

- 5) Dystrophic calcification occurs in
 A. Hyperparathyroidism
 B. Vitamin D Intoxication
 C. Necrotic tissue
 D. Renal Failure.
- 6) Interstitial fluid collection during Congestive cardiac failure is called
 A. Cystic collection
 B. Exudate
 C. Edema
 D. Effusion
- 7) Haematoxylin body represents:
 A. Nuclear chromatin material
 B. RNA
 C. Cytosolic components.
 D. Cell membrane components.
- 8) Most Important Antigen initiating graft rejection.
 A. P24 Ag
 B. Polysaccharide
 C. HLA antigen
 D. TCR.
- 9) Father of cellular pathology is:
 A. Carl Rokitansky
 B. Rudolf Virchow
 C. G.Morgagni
 D. FT Schwann
- 10) Which of the following organs are heart failure cells seen in:
 A. Myocardium
 B. Lungs
 C. Liver
 D. Spleen
- 11) White Infarct is seen in all Except
 A. Lung
 B. Spleen
 C. Kidney
 D. Heart
- 12) Correct sequence of Cell cycle is
 A. G₀-M-G₂-S-G₁
 B. G₀-G₁-G₂-S-M
 C. G₀-G₁-S-G₂-M
 D. G₀-G₁-S-M-G₂
- 13) All are pigments stainable by Prussian Blue except
 A. Hemosiderin
 B. Haematin
 C. Ferritin.
 D. Melanin.
- 14) Histopathology specimen are fixed in
 A. Glutaraldehyde
 B. 10% Ethyl alcohol
 C. 10% picric acid
 D. 10% buffered neutral formalin
- 15) Father has Blood group "B", Mother has "AB"; Childrens are not likely to have following blood group.
 A. "B"
 B. "AB"
 C. "O"
 D. "A".

- 16) Bombay Blood group is characterized by
- Absence of A gene
 - Absence of B gene
 - Absence of Both A & B gene
 - Absence of H gene
- 17) All are germ cell Tumor except
- Seminoma
 - Embryonal Carcinoma
 - Leydig cell tumor
 - Yolk sac Tumor.
- 18) Most Effective Antigen presenting cell is
- Dendritic cells
 - Neutrophils
 - Lymphocytes
 - NK cells.
- 19) Tumor marker useful in diagnosis of Liver Cancer is
- Beta HCG
 - AFP
 - CEA
 - CA-125
- 20) All of the following is Autosomal Recessive disorder except.
- Hemophilia
 - Cystic Fibrosis
 - Sickle cell Anemia
 - Phenylketonuria.

Section- II

Q.2 Case based long essay questions

13

20 year female admitted with high grade fever and hypotension. Blood culture show Gram negative bacteria. She died due to multiorgan failure.

- 1) What is your Diagnosis based on above findings? 2
- 2) Enumerate four laboratory tests and its findings required for early diagnosis and to rule out other differential diagnosis of this condition. 4
- 3) Describe its etiopathogenesis. 3
- 4) Describe its morphology. 4

Q.3 Long essay questions. (Attempt any three)

- 1) Enumerate viral and chemical carcinogenic agents. Describe their etiopathogenesis with example (tumours). 9
- 2) Define and classify Amyloidosis. Describe morphological features of Amyloidosis of spleen and kidney. 9
- 3) Define Granuloma. Describe pathogenesis of Granuloma formation and morphology of Granuloma. Enumerate its examples. 9
- 4) Define Hypersensitivity reactions. Describe etiology, pathogenesis, and examples of Type- 4 Hypersensitivity reactions. 9

Section- III

Q.4 Short notes (Attempt Any 8)

40

- 1) Exfoliative cytology
- 2) Describe laboratory investigations in case of female Infertility
- 3) A 19-year-old female presented with primary amenorrhoea. She has short Stature and widespread nipples. Write the diagnosis, describe genetic aspects and clinical features of disease.
- 4) Wound healing
- 5) Cross matching in Blood bank.
- 6) Enumerate the serological Test and Test method used in blood bank.
- 7) Chemical mediators of Inflammation.
- 8) Define Necrosis. Type of necrosis with examples.
- 9) Dysplasia Vs Metaplasia.
- 10) Three opportunistic infection and two Tumours Associated with AIDS.

