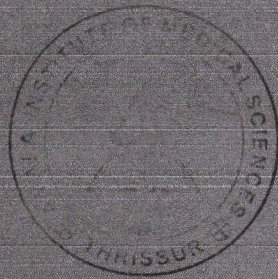


PATHOLOGY

LUMINAIRE 12



Betsy
Dr. BETSY THOMAS
MD, FRCOG, DNB, MCOG
PRINCIPAL
AMALA INSTITUTE OF MEDICAL SCIENCES
AMALA NAGAR, THRISSUR-680 555

OVERVIEW

THEORY

PAPER 1: CLINICAL PATHOLOGY, GENERAL PATHOLOGY, HEMATOLOGY

PAPER 2: SYSTEMIC PATHOLOGY

Long Essay: $2 \times 15 = 30$ Marks

Short Essay: $5 \times 8 = 40$ Marks

Short Answers: $4 \times 5 = 20$ Marks

Answer in Single Sentence: $10 \times 1 = 10$ Marks

THEORY: $100 + 100 = 200$ MARKS

UNIVERSITY PRACTICAL: 80 MARKS

VIVA VOCE: 20 MARKS

GRAND TOTAL: 300 MARKS



MODEL QUESTION PAPER**Pathology –Paper I****(General Pathology and Hematology including Clinical Pathology)****Long essays (2x15=30)**

- 11 year old boy presented with fever, tiredness, purpuric spots over the body and generalised lymphadenopathy. His Hb 6gm%; WBC count 95,000 cells/cmm; platelet count 40,000 cells/cmm.
 - What is your provisional diagnosis
 - Describe the peripheral smear and bone marrow findings
 - Mention 2 special stains helpful in the diagnosis
 - List 4 prognostic factors of this condition
 (1+8+2+4=15)

2. Explain the vascular events in acute inflammation. Describe the sequence of cellular events that follow. Enumerate the differences between transudate and exudate. (5+5+5=15)

Short essays (5x8=40)

3. Pathogenesis of thrombus formation
4. Chemical mediators
5. Morphology of 3 phases of chronic myeloid leukemia
6. Viral oncogenesis
7. Septic shock

Short answers (4x5=20)

8. Differences between benign and malignant lesions
9. Genetics and lab diagnosis of hemophilia
10. RBC parameters and histogram of iron deficiency anemia
11. Biochemical findings in pyogenic, tuberculous and viral meningitis.
12. Processing of tissue for histopathological examination

Name the following (10x1=10)

13. Migration of leucocytes to the site of injury is called
14. The defect seen in Bernard Soulier syndrome is
15. Name the mutation seen in polycythemia vera
16. Name the anticoagulant used for blood transfusion
17. Name two viral hepatitis having a risk of developing hepatocellular carcinoma
18. The type of necrosis seen in the brain is
19. Stages of lobar pneumonia
20. Two malarial parasite species seen in India
21. Two tumour suppressor genes and associated neoplasm.
22. Two viruses that form intracellular inclusion bodies

**Pathology –Paper II
(Systemic Pathology)****Long essays (2x15=30)**

- 45 year old male was brought to the casualty with sudden onset of chest pain with radiation to the left arm. While on treatment, on the fifth day, he developed hypotension and died.
 - What is your provisional diagnosis
 - Mention 4 risk factors of this condition
 - Describe the gross and microscopic features expected in the autopsy specimen
 - Mention 2 lab investigations helpful in the diagnosis during admission
 - List 4 complications of this condition
 (1+2+8+2+2=15)
2. Classify ovarian tumours. Describe the gross and microscopy of dysgerminoma. Name the markers of germ cell tumours of ovary. (4+8+3=15)

Short essays (5x8=40)

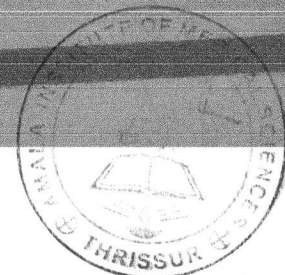
3. Gross and microscopic features of papillary carcinoma thyroid
4. Basal cell carcinoma
5. Morphology and clinical significance of fibrocystic disease of breast
6. Pathogenesis and morphology of emphysema
7. Risk factors, gross and microscopy of carcinoma cervix

Short answers (4x5=20)

8. Glioblastoma multiforme
9. Pleomorphic adenoma
10. Renal cell carcinoma
11. Hodgkin lymphoma
12. Osteoclastoma

Name the following (10x1=10)

13. Two pediatric tumours in kidney
14. Two endocrine tumours of pancreas
15. Name the grading system used in breast carcinoma
16. Mesothelioma occurs following the exposure to
17. Commonest site of carcinoid tumour is
18. Name two microscopic features of a sarcoid lesion
19. Libman-Sacks endocarditis is seen in
20. Name the intracytoplasmic inclusion seen in alcoholic hepatitis
21. Name the translocation seen in Ewing sarcoma
22. Name the pulmonary infection seen in AIDS



CLINICAL PATHOLOGY**CYTOLOGY AND HISTOPATHOLOGY**

1. [UQ] Exfoliative cytology (HM 227; RB 97)
2. [UQ] Frozen section
3. [UQ] Leishman's stain
4. [UQ] Pap smear (HM 897)
5. [UQ] Lipid special stains
6. [UQ] Cytology in diagnosis of cancer
7. [UQ] FNAC (HM 888; RB 333)
8. Steps in tissue processing
9. Fixatives (HM 898)
10. Immunohistochemical stains
11. Flow cytometry

