Labeat
9/25 SET
Sept-2025

BLDE (DEEMED TO BE UNIVERSITY)
MBBS PHASE – I EXAMINATION

[Time :3 Hours] [Max. Marks: 80]

ANATOMY – PAPER – I
QP CODE: 1011

Your answer should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.
Each answer should be written on new page only.
Write Question No. in the middle of margin.

Long Essay: (Answer to be started on fresh page only) **2 X 10 = 20**

1. A 45 year old male came with complaints of chest pain, radiating to the left upper limb, vomiting since 1 hour. On examination and taking ECG he was found to have myocardial infarction. Describe the blood supply of heart. What is the anatomical basis of pain radiating to left upper limb. Describe what is coronary dominance. (7+1+2)
2. Describe parotid gland under the following headings,
   a. Location and extent
   b. External features and relations
   c. Parotid duct
   d. Applied aspects (2+5+2+1)

Short Essay: (Answer to be started on fresh page only) **6 X 5 = 30**

3. Classify connective tissue fibers with its