

**2106000102010101**  
**Examination February – March 2024**  
**SECOND MBBS**  
**PATHOLOGY ( PAPER - I ) - 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 - I) - LEVEL 1 (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)  $\pi$ -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 athletes
- 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 27 (Attempt any 3 out of 4)

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

### 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.

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