch III — Pathology

Paper II — GENERAL PATHOLOGY

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.

A. Essay. (2 × 15 = 30)

(1) Classify chemical mediators of Inflammation.
Give a brief description of mechanism of action. (15)

(2) Molecular diagnostic techniques in the
diagnosis of diseases. (15)

B. Short notes on : (10 × 5 = 50)

- (1) Pathologic calcification.
- (2) Autosomal Dominant Disorders.
- (3) Systemic Lupus Erythematosus.
- (4) P53 gene.

- (5) Infectious Mononucleosis.
 - (6) Cancer-Suppressor genes.
 - (7) Differentiation and Anaplasia.
 - (8) Aetiology of Thrombus formation.
 - (9) Infarction.
 - (10) Paraneoplastic Syndromes.
-

[KM 114]

Sub. Code : 2011

II. Write short notes on :

(10 × 5 = 50)

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch III — Pathology

Paper II — GENERAL PATHOLOGY

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.

I. Essay : (2 × 15 = 30)

(1) Discuss Edema. (15)

(2) Discuss HIV associated respiratory
infections. (15)

- (a) Viral oncogenesis.
- (b) Pathogenesis of ageing
- (c) Adult respiratory distress syndrome.
- (d) Immuno-histochemistry of soft tissue tumors.
- (e) Heat-Shock proteins.
- (f) Spontaneous regression of tumors.
- (g) Lysosomal storage disorders.
- (h) Role of immunohistochemistry of keratins in diagnosis of tumors.
- (i) HLA and disease.
- (j) Adhesion molecules.

[KO 114]

Sub. Code : 2011

M.D. DEGREE EXAMINATION.

Branch III — Pathology

Paper II — GENERAL PATHOLOGY

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 causes, biochemical features and mechanism of Apoptosis.

2. Discuss the steps involved in the invasion and metastasis of malignant neoplasms.

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

(a) Oxygen derived free radicals

(b) Defects in Leukocyte function

(c) Role of endothelium in haemostasis and thrombosis

(d) Antinuclear Antibodies (ANA) in autoimmune diseases

(e) Classification of Amyloidosis

(f) Sudden infant Death Syndrome (SIDS)

(g) Zoonotic bacterial infections

(h) Prenatal Diagnosis of genetic diseases

(i) Metaplasias in Female genital tract

(j) Lepa reactions.

[KP 114]

Sub. Code : 2011

II. Write short notes on :

(6 × 5 = 30)

M.D. DEGREE EXAMINATION.

Branch III — Pathology

Paper II — GENERAL PATHOLOGY

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) Classify autoimmune diseases. Discuss aetiopathogenesis and pathology of systemic Lupus Erythematosus. (20)

(2) Discuss clinical utility and methodology of telepathology. (15)

(3) Discuss the host defence against the tumours. (15)

- (a) Heat shock proteins.
- (b) Disorders due to sex chromosomes.
- (c) Septic shock.
- (d) Antiphospholipid antibody.
- (e) Paraneoplastic syndromes.
- (f) Fluorescent microscopy and its use in diagnosis.

[KQ 112]

Sub. Code : 2011

M.D. DEGREE EXAMINATION.

Branch III — Pathology

GENERAL PATHOLOGY

Common to

Paper II – (Old/New/Revised Regulations)
(Candidates admitted from 1988–89 onwards)

and

Paper II — (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.

1. Essay Questions :

1. Discuss the adverse effects of ionising radiation of human body. (20)
2. Discuss the role of viruses in carcinogenesis. (15)
3. Discuss mast cell in health and disease. (15)

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

- (a) Demonstration of mucin in tissue sections
- (b) C.G.D. chronic (granulomatous disease)
- (c) Lysosomal storage diseases
- (d) Primary immunodeficiency disorders
- (e) Caisson disease
- (f) Pathology of malaria.

[KR 114]

Sub. Code : 2011

M.D. DEGREE EXAMINATION.

Branch III — Pathology

GENERAL PATHOLOGY

Common to

Paper II — (Old/New/Revised Regulations)

(Candidates admitted upto 2003-04)

and

Paper II — (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

Draw suitable diagram whenever necessary.

Answer ALL questions.

I. Essay questions :

(1) Discuss the various methods used in the
post-natal diagnosis of genetic diseases. (20)

(2) Discuss the role of adhesion molecules in
inflammatory response. (15)

(3) Discuss the types and morphology of infarction.
(15)

II. Write short notes on :

(6 × 5 = 30)

(a) Microsatellite instability in neoplasia.

