

**MBBS PHASE – II (NON-CBME)  
DEGREE EXAMINATION – AUGUST 2025**

**Time: 3 Hours**

**Max. Marks: 100**

**PATHOLOGY  
PAPER – I**

**Q.P. Code: 1008**

Answers should be specific to the Questions asked.  
Draw neat, labeled diagrams wherever necessary.  
All questions are compulsory.

<b>Question Number</b>	<b>Marks</b>
1. M.C.Q.	<b>25 X 1 = 25</b>
<b>LONG ESSAY QUESTIONS:</b>	<b>2 X 10 = 20</b>
2. Define inflammation. Enumerate its types. Discuss the cellular events in inflammation.	(2+2+6)
3. Classify Haemolytic anaemias. Discuss laboratory diagnosis of Sickle cell anaemia.	(3+7)
<b>SHORT ESSAY QUESTIONS:</b>	<b>8 X 5 = 40</b>
4. Define necrosis. Enumerate its types with examples.	(1+4)
5. Describe the Etiopathogenesis of Type III hypersensitivity reaction with examples.	
6. Describe the gross and microscopy of CVC Liver.	
7. Discuss the difference between benign and malignant tumours.	
8. Discuss Knudson's hypothesis for Retinoblastoma.	
9. Mention the causes of Ketonuria. Describe the tests for detection of Ketone bodies in urine.	
10. Discuss the antigens, antibodies and principle of ABO blood group system.	
11. Enumerate the differences between Tuberculoid and Lepromatous Leprosy.	
<b>SHORT ANSWER QUESTIONS:</b>	<b>5 X 3 = 15</b>
12. Define Hyperplasia. Give <b>two</b> examples.	
13. Enumerate <b>three</b> neoplastic lesions in AIDS.	
14. Enumerate <b>six</b> sequelae of obesity.	
15. List the fates of thrombus.	
16. List <b>six</b> tumors of infancy and childhood.	

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**MULTIPLE CHOICE QUESTIONS**

<b>Course:</b> MBBS Phase-II, Non-CBME August 2025	<b>Max. Marks:</b> 25 Marks
<b>Subject:</b> Pathology Paper-I, QP Code: 1008	<b>Time:</b> 30 Minutes

**Instructions:**

- Each question is followed by four options.
- Pick up the single best option and darken the appropriate circle in the OMR Sheet provided.
- Each question carries one mark. No negative marking.

1. Increase in number of cells leading to increase in size of organ is known as  
(A) Hyperplasia (B) Hypoplasia  
(C) Hypertrophy (D) Anaplasia
2. Brown atrophy of liver is due to deposition of  
(A) Hemosiderin (B) Lipofuscin  
(C) Melanin (D) Bilirubin
3. Pathogenesis of increased vascular permeability is due to  
(A) Histamine (B) Interleukin  
(C) Tumour Necrosis factor (D) All of the above
4. Lepra cells belong to which of the following cell types?  
(A) Neutrophils (B) Plasma cells  
(C) Histiocytes (D) Lymphocytes
5. Following are the cell-derived chemical mediators **EXCEPT**  
(A) Cytokines (B) Fibrinolytic System  
(C) Platelet activating factor (D) Vasoactive amines
6. Following are the morphological types of acute inflammation **EXCEPT**  
(A) Fibrinous (B) Granulomatous  
(C) Purulent (D) Serous
7. Cell type that differentiates into morphologically distinct cells capable of immunoglobulin production is  
(A) Basophils (B) B cells  
(C) T cells (D) Null cells
8. If mast cells are identified in a tissue biopsy from an inflammatory process, which type of immune reaction is **most** likely to have occurred?  
(A) Type I hypersensitivity (B) Type II hypersensitivity  
(C) Type III hypersensitivity (D) Type IV hypersensitivity
9. All are autosomal dominant **EXCEPT**  
(A) Adult polycystic kidney (B) Huntington's Disease  
(C) Hereditary spherocytosis (D) Phenylketonuria
10. Class I histocompatibility antigens of HLA are located on  
(A) Monocytes (B) All nucleated cells  
(C) T-Lymphocytes (D) NK Cells
11. Pulmonary edema is an early manifestation of  
(A) Right ventricular failure (B) Left ventricular failure  
(C) Hepatic failure (D) Renal failure
12. The **commonest** source of embolism is  
(A) Air (B) Fat  
(C) Thrombus (D) Amniotic fluid