ANALYSIS OF

1. [UQ] Urine- Casts and Crystals
2. [UQ] CSF Findings
3. [UQ] Tests done in feces
4. [UQ] Characteristics of normal seminal fluid.
5. [UQ] Bone marrow aspiration and Biopsy (HM 262-264)
6. Sperm, Oligospermia

HEMATOLOGY

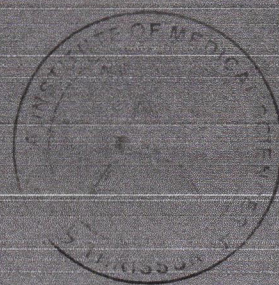
1. [UQ] Blood transfusion reactions
2. [UQ] Bombay Blood group (HM-318)
3. [UQ] Dangerous O group
4. [UQ] ESR (HM 270)
5. [UQ] PCV- Uses of buffy coat, Uses of PCV tube
6. [UQ] Reticulocyte count (HM 265; RB 631)
7. [UQ] Clotting time (HM 307)
8. [UQ] Coomb's test
9. [UQ] Barr body (HM 252)
10. [UQ] Peripheral blood smear
11. [UQ] Principle of Reagent strip test for glycosuria
12. [UQ] Anti-coagulants and Blood storage
13. [UQ] Types of blood groupings

14. [UQ] Normal reticulocyte count
15. [UQ] Macropolycyte
16. Screening of a blood donor
17. Transfusion transmitted diseases
18. Cross matching (HM 318)

MISCELLANEOUS

1. [UQ] Parasites seen in peripheral blood smear
2. [UQ] Target cell (HM 270), Mott cell, Reed Sternberg cell (HM 348)
3. [UQ] Russel body (HM 18, 362)
4. [UQ] Ketonuria- Causes
5. [UQ] Indications for bone marrow aspiration study
6. [UQ] Proteinuria- Causes

***STUDY CLIP RECORD THOROUGHLY.**



GENERAL PATHOLOGY**CELLULAR ADAPTATION AND CELL INJURY****LONG ESSAY**

1. [UQ] Necrosis- types, explain each type (HM[8] 49; RB 35; RN 27)
2. [UQ] Apoptosis- definition, mechanism, variants, difference between apoptosis and necrosis (HM[8] 57 table 3.9; RB 37; RN 33)
3. [UQ] Cell injury- definition, causes mechanism, reversible and irreversible type, morphology of both types (HM[8] 33; RB 31; RN 14)

SHORT ESSAY

1. [UQ] Pathological calcification - definition, types, difference between dystrophic and metastatic calcification (HM[8] 54 Tab. 3.8; RB 53; RN 38)
2. [UQ] Gangrene- definition, types, difference between dry, wet and gas gangrene (HM[8] 52 Tab. 3.7; RN 31)

SHORT ANSWER

1. [UQ] Metaplasia (HM[8] 38; RB 50; RN 44)
2. [UQ] Dysplasia, hyperplasia, hypertrophy, atrophy (HM[8] 35-39; RB 48-50; RN 41,43,197)
3. [UQ] Reperfusion injury, free radical injury - mechanism (HM[8] 43; RB 43; RN 17,18)
4. [UQ] Endogenous pigments (HM[8] 64; RB 52; RN 26)
5. [UQ] Fatty change, special stains for fat (HM[8] 62; RB 652; RN 22)
*SPI stains for fat
 Sudan dyes: III, IV,
 sudan black
 -oil red O, osmic
 acid*
6. [UQ] Lipofuscin (HM[8] 67; RB 52; RN 27)
7. [UQ] Autophagy (HM[8] 60; RB 40; RN 217)
8. Ochronosis (HM[8] 65; RB 64; RN 26)
9. Necroptosis (HM[8] 60; RB 40; RN 38)
10. Pyroptosis (HM[8] 60; RB 40; RN 38)

PATHOLOGY

INFLAMMATION AND REPAIR**LONG ESSAY**

1. [UQ] Inflammation- Definition, Cardinal signs, Types, Vascular & Cellular events, Mediators, Cell Adhesion Molecules, Outcomes of inflammation (HM[8] 70; RB 60 Fig. 3.4; RN 50)
2. [UQ] Granuloma- Definition, Morphology (dig), Evolution, Fate of tubercle (useful for TB, Type 4 HSN, Leprosy) (HM[8] 91 Fig. 4.19; RB 85; RN 69,512)
3. [UQ] Wound healing- Types, Mechanisms, Factors affecting, Complications (HM[8] 116; RB 87 Fig. 3.24; RN 81)

SHORT ANSWER

1. [UQ] Fracture Healing (HM[8] 118 Fig. 4.4; RB 805 Fig. 21.12; RN 77)
2. [UQ] Granulation tissue with diagram (HM[8] 118 Fig. 4.45; RB 92 Fig. 3.26; RN 69)
3. [UQ] Chemotaxis (HM[8] 75 Fig. 4.5; RN 55)

Dr. BETSY THOMAS

MD, FRCOG, DNB, MICOG

PRINCIPAL

AMALA INSTITUTE OF MEDICAL SCIENCES
AMALA NAGAR, THRISSUR-680 555*Betsy*