(b) Cytoskeletal abnormalities.

(c) Mechanism of cellular aging.

(d) Pathogenesis of granuloma.

(e) T cell immunodeficiency in HIV infection.

(f) Pathology of obesity.

MARCH 2008

[KS 114]

Sub. Code : 2011

M.D. DEGREE EXAMINATION.

Branch III — Pathology

GENERAL PATHOLOGY

(Common to all Regulations)

Q.P. Code : 202011

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

- I. Essay questions : (2 × 20 = 40)
1. Discuss tumour cell proliferation markers and their significance.
 2. Discuss the pathogenesis and morphology of shock.
- II. Write short notes on : (10 × 6 = 60)
1. Free radicals.
 2. Integrins.
 3. Lepromatous leprosy.
 4. Toxoplasmosis.
 5. Mechanism of apoptosis.
 6. Mutations.
 7. Tonofilaments.
 8. Growth factors.
 9. Dystrophic calcification.
 10. Rickets.
-

September 2008

[KT 114]

Sub. Code: 2011

M.D. DEGREE EXAMINATION

Branch III – Pathology

Paper II - GENERAL PATHOLOGY

Common to all Regulations

Q.P. Code : 202011

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions : **(2 X 20 = 40)**

1. Define oedema. Discuss etiopathogenesis and morphology.
2. Define Granuloma. Name all types of granulomas. Discuss etiopathogenesis and laboratory diagnosis of mycobacterium tuberculosis.

II. Write short notes on : **(10 X 6 = 60)**

1. Healing by secondary union.
 2. Alternate pathway of complement system.
 3. Grading and staging of cancer.
 4. Functions of plasma proteins.
 5. Features of Vitamin A deficiency.
 6. Metastatic calcification.
 7. HLA system.
 8. Cytotoxicity.
 9. Gaucher's disease.
 10. Types of Ischaemia and pathogenesis.
-

March 2009

[KU 114]

Sub. Code: 2011

M.D. DEGREE EXAMINATION

Branch III – PATHOLOGY

(Common to all candidates)

Paper II – GENERAL PATHOLOGY

Q.P. Code : 202011

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions : (2 x 20 = 40)

1. Discuss cellular and molecular events of acute inflammation.
2. Discuss etiopathogenesis and morphology of thromboembolism.

II. Write short notes on : (10 x 6 = 60)

1. Gene therapy.
2. Pathophysiology of pulmonary edema.
3. Functions of leukotrienes.
4. Transplant rejection and graft survival.
5. Acute radiation injury.
6. Tumor markers.
7. Fish and Tish.
8. Role of endothelial cells in health and disease.
9. Morphology of infarct.
10. Healing of fracture and its complications.

September - 2009

[KV 114]

Sub. Code: 2011

M.D. DEGREE EXAMINATION

Branch III – PATHOLOGY

(Common to all candidates)

Paper II – GENERAL PATHOLOGY

Q.P. Code : 202011

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions :

(2 x 20 = 40)

1. Define inflammation. Discuss the role of various chemical mediators in acute inflammation.
2. Classify mycoses. Discuss the pathogenesis, tissue reaction and diagnosis of various fungal infection.

II. Write short notes on :

(10 x 6 = 60)

1. Types of necrosis
2. Cellular aging
3. Cell adhesion molecules
4. Fate of thrombus
5. Genomic imprinting
6. Tumour suppressor genes
7. Pathology of rickets
8. Chemoprevention of cancer
9. Precancerous lesions
10. Pneumoconioses

March 2010

[KW 114]

Sub. Code: 2011

M.D. DEGREE EXAMINATION

Branch III – PATHOLOGY

(Common to all candidates)

Paper II – GENERAL PATHOLOGY

Q.P. Code : 202011

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions : (2 x 20 = 40)

1. Role of immuno histochemistry in diagnostic pathology.
2. Laboratory approach to autoimmune diseases.

II. Write short notes on : (10 x 6 = 60)

1. Inflammatory myopathies.
2. Carcinoid syndrome.
3. Multistep carcinogenesis.
4. Pulmonary edema.
5. Chemokines - their relation to chronic idiopathic inflammatory bowel disease.
6. Current concepts in the pathogenesis of immunity of tuberculosis.
7. Cystic fibrosis.
8. Aminoacid disorders.
9. 'T' Cell receptor.
10. Familial hypercholesterolemia.