13. In which of the following type of Hodgkin Lymphoma, Lacunar cells are present?  
 (A) Lymphocyte predominant (B) Mixed cellularity  
 (C) Nodular Sclerosis (D) Lymphocyte depletion
14. In which of the following conditions, NAP score is reduced?  
 (A) CML (B) AML  
 (C) ALL (D) CLL
15. Pernicious anaemia is  
 (A) Genetic disorder (B) Hypersensitivity disorder  
 (C) Neoplastic disorder (D) Autoimmune disorder
16. Reticulocytosis is seen in  
 (A) Fanconi's anaemia (B) Bone marrow irradiation  
 (C) Haemolytic anaemia (D) Myelofibrosis
17. Punched out lesions in the skull on radiological examination are seen in  
 (A) Thalassemia (B) Sickle cell anaemia  
 (C) Multiple myeloma (D) Polycythemia
18. The gene considered as the Guardian of genome is  
 (A) RB (B) TP53  
 (C) APC (D) RAS
19. All the following are oncogenic viruses, **EXCEPT**  
 (A) EBV (B) HSV-I  
 (C) HTLV-I (D) HPV-16
20. The **most** important indicator of malignancy is  
 (A) Increased mitotic activity (B) Infiltrative borders  
 (C) Metastasis (D) Necrosis
21. Homogentisic oxidase is absent in  
 (A) Alkaptonuria (B) Glycogen storage disease  
 (C) Goucher's disease (D) Melanosis coli
22. The main function of vitamin E is  
 (A) Immune regulation (B) Hepatic microsomal carboxylation  
 (C) Antioxidant (D) Maintenance of structure and function of epithelium
23. Advantage of FNAC procedure is  
 (A) Requires no anaesthesia (B) Rapid results  
 (C) Low cost (D) All of the above
24. Presence of tad pole cells in cervical smear indicates  
 (A) Carcinoma Cervix (B) Dysplasia  
 (C) T. Vaginalis infection (D) H.P.V. Infection
25. Heavy proteinuria is characterized by loss of protein  
 (A) > 3 to 4 G / day (B) > 2 to 3 G / day  
 (C) 1 to 2 G / day (D) 0.5 to 1 G / day