2406000102020602
EXAMINATION JANUARY 2024
BACHELOR OF MEDICINE AND BACHELOR OF SURGERY
(SECOND YEAR)
PATHOLOGY (PAPER - II) (NEW) (OMR)

[Time: As Per Schedule]

[Max. Marks: 80]

Instructions:

1. Fill up strictly the following details on your answer book
 - a. Name of the Examination : **BACHELOR OF MEDICINE AND BACHELOR OF SURGERY (SECOND YEAR)**
 - b. Name of the Subject : **PATHOLOGY (PAPER - II) (NEW) (OMR)**
 - c. Subject Code No : **2406000102020602**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.
5. Each question carries one mark
6. Write correct Answer (A/B/C/D in adjacent box).

Seat No:

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Student's Signature

SECTION-I

Q.1 Multiple choice questions (*no negative markings)

20

1. Essential Diagnostic feature in Iron deficiency anaemia is
 - A. Decreased S. Ferritin.
 - B. Decreased S. iron.
 - C. Increased S. Ferritin.
 - D. Decreased TIBC.
2. Type of Anaemia Caused by ileocecal Tuberculosis
 - A. Megaloblastic Anemia
 - B. Normocytic Normochromic
 - C. Sideroblastic
 - D. Iron Deficiency Anemia.
3. Patient had hypertension of 30 years, His heart will show
 - A. Left Ventricular Hypertrophy
 - B. Dilated Cardiomyopathy
 - C. Right ventricular hypertrophy
 - D. Restrictive Cardiomyopathy
4. Popcorn cells will be seen in which type of Hodkin's disease
 - A. Lymphocytic dominant
 - B. Nodular sclerosis
 - C. Lymphocytic depleted
 - D. Mixed type.

5. Flea bitten Kidney is seen in all except:

- A. Infective Endocarditis
- B. Diabetic Nephropathy
- C. Malignant Hypertension
- D. Hemolytic Uremic Syndrome.

6. Anthracosis is due to inhalation of

- A. Coal dust
- B. Silica dust
- C. Asbestos dust
- D. Beryllium dust.

7. Auer rods are derived from:

- A. RNA
- B. DNA
- C. Primary granules.
- D. Secondary granules.

8. Most thrombogenic constituent of atheroma is.

- A. Fibrous cap
- B. Lipid core
- C. Foam cells
- D. Fibrous degradation product.

9. Most common congenital abnormality of heart is:

- A. VSD
- B. Myxoma
- C. ASD
- D. Tetralogy of Fallot

10. Viral pneumonia are characterised by following Except:

- A. Interstitial Inflammation
- B. Alveolar exudates
- C. Multinucleate giant cells in bronchial wall
- D. Necrotising bronchiolitis.

11. All of the following have strong association with oral squamous cell carcinoma Except

- A. Tobacco smoking
- B. Chronic alcoholism
- C. HPV 16 and 18
- D. Sub mucosal fibrosis

12. Common causes of hematemesis of oesophageal origin are as follows except

- A. Oesophageal varices
- B. Mallory-weiss syndrome
- C. Reflux oesophagitis
- D. Oesophageal rupture

13. Most common site of Hydatid cyst is

- A. Liver
- B. Spleen
- C. Kidney.
- D. Brain.

14. Autoimmune hemolytic anemia is most likely to be associated with

- A. AML
- B. ALL
- C. CML
- D. CLL

15. Presence of which rule out the diagnosis of Aplastic Anemia.

- A. Hepatomegaly.
- B. Splenomegaly.
- C. Lymphadenopathy
- D. Cardiomegaly.

16. In Good pasture disease, the antigen is

- A. DNA
- B. Collagen IV of Basement membrane.
- C. Bacterial Products
- D. Cationic proteins.

17. Prostatic hyperplasia affects most often :

- A. Peripheral prostate
- B. Capsule of prostate
- C. Periurethral prostate
- D. Entire Prostate.

18. Which type of breast carcinoma is characterized by "Indian file pattern of tumor cells.

- A. Infiltrating Duct carcinoma
- B. Medullary carcinoma
- C. Tubular carcinoma
- D. Invasive lobular carcinoma.

19. Common causes of myxoedema are as under except

- A. Follicular Adenoma
- B. Ablation of thyroid by surgery
- C. Thyroid cancer
- D. Autoimmune Thyroiditis.

20. Cell of origin of Ewings sarcoma is ;

- A. Endothelial cells
- B. Primitive neuroectodermal cells
- C. Osteoblast
- D. Marrow cell.

SECTION -II

Q.2 (LONG ASSAY QUESTION -CASE Based)

13

8 year female residing at tribal area, presented with complain of abdominal pain, pain in finger, weakness and fatigue on exertion. On examination tongue show pallor

HEMOGLOBIN: 7.5 gm/dl	MCV: 80fl
RBC COUNT: 3.4 Million/cmm	MCH: 27.5 pg

WBC count: 8700/cumm	MCHC: 32.5 g/dl
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Reticulocyte Count:	8.9 %
Peripheral smear:	Anisocytosis ++, Poikilocytosis+, Fragmented and Boat shape RBC +

- What is your Diagnosis based on above findings?
- Enumerate differential diagnosis and describe various lab investigation used for screening & to confirm the diagnosis
- Describe its etiopathogenesis.

Q.3 Long assay question. (Any Three). (9 marks each)....

27

1. Define and enumerate etiology of liver cirrhosis and laboratory test findings with morphology of alcoholic cirrhosis.
2. Types of Pnemonia, Morphology of Lobar Pnemonia and lab investigation for diagnosis.
3. Laboratory Investigation, pathogenesis and complication of Diabetes.
4. Classify Testicular Tumor & write about Germ cell Tumor of Testis.

SECTION -III

Q.4 SHORT NOTE. (ANY EIGHT) (5 MARKS EACH).....

40

1. DIC (disseminated intravascular coagulation).
2. Lab investigation and complications of Acute Myocardial Infarction.
3. Etiopathogenesis and Morphology of pyogenic osteomyelitis.
4. Enumerate Plasma cell disorder. Write laboratory diagnosis of Multiple myeloma.
5. Enumerate Benign breast Tumor & describe invasive ductal carcinoma of Breast.
6. Morphology of various types of Emphysema.
7. Define and give difference between Nephrotic and nephritic syndrome.
8. Reticulocyte count
9. Thyroid Function Tests.
10. Malignant Melanoma.

HEMOGLOBIN: 7.5 g/dl	MCV: 80fl
RBC COUNT: 3.4 Million/cmm	MCH: 27.2 pg

2106000102010101
Examination February – March 2024
SECOND MBBS
PATHOLOGY (PAPER - I) - LEVEL I

[Time: Three Hours]

[Max. Marks: 100]

Instructions:

1. Fill up strictly the following details on your answer book
 - a. Name of the Examination: **SECOND MBBS**
 - b. Name of the Subject: **PATHOLOGY (PAPER - I) - LEVEL I (OMR)**
 - c. Subject Code No: **2106000102010101**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

SECTION – I

Q.1 Multiple choice questions (MCQs).

20*1=20

(Instruction: Encircle the correct answer)

1. Mitochondrial DNA differs from Nuclear DNA in :

- a) Being linear and open ended
- b) Having two co copies per somatic cell
- c) Monocistronic transcription pattern
- d) Having Maternal inheritance pattern

2. Wear and Tear pigment is:

- | | |
|---------------|-----------------|
| a) Lipofuscin | b) Haemosiderin |
| c) Melanin | d) Bilirubin |

3. Dystrophic calcification is seen in:
- a) Hypervitaminosis D
 - b) Williams Syndrome
 - c) Atheromatous Plaque
 - d) Renal tubular acidosis
4. Bradykinin effects include all the following **EXCEPT**:
- a) Smooth muscle contraction
 - b) Vasoconstriction
 - c) Increased Vascular permeability
 - d) Pain
5. Wound contraction is mediated by:
- a) Collagen
 - b) Elastin
 - c) Myofibroblast
 - d) Granulation tissue
6. Fifth sign of Inflammation " Functiolaesa "was given by :
- a) Celsus
 - b) Hunter
 - c) Virchow
 - d) Cohnheim
7. Apoptosis is inhibited by :
- a) P53
 - b) π -myc
 - c) Ras
 - d) bcl2
8. The most potent antigen presenting cell for T lymphocytes is :
- a) Dendritic cell
 - b) NK cell
 - c) Stem cell
 - d) Macrophage
9. Type I hypersensitivity reaction is mediated by :
- a) IgG antibody
 - b) IgM antibody
 - c) IgE antibody
 - d) IgA antibody
10. Red infarct is seen in all **EXCEPT**:
- a) Lung
 - b) Liver
 - c) Intestine
 - d) Spleen

11. Caisson disease is due to:

- a) Fat embolism
- b) Air embolism
- c) Thromboembolism
- d) Amniotic fluid embolism

12. Venous thrombus is associated with following feature:

- a) Tendency to embolise
- b) Associated with atheroma
- c) Often with turbulence
- d) Commonly Mural

13. Syphilitic involvement of aorta is observed mostly in:

- a) Descending aorta
- b) Arch of Aorta
- c) Abdominal Aorta
- d) Bifurcation of Aorta

14. Bombay Phenotype are the individuals who:

- a) Lack of H genes and therefore H substance.
- b) Possess A and B antigen
- c) Secrete excessive amount of H substance
- d) Lack C, D, E antigens

15. "Tombstone" appearance of cells is seen in which type of Necrosis?