September 2010

[KX 114]

Sub. Code: 2011

M.D. DEGREE EXAMINATION

Branch III – Pathology

Paper II - GENERAL PATHOLOGY

(Common to all candidates)

Q.P. Code : 202011

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions :

(2 X 20 = 40)

1. Define Neoplasia. Write the molecular basis of carcinogenesis.
2. Discuss the pathogenesis and diagnosis of Genito - Urinary Tuberculosis.

II. Write short notes on :

(10 X 6 = 60)

1. Mucocutaneous manifestations of H.I.V infection.
2. Leukoplakia.
3. Mucin histochemistry.
4. Biomedical waste management.
5. Organic dust pneumoconiosis.
6. Frozen section.
7. Limitations of FNAC.
8. Adeno carcinoma.
9. Applications of PCR.
10. Cellular aging.

M.D. DEGREE EXAMINATION
BRANCH III – PATHOLOGY
GENERAL PATHOLOGY
Q.P. Code : 202011

Time : 3 hours
(180 Min)

Maximum : 100 marks

Answer ALL questions in the same order.

| | Pages | Time | Marks |
|---|---------------|---------------|---------------|
| | (Max.) | (Max.) | (Max.) |
| I. Essay: | | | |
| 1. Discuss about Human disease associated with occupational exposure. | 6 | 15 | 10 |
| 2. Apoptosis in health and diseases. | 6 | 15 | 10 |
| II. Short Questions: | | | |
| 1. Prognostic factors of Neuroblastoma. | 3 | 8 | 5 |
| 2. Calcium homeostasis in cell injury. | 3 | 8 | 5 |
| 3. Obesity and diseases. | 3 | 8 | 5 |
| 4. Intracellular accumulation of protein. | 3 | 8 | 5 |
| 5. RAS oncogene. | 3 | 8 | 5 |
| 6. Connective tissue remodeling. | 3 | 8 | 5 |
| 7. Epstein-Barr virus. | 3 | 8 | 5 |
| 8. Antibody mediated hypersensitivity reaction. | 3 | 8 | 5 |
| III. Reasoning Out: | | | |
| 1. 28/F presented with acute abdominal pain, diagnosed as twisted ovarian cyst and underwent surgery. Describe the etiopathogenesis and morphology of the ovary in this case. | 4 | 10 | 5 |
| 2. 6 months old child presented with protuberant abdomen, vomiting, fever and deterioration of psychomotor function. Bone marrow biopsy was done and special stain also applied for confirmatory diagnosis. Describe the etiopathogenesis and morphology of the lesion. | 4 | 10 | 5 |
| 3. 28/M admitted with H/O focal fits in the left arm that became generalized. He had taken antituberculous treatment irregularly. CT scan was taken. Describe the etiopathogenesis and laboratory diagnosis in this case. | 4 | 10 | 5 |
| 4. 34/M admitted with massive splenomegaly. Discuss the differential diagnosis. | 4 | 10 | 5 |
| IV. Very Short Answers : | | | |
| 1. Pyrogens. | 1 | 4 | 2 |
| 2. Buerger's disease. | 1 | 4 | 2 |
| 3. Enzymes as free radical scavenging system. | 1 | 4 | 2 |
| 4. Nephrogenic rests. | 1 | 4 | 2 |
| 5. McArdle disease. | 1 | 4 | 2 |
| 6. Cardiovascular effects of cocaine. | 1 | 4 | 2 |
| 7. Wiskott-Aldrich syndrome. | 1 | 4 | 2 |
| 8. Prion disease. | 1 | 4 | 2 |
| 9. Warburg effect. | 1 | 4 | 2 |
| 10. Lipofuscin. | 1 | 4 | 2 |

April 2012

[LA 114]

Sub. Code: 2011

M.D. DEGREE EXAMINATION
BRANCH III – PATHOLOGY
GENERAL PATHOLOGY

Q.P. Code : 202011

Time : 3 hours
(180 Min)

Maximum : 100 marks

Answer ALL questions in the same order.

| | Pages (Max.) | Time (Max.) | Marks (Max.) |
|---|-----------------|----------------|-----------------|
| I. Essay: | | | |
| 1. What is granulomatous inflammation? Give examples of diseases of granulomatous inflammation. Discuss pathogenesis of immune granulomas with reference to Tuberculosis. | 9 | 15 | 10 |
| 2. What is angiogenesis? What are the mechanisms of angiogenesis? Discuss the role of Growth factors and receptors in angiogenesis. | 9 | 15 | 10 |
| II. Short Questions: | | | |
| 1. Tabulate auto antibodies in SLE with prevalence percentage, Antigens recognised and the clinical utility of tests detecting the antibodies. | 3 | 8 | 5 |
| 2. What are the stages of Lobar Pneumonia? Enumerate its Complications. | 3 | 8 | 5 |
| 3. Write briefly on Amniotic fluid embolism. | 3 | 8 | 5 |
| 4. Tabulate genetic and acquired diseases of leukocyte function with enumeration of the defect in each disease. | 3 | 8 | 5 |
| 5. Represent diagrammatically cell cycle with its landmarks. | 3 | 8 | 5 |
| 6. Define Macro and Microvesicular hepatic steatosis and give 2 examples for each condition. | 3 | 8 | 5 |
| 7. Discuss mechanisms responsible for increased vascular Permeability in acute inflammation. | 3 | 8 | 5 |
| 8. Outline briefly stages of shock. | 3 | 8 | 5 |
| III. Reasoning Out: | | | |
| 1. A 26 year old woman with third degree burns developed septic shock. With 24 hours she was bleeding from all needle puncture sites, with extensive ecchymoses and petechiae and GI Bleeding. Lab studies showed Hb-6gm/dl., platelet count 64000/cu mm., PT 20 seconds, PTT 50 seconds and D-dimer positive. Which of the following is the most likely diagnosis? a) Autoimmune thrombocytopenia b) Circulating anticoagulants c) Disseminated intravascular coagulation d) Thrombotic thrombocytopenic purpura | 5 | 10 | 5 |
| 2. A 25 year old woman with poorly controlled gestational diabetes mellitus gave birth to a female infant who developed seizures 3 hours after birth. Which of the following hormones is the most likely cause of this symptom? a) Cortisol b) Epinephrine c) Glucagon d) Insulin | 5 | 10 | 5 |
| 3. A 60 year old female on alighting after an 18 hour long air travel | (PTO) | | |

April 2012

complained of pain in the right calf. On examination there was warmth, tenderness and modest swelling. Bed rest, elevation of the affected extremity above the level of the heart and treatment with anticoagulants are therapeutic measures for this condition. Name the condition being treated and what is the most important reason for the treatment? 5 10 5

4. A 16 year old female 130 cm in height presented with primary amenorrhoea. She was obese with infantile genitalia & inadequate breast development. The karyotype of this patient would most likely be:

- a) 45X
 - b) 46XX / 46XY
 - c) 47 XXY
 - d) 47 XX + 21
- 5 10 5

IV. Very Short Answers :

- 1. What is the role of Fibroblasts in wound healing? 1 4 2
- 2. What is the mechanism underlying Physiological Jaundice? 1 4 2
- 3. What is "cigarette pack years"? 1 4 2
- 4. What are the common causes of neoplastic meningitis? 1 4 2
- 5. What are the causative organisms of Pneumonia in immuno compromised hosts? 1 4 2
- 6. Enumerate the paraneoplastic syndromes associated with Lung cancer. 1 4 2
- 7. What is intestinal metaplasia? 1 4 2
- 8. Describe a lipogranuloma. 1 4 2
- 9. What is lipofuscin ? 1 4 2
- 10. What are psammoma bodies ? 1 4 2

[LB 114]

OCTOBER 2012
M.D. DEGREE EXAMINATION
BRANCH III – PATHOLOGY
GENERAL PATHOLOGY
Q.P. Code : 202011

Sub. Code: 2011

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 role of Cytokeratin immune staining profiles in diagnostic anatomical pathology. | 9 | 15 | 10 |
| 2. Define apoptosis. Enumerate its causes. Discuss mechanisms of apoptosis with suitable examples. | 9 | 15 | 10 |
| II. Short Questions: | | | |
| 1. Discuss Fibrosis- Cancer link hypothesis. | 3 | 8 | 5 |
| 2. Tabulate discriminant markers in reactive and neoplastic Mesothelium. | 3 | 8 | 5 |
| 3. What are the functional consequences of mutation? | 3 | 8 | 5 |
| 4. Outline the mechanisms of recognition and rejection of Renal allograft. | 3 | 8 | 5 |
| 5. Describe a pulmonary infarct. | 3 | 8 | 5 |
| 6. Discuss role of tobacco smoking in Lung Cancer. | 3 | 8 | 5 |
| 7. Discuss mechanisms responsible for increased vascular permeability in acute inflammation. | 3 | 8 | 5 |
| 8. Outline briefly stages of shock. | 3 | 8 | 5 |
| III. Reasoning Out: | | | |
| 1. A 75 years old man admitted to the hospital with severe sub Sternal chest pain radiating to the arm and the jaw, died on day 5 of hospitalization due to ventricular arrhythmia. At autopsy, the left ventricle showed a pale yellow area of necrosis involving the posterior wall and the papillary muscles in the region of distribution of the right coronary artery. The type of necrosis is a) Caseous necrosis b) Coagulation necrosis c) Enzymatic fat necrosis d) Fibrinoid necrosis | 5 | 10 | 5 |
| 2. A 20 year old women with AIDS presented with a painless Non pruritic erythematous lesions on the neck and the hard palate. Which of the following is likely to be the causative organism? a) Cytomegalovirus b) Epstein – Barr virus c) Human herpes virus d) Human Immunodeficiency virus | 5 | 10 | 5 |
| 3. A Cholecystectomy was performed on a 50 year old female and as the wound was not healing properly she was asked about her diet. Though she consumed a diet high in protein she did not eat fruits or vegetable. Which of the following is the most likely cause for the poor wound healing? a) Decreased synthesis of granulation tissues | | | (PTO) |

- | | | | |
|---|---|----|---|
| b) Decreased synthesis of type III collagen | | | |
| c) Decreased tensile strength of collagen | | | |
| d) Defect in fibrillin in elastic tissue | 5 | 10 | 5 |
4. A centrally located lung mass from a 60 year old chronic smoker shows a tumour composed of densely packed small round to spindle cells with numerous mitoses and areas of necrosis. Which of the following endocrinopathies is associated with this type of tumor?
- | | | | |
|--|---|----|---|
| a) Carcinoid syndrome | | | |
| b) Hypercalcemia | | | |
| c) Polycythemia | | | |
| d) Inappropriate secretion of Antidiuretic hormone | 5 | 10 | 5 |

IV. Very Short Answers :

- | | | | |
|---|---|---|---|
| 1. What is kit gene? | 1 | 4 | 2 |
| 2. What is Tumour lysis Syndrome? | 1 | 4 | 2 |
| 3. What is Kernicterus? | 1 | 4 | 2 |
| 4. Differentiate Haematuria and Hemoglobinuria | 1 | 4 | 2 |
| 5. What are the factors that evoke acute inflammation on the gall bladder? | 1 | 4 | 2 |
| 6. What is the association between interstitial cells of Cajal & GISTs. | 1 | 4 | 2 |
| 7. What is the significance of circulating tumour cells in the blood of patients with breast carcinoma? | 1 | 4 | 2 |
| 8. What is the inheritance pattern in autosomal dominant Disorders | 1 | 4 | 2 |
| 9. What is the mechanism underlying increasing maternal age causing fetal trisomy | 1 | 4 | 2 |
| 10. What are second malignancies? Categorize them | 1 | 4 | 2 |

**M.D. DEGREE EXAMINATION
BRANCH III – PATHOLOGY
GENERAL PATHOLOGY
Q.P. Code : 202011**

Time: Three Hours

Maximum: 100 marks

I. Essay: (2X10=20)

1. Define embolism. What are the types of emboli? Discuss the etiopathogenesis and morphology and clinical features of each in detail.
2. Classify immunodeficiency syndromes. Name the genetically determined immunodeficiencies. Write briefly about x-linked agammaglobulinemia (Bruton's agammaglobulinemia).

II. Short Questions: (8X5=40)

1. Pathogenesis of brain abscess.
2. What is xeroderma pigmentosum?
3. Principle of fluorescent in-situ hybridization.
4. Phases of cutaneous wound healing.
5. Apoptosis in health and disease.
6. Heparin induced thrombocytopenia.
7. Disorders of Jak2 mutation.
8. Consequences of staphylococcal infections.

III. Reasoning Out: (4X5=20)

1. 25 years old male who was HIV positive presented with multiple red to purple papulo nodular lesions in the lower extremities which slowly increased in size.
 - a. What is the lesion?
 - b. What is the causative organism?
 - c. What is the role of HIV & Cytokines in this lesion?
2. 30 years old male presented with thickening of ulnar, peroneal nerves and multiple papules and nodules over the face.
 - a. What is your probable diagnosis?
 - b. What will the nerve biopsy show in this condition?
 - c. Name the special stain used to confirm the diagnosis?
3. 6 years old male presented with posterior mediastinal mass and multiple axillary nodes with bone pain. Biopsy from the mass showed small round cells with finely fibrillar matrix.
 - a. What is your diagnosis?
 - b. What is the cause of bone pain?
 - c. Enumerate the differential diagnosis?

(PTO)

4. 5 years old boy presented with periorbital edema and severe proteinuria. His serum cholesterol was raised.

- a. Name the condition.
- b. What is the pathophysiology of edema in this condition?

IV. Very Short Answers:

(10X2=20)

1. What is Warburg effect?
2. Name the leucocyte receptors.
3. What is the role of Vitamin-A in epithelial metaplasia?
4. What is the characteristic triad in Wegener granulomatosis.
5. Changes in aging heart.
6. What is smoldering myeloma?
7. Give example for a choristoma.
8. Which hemoparasite resembles ring stage of *P.falciparum*?
9. What type of lymphomas occur in *H-pylori* infection?
10. What is red bile?

[LD 114]

OCTOBER 2013

Sub. Code: 2011

M.D. DEGREE EXAMINATION

BRANCH III – PATHOLOGY

GENERAL PATHOLOGY

Q.P. Code : 202011

Time: Three Hours

Maximum: 100 marks

I. Essay:

(2 x 10 = 20)

1. Describe the pathology of acute myocardial infarction.
2. Discuss the pathology of syphilis.

II. Short Questions:

(8 x 5 = 40)

1. Acute inflammatory response
2. Pathogenesis of oedema
3. Atheroma
4. Asbestosis
5. Gatekeeper genes
6. Primary tuberculosis
7. Risk factors for carcinoma of the urinary bladder
8. Transforming infections

III. Reasoning Out:

(4 x 5 = 20)

1. A 25 year-old-woman seeks consultation as she is concerned that several members of her family have been affected by the onset of progressive loss of mental function and motor coordination and choreoathetosis when they reach middle age. Genetic studies have shown that some of these individuals have CAG trinucleotide repeat mutations. Which of the following sites are likely to be grossly abnormal in these affected persons?
 - a. Caudate nucleus
 - b. Basal ganglia
 - c. Amygdala
 - d. Hippocampus

[PTO]

2. A 19-year-old girl with a height of 135 cm, webbed neck and poorly developed secondary sexual characteristics has a continuous murmur heard over both the front of and back of the chest. She had claudication pain and coldness of her extremities. Which of the following cardiovascular abnormalities is she most likely to have?

- a. Mitral stenosis
- b. Coarctation of the aorta
- c. Patent ductus arteriosus
- d. Atrial septal defect

3. The following findings were noted at autopsy in a 49-year-old woman with a history of atrial fibrillation. The heart was enlarged with vegetations along the line of closure of the mitral valve with partial fusion of the leaflets and thickened, shortened chordae tendineae. The left atrium was enlarged and contained a mural thrombus. Which of the following conditions could she have had?

- a. Marantic endocarditis
- b. Rheumatic carditis
- c. Infective endocarditis
- d. Systemic lupus erythematosus

4. A 23-year-old man football player falls and hits the right side of his head against a bench. He gets up and resumes play. He collapses about 40 minutes later. Radiology reveals a convex area of hemorrhage centered in the right parietal region. His condition is most probably due to damage to which of the following vessels?

- a. Cavernous sinus
- b. Carotid artery
- c. Middle meningeal artery
- d. Anterior cerebral artery

IV. Very Short Answers:

(10 x 2 = 20)

1. Neonatal hyaline membrane disease
2. Knudson's two-hit hypothesis
3. Two paraneoplastic syndromes and the tumours associated with them
4. Haemorrhagic infarcts
5. Gas gangrene
6. Severe acute respiratory syndrome
7. Hyaline change
8. Radiation pneumonitis
9. Diseases with multifactorial inheritance
10. Healing by second intention

[LE 114]

APRIL 2014

Sub. Code: 2011

**M.D. DEGREE EXAMINATION
BRANCH III – PATHOLOGY
GENERAL PATHOLOGY**

Q.P. Code :202011

Time : Three Hours

Maximum : 100 marks

I. Essay:

(2X10=20)

1. Enumerate the causes of cell injury. Discuss the morphologic changes in cell injury culminating in necrosis or apoptosis.
2. Discuss the pathogenesis of viral oncogenesis with examples.

II. Write short notes on:

(8X5=40)

1. Carcinoid syndrome.
2. Pathologic calcification.
3. Pathogenesis of fatty liver.
4. Write briefly on Klienfelter's syndrome.
5. Mechanism of angiogenesis.
6. Leukocytoclastic vasculitis.
7. Write briefly on defects in leucocyte function.
8. Isoenzymes as tumor markers.

III. Reasoning Out:

(4X5=20)

1. 18 years old boy presented with fever of unknown origin, fatigue and generalized lymphadenopathy. His peripheral smear showed lymphocytosis with atypical lymphocytes.
 - a. What is your probable diagnosis?
 - b. What is the specific antibody test to confirm your diagnosis?
2. 30 years old male smoker presented with symptoms of cough with hemoptysis. X-ray chest showed a mass lesion in the hilum of left lung. His serum calcium levels were elevated.
 - a. What is your diagnosis?

- b. What is the cause for hypercalcemia?
3. New born baby had flat to elevated reddish irregular lesions on the face.
- a. What is the nature of lesion?
 - b. Name the hereditary syndrome associated with this condition.
4. 15 year old short statured female had webbing of neck, low posterior hair line and pigmented nevi with failure to develop secondary sex characteristics.
- a. What is the syndrome?
 - b. What is its molecular pathogenesis?
 - c. What is the tumor that they are prone to develop?

IV. Very Short Answers:

(10X2=20)

1. What is the translocation in Burkitt lymphoma?
2. Name one non-metastasizing malignant tumor.
3. What is the reason for decrease in tears and saliva in sicca syndrome?
4. Name the erythropoietin producing tumors.
5. Name the carcinogens in tobacco smoke.
6. What is the gross appearance of fat necrosis in the mesentry?
7. What are myelin figures?
8. Name the mononuclear phagocyte of the bone.
9. What are the diseases caused by α_1 -antitrypsin deficiency?
10. What are "Clue cells"?

[LF 114]

OCTOBER 2014

Sub. Code: 2011

M.D. DEGREE EXAMINATION
BRANCH III – PATHOLOGY
PAPER II - GENERAL PATHOLOGY
Q.P. Code :202011

Time : 3 Hours

Maximum : 100 marks

I. Essay:

(2 x 10 = 20)

1. Discuss the cytogenetic disorders involving autosomes and sex chromosomes.
2. Discuss the etiopathogenesis of thrombosis. Enumerate the hypercoagulable pathologic conditions and discuss in detail about them.

II. Write short notes on:

(8 x 5 = 40)

1. Free radical injury.
2. Growth factors in wound healing.
3. Metaplasia of FGT.
4. Immunology of TB.
5. Sudden infant death syndrome.
6. Recent concepts in pathogenesis of shock.
7. Prion disease.
8. Precursor proteins of amyloid.

III. Reasoning Out:

(4 x 5 = 20)

1. 25 years old male presented with matted cervical lymph nodes and evening rise of temperature. His ESR was 60 mm / hr with lymphocytosis.
 - A. The diagnostic feature in cervical node biopsy would be
 - a. Monotonous sheets of atypical lymphocytes.
 - b. Collar stud abscess.
 - c. Caseating granuloma.
 - d. Eosinophilic abscess.
 - B. Write about the pathomorphology of the disease.
2. 35 year old lorry driver presented with frequent diarrhea, productive cough and loss of weight. On investigation there was reduction in CD4 count.
 - A. What is your diagnosis?

- B. What is the cause of diarrhea?
 - C. What is the pathogenesis of the above disease?
3. A three year old boy presented with loin mass and hematuria .
- A. What is your diagnosis?
 - B. What are the genetic alterations in this conditions?
 - C. Mention the syndromes associated with this condition.
4. 12 year old boy presented with short stature, bone pain and beaded ribs
- A. What is your diagnosis?
 - B. What is the pathophysiology of this condition?

IV. Very Short Answers:

(10 x 2 = 20)

1. Chronic granulomatous disease.
2. Caisson disease.
3. Effects of hyperthermia.
4. Werner syndrome.
5. Fibrillar collagens.
6. Thromboplastin.
7. FMR gene.
8. Spectral karyotyping.
9. Common sites of invasive candidiasis.
10. Erythema infectiosum.