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**KLE ACADEMY OF HIGHER EDUCATION AND RESEARCH**

MBBS Phase - II Degree Examination August 2025  
QP CODE: A009

**Pathology Paper 1 [PATHO1]**

**Marks: 100**

**Duration: 180 mins.**

**MCQ: 20 X 1 = 20**

**Answer all the questions.**

Section Duration: 30 mins

- |                                      |                                       |                                       |  |   |     |                                      |                                       |                                       |   |
|--------------------------------------|---------------------------------------|---------------------------------------|--|---|-----|--------------------------------------|---------------------------------------|---------------------------------------|---|
| 1                                    |                                       |                                       |  | A 50 year old male with long-standing hypertension shows an enlarged heart on imaging. Which type of cellular adaptation it is?   | (1) |                                      |                                       |                                       |   |
|                                      |                                       |                                       | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">1) Hypertrophy</td> <td style="width: 25%;">2) Atrophy</td> <td style="width: 25%;">3) Hyperplasia</td> <td style="width: 25%;">4) Metaplasia</td> </tr> </table>  |   |     | 1) Hypertrophy                       | 2) Atrophy                            | 3) Hyperplasia                        | 4) Metaplasia   |
| 1) Hypertrophy                       | 2) Atrophy                            | 3) Hyperplasia                        | 4) Metaplasia  |   |     |                                      |                                       |                                       |   |
| 2                                    |                                       |                                       |  | A 60-year-old diabetic male patient experiences a chronic non healing wound on the lower leg. Which factor is <b>most</b> likely impairing his healing process?   | (1) |                                      |                                       |                                       |   |
|                                      |                                       |                                       | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">1) Increased collagen production</td> <td style="width: 25%;">2) Enhanced angiogenesis</td> <td style="width: 25%;">3) Impaired vascular supply</td> <td style="width: 25%;">4) Rapid epithelialization</td> </tr> </table>                                    |   |     | 1) Increased collagen production     | 2) Enhanced angiogenesis              | 3) Impaired vascular supply           | 4) Rapid epithelialization                              |
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| 3                                    |                                       |                                       |  | A patient is found to have a genetic disorder with both parents being carriers. What is the likely mode of inheritance?   | (1) |                                      |                                       |                                       |   |
|                                      |                                       |                                       | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">1) Autosomal dominant</td> <td style="width: 25%;">2) Autosomal recessive</td> <td style="width: 25%;">3) X-linked dominant</td> <td style="width: 25%;">4) X-linked recessive</td> </tr> </table>   |   |     | 1) Autosomal dominant                | 2) Autosomal recessive                | 3) X-linked dominant                  | 4) X-linked recessive                                   |
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| 4                                    |                                       |                                       |  | A 72-year-old patient on long term dialysis with chronic renal failure presents with carpal tunnel syndrome and joint pain. A biopsy of the abdominal fat tissue shows amyloid deposits. What is the most likely type of amyloidosis in this patient? | (1) |                                      |                                       |                                       |   |
|                                      |                                       |                                       | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">1) AL (primary) amyloidosis</td> <td style="width: 25%;">2) AA (secondary) amyloidosis</td> <td style="width: 25%;">3) ATTR (transthyretin) amyloidosis</td> <td style="width: 25%;">4) Aβ<sub>2</sub>M (beta-2 microglobulin) amyloidosis</td> </tr> </table> |   |     | 1) AL (primary) amyloidosis          | 2) AA (secondary) amyloidosis         | 3) ATTR (transthyretin) amyloidosis   | 4) Aβ <sub>2</sub> M (beta-2 microglobulin) amyloidosis |
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| 5                                    |                                       |                                       |  | A 28-year-old man presents with symptoms of anemia, bleeding gums and petechiae. His complete blood count (CBC) shows a decreased platelet count and elevated white blood cell count. What is the likely diagnosis?                                   | (1) |                                      |                                       |                                       |   |
|                                      |                                       |                                       | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">1) Acute Myeloid Leukemia (AML)</td> <td style="width: 25%;">2) Acute Lymphoblastic Leukemia (ALL)</td> <td style="width: 25%;">3) Chronic Lymphocytic Leukemia (CLL)</td> <td style="width: 25%;">4) Chronic Myeloid Leukemia (CML)</td> </tr> </table>       |   |     | 1) Acute Myeloid Leukemia (AML)      | 2) Acute Lymphoblastic Leukemia (ALL) | 3) Chronic Lymphocytic Leukemia (CLL) | 4) Chronic Myeloid Leukemia (CML)                       |
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| 6                                    |                                       |                                       |  | Which of the following is a major limitation of cytology compared to histopathology?  | (1) |                                      |                                       |                                       |   |
|                                      |                                       |                                       | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">1) It is more expensive</td> <td style="width: 25%;">2) It takes longer time to perform</td> <td style="width: 25%;">3) It lacks tissue architecture</td> <td style="width: 25%;">4) It cannot detect malignancy</td> </tr> </table>                           |   |     | 1) It is more expensive              | 2) It takes longer time to perform    | 3) It lacks tissue architecture       | 4) It cannot detect malignancy                          |
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| 7                                    |                                       |                                       |  | Brown induration is characteristic of   | (1) |                                      |                                       |                                       |   |
|                                      |                                       |                                       | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">1) Chronic venous congestion of Lung</td> <td style="width: 25%;">2) Infarct Lung</td> <td style="width: 25%;">3) Pulmonary embolism</td> <td style="width: 25%;">4) Pulmonary Haemorrhage</td> </tr> </table>   |   |     | 1) Chronic venous congestion of Lung | 2) Infarct Lung                       | 3) Pulmonary embolism                 | 4) Pulmonary Haemorrhage                                |
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| 8                                    |                                       |                                       |  | Gaucher's disease is caused by deficiency of  | (1) |                                      |                                       |                                       |   |

1)	Glucocerebrosidase	2)	Hexosaminidase A	3)	Sphingomyelinase	4)	Alpha-galactosidase A
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9

Lepra cells are

(1)

1)	Neutrophils	2)	Plasma cells	3)	Histiocytes	4)	Lymphocytes
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10

Fatty casts are **commonly** associated with

(1)

1)	Nephrotic syndrome	2)	Diuretic therapy	3)	Tubular inflammation	4)	Heavy Exercise
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11

'Punched out lesions' in the skull on radiological examination are seen in

(1)

1)	Thalassemia	2)	Sickle cell anaemia	3)	Multiple myeloma	4)	Polycythemia
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12

Which of the following is an oncofetal antigen?