- a) Fibrinoid
- b) Coagulative
- c) Liquefactive
- d) Fat

16. Which of the following is malignant tumour?

- a) Papilloma
- b) Melanoma
- c) Adenoma
- d) Osteoma

17. Which one of the following is an example of Metaplasia?

- a) Changes in skeletal muscles in athelets
- b) Changes in Cardiac muscles due to hypertension
- c) Barret's Oesophagus
- d) Hormonal changes in breast and uterus during Pregnancy.

18. Hypercalcaemia is associated with all of the following tumours

EXCEPT:

- a) Small cell carcinoma of the lung
- b) Squamous cell carcinoma of Lung
- c) Adult T cell Leukaemia
- d) Renal cell carcinoma

19. Placental alkaline Phosphatase is raised in :

- a) Teratoma
- b) Seminoma
- c) Endodermal Sinus tumour
- d) Lymphoma Testis

20. Role of L-selectin in inflammation:

- a) Rolling
- b) Adhesion
- c) Homing
- d) Transmigration

SECTION - II

Q.2 Case based question (compulsory to attempt)

13

45 yrs male, intravenous drug abuser presented with weight loss, oral candidiasis, generalized lymphadenopathy and symptoms of multiple opportunistic infections.

- a) What is your Probable diagnosis? 1
- b) Enumerate the investigations carried out to support the diagnosis? 4
- c) Describe the pathogenesis of the disease. 5
- d) Describe the Natural History and stages of the Disease 3

Q.3 Long Essay Questions
(Attempt any 3 out of 4)

27

1. Define Apoptosis. Describe the molecular mechanisms of Apoptosis. 1+5+3
Illustrate contrasting features of Apoptosis from Necrosis.

2. Define Shock. Enumerate the classification and etiology of Shock. Describe the pathogenesis of Septic Shock. Describe the stages of Shock. 1+2+3+3
3. Define Metastasis. Write three different routes of Metastasis. Describe cell biology of Invasion and Metastasis Cascade. 1+3+5
4. Describe the pathogenesis of Cell Injury. Write the distinguishing features of Reversible and Irreversible Cell Injury. 5+4

SECTION – III

Q.4 (Attempt any 8 out of 10) (5 marks Each)

40

- 1) Difference between Transudate and Exudate.
- 2) Describe healing by First intention (Primary Union)
- 3) Enumerate the Liver Function tests and explain the clinical significance of each.
- 4) Enumerate the contrasting features of initiator and promoter carcinogens.
- 5) Describe Mismatched blood transfusion.
- 6) Difference between Kwashiorkor and Marasmus.
- 7) Define Edema. Write pathophysiology of Edema.
- 8) Clinical features and cytogenetic abnormalities of Down Syndrome.
- 9) Enumerate special stains in Amyloidosis.
- 10) Describe Paraneoplastic syndrome.

2106000102010102
Examination February – March 2024
SECOND MBBS
PATHOLOGY (PAPER - II) - LEVEL 1

[Time: Three Hours]

[Max. Marks:100]

Instructions:

1. Fill up strictly the following details on your answer book
 - a. Name of the Examination : **SECOND MBBS**
 - b. Name of the Subject : **PATHOLOGY (PAPER - II) - LEVEL 1 (OMR)**
 - c. Subject Code No : **2106000102010102**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.
5. No negative marks

Seat No:

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Student's Signature

SECTION – I

Q.1 Multiple choice questions (MCQs).

20*1=20

(Instruction: Encircle the correct answer)

1. Erythropoietin is produced by
 - a) Liver
 - b) Lungs
 - c) Bone marrow
 - d) Kidney
2. Which is NOT SEEN in Megaloblastic anaemia?
 - a) Hyper segmented neutrophil
 - b) MCV < 80
 - c) Evidence of dyserythropoiesis
 - d) Giant metamyelocytes
3. Howell Jolly bodies in red cells seen in:
 - a) Hereditary Spherocytosis
 - b) Lead Poisoning
 - c) Post Splenectomy
 - d) Iron deficiency anemia

4. The pathognomonic abnormality in β -thalassaemia minor is:
 - a) marked rise in HbA₂
 - b) marked rise in HbF
 - c) marked unconjugated hyperbilirubinaemia
 - d) marked anaemia

5. Small warty vegetations along the lines of closure of Valves on mitral and aortic valves are observed in :
 - a) Infective endocarditis
 - b) Rheumatic fever
 - c) Libman -Sach's endocarditis
 - d) Non-Bacterial thrombotic endocarditis

6. The commonest vessel involved in Myocardial Infarction:
 - a) Right Coronary artery
 - b) Left Circumflex artery
 - c) Left Anterior Descending artery
 - d) Posterior Descending artery

7. Which of the following is associated with the development of bronchogenic carcinoma and mesothelioma?

a) Silicosis	b) Asbestosis
c) Siderosilicosis	d) Anthracosis

8. Patients are designated as pink puffers in:

a) Chronic Bronchitis	b) Bronchiectasis
c) Emphysema	d) Pneumoconiosis

9. Essential diagnostic criteria for nephrotic syndrome in adults is :
 - a) Anasarca with orbital puffiness
 - b) 24hrs urinary excretion of protein 3.5 gm or greater
 - c) Hypoalbuminemia
 - d) A constellation of hypertension, hyperlipidemia and lipiduria

10. Typical "Grain Leather" appearance of kidney is seen in :

a) Benign nephrosclerosis	b) Malignant nephrosclerosis
c) Nephrocalcinosis	d) Necrotising Papillitis

11. Toxic Megacolon is complication of:
- a) Crohn's Disease
 - b) Ulcerative Colitis
 - c) Necrotising Enterocolitis
 - d) Pseudomembranous Colitis
12. The most common site for hydatid cyst is
- a) Liver
 - b) Lungs
 - c) Spleen
 - d) Brain
13. The most common mechanism in pathogenesis of chronic pyelonephritis is
- a) Ascending infection
 - b) Reflux nephropathy
 - c) Obstructive nephropathy
 - d) Haematogenous infection
14. Cirrhosis in Wilson's disease is related to:
- a) Zinc
 - b) Copper
 - c) Mercury
 - d) Iron
15. Ovarian tumour arising from Stromal cells is :
- a) Dysgerminoma
 - b) Brenner tumour
 - c) Granulosa theca cell tumour
 - d) Krukenberg Tumour
16. Giant cell tumour arises from:
- a) Diaphysis
 - b) Metaphysis
 - c) Articular cartilage
 - d) Epiphysis
17. Gout is characterised by deposition of crystals of
- a) Uric acid
 - b) Hydroxy apatite
 - c) Pyrophosphate
 - d) Urate
18. Mutation characteristic of polycythaemia vera
- a) JAK2
 - b) Bcr-abl
 - c) p53
 - d) RAS

19. Medullary carcinoma of thyroid arises from:

- a) C-cells of thyroid
- b) Follicular cells
- c) Parathyroid cells
- d) Primitive pluripotent cell of thyroid

20. Which type of Nevus most commonly progresses to Malignant Melanoma:

- a) Blue cell Nevus
- b) Spindle cell Nevus
- c) Dysplastic Nevus
- d) Compound Nevus

SECTION – II

Q.2 Case based Question (Compulsory to attempt)

13

1. A 50year male with history of chronic alcohol consumption presented with distended abdomen .ultrasound scan show reduced size of liver.

a. What is the probable diagnosis?

1

b. Describe the pathogenesis of this condition

5

c. Describe gross and microscopic findings.

4

d. Enumerate three Complications of the condition.

3

Q.3 Long Essay Questions: (Attempt any 3 out of 4)

9*3=27

1. Describe the Clinical features, pathogenesis and Lab findings in β Thalassemia Major.

3+3+3

2. Describe etiopathogenesis, gross and microscopy & complications of ulcerative colitis.

4+3+2

3. Describe the Pathogenesis and stages of lobar pneumonia.

3+6

4. Describe etiopathogenesis of Hypertension vascular Disease. Write About Benign and Malignant Nephrosclerosis. 4+5

SECTION – III

Q.4 (Attempt any 8 out of 10) (5 marks each) 40

1. Describe clinical findings, inheritance in von Willebrand disease.
2. Classify germ cell Tumour. Describe Morphological features of Seminoma.
3. Describe Major and Minor criteria to diagnose Rheumatic Heart disease.
4. Write the staging Classification of Hodgkin Lymphoma.
5. Giant cell Tumour of Bone
6. Atherosclerosis
7. Squamous cell carcinoma
8. Lab findings in Megaloblastic Anaemia
9. Describe morphologic features of Fibroadenoma.
10. Describe the Pathogenesis and morphology Of Bronchiectasis.