(1)

1)	CA 125	2)	Prostate specific antigen	3)	Human chorionic gonadotropin (HCG)	4)	Carcinoembryonic antigen (CEA)
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13

For causation of edema by decreased oncotic pressure which of the following factor is **most** important?

(1)

1)	Fall in albumin as well as globulin levels	2)	Fall in globulin level	3)	Fall in albumin level	4)	Fall in fibrinogen level
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14

Gas Gangrene is caused by

(1)

1)	Botulism	2)	Clostridium difficile	3)	Clostridium perfringens	4)	Clostridium tetani
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15

Which of the following contributes **most** to alcohol induced liver injury?

(1)

1)	Depletion of folate	2)	Increased NADH/NAD <sup>+</sup> ratio	3)	Activation of the complement system	4)	Autoantibody formation
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16

Carcinomas metastasise most **commonly** due to spread via

(1)

1)	Transcoelomic pathway	2)	Haematogenous route	3)	Lymphatic route	4)	Retrograde
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17

Philadelphia chromosome is an example of

(1)

1)	Non-disjunction	2)	Duplication	3)	Translocation	4)	Deletion
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18

Specific gravity of urine can be measured by all **EXCEPT**

(1)

1)	Refractometer	2)	Reagent strips	3)	Urinometer	4)	Albuminometer
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19

Hodgkin's lymphoma arises from

(1)

1)	Pre-B cells	2)	Pre-T Cells	3)	NK cells	4)	Germinal centre B cells
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20

Fresh Frozen plasma is indicated in which of the following scenarios?

(1)

1)	Severe Anaemia	2)	Haemophilia A	3)	Disseminated Intravascular Coagulation	4)	Hypovolemia
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### LONG ESSAY QUESTIONS: 2 X 10 = 20

Answer all the questions.

21

A 37 year old male presented with cough with expectoration, evening rise of temperature, loss of appetite and weight. Enlarged matted cervical lymph nodes were noted. What is the diagnosis? Discuss the etio-pathogenesis of the above condition. Describe the gross and microscopic findings in the affected organ. (1+5+4) (10)

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22			Define neoplasia. Mention the fundamental principles of malignant transformation. Discuss the role of tumour suppressor genes. (2+2+6)	(10)
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**SHORT ESSAY QUESTIONS: 9 X 5 = 45**

**Answer all the questions.**

23			A 45 year old woman presented with dark yellow coloured urine, intermittent right hypochondrial pain, pale stools and generalized pruritus for past 6 months. What is the type of jaundice? What is the expected urinary profile? Discuss the urinary findings in various types of jaundice.(1+1+3)	(5)
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24			A 15 year old male presented with easy bruising and massive hemorrhage following trauma. Patient gives history of similar complaints in the past with positive family history. What is the clinical diagnosis? What is the mode of inheritance of disease? List investigations for above condition ? (1+1+3)	(5)
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25			A 25 year old male presents with painless enlarged lymph nodes in neck associated with fever and night sweats. On examination there are multiple lymphnodes, <b>discrete</b> and rubbery in consistency. What is the diagnosis? Describe the classical histopathological features in the above condition. (1+4)	(5)
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26			A 5 year old child presents with sudden onset dyspnoea with wheeze after a visit to fields. What is the diagnosis? Explain the pathophysiology of the above condition (1+4)	(5)
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27			Describe morphology of various types of necrosis with examples.	(5)
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28			Write the etiology and clinical features of Turner's syndrome. (1+4)	(5)
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29			Discuss the etiology and pathogenesis of air embolism. (3+2)	(5)
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30			Discuss the etiopathogenesis and laboratory findings of idiopathic thrombocytopenic purpura. (2+3)	(5)
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31			Define amyloidosis. Describe the changes of amyloidosis in the spleen. List the special stains for amyloid (1+2+2)	(5)
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**SHORT ANSWER QUESTIONS: 5 X 3 = 15**

**Answer all the questions.**

32			Enumerate <b>three</b> antibodies in systemic lupus erythematosus (SLE).	(3)
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33			Enumerate the components of Virchow's triad.	(3)
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34			Name the diseases transmitted by blood transfusion.	(3)
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35			List <b>three</b> childhood tumours and mention the associated genetic mutation.	(3)
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36			Differentiate between euthanasia and withdrawal of life support with suitable examples.	(3)
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-----End-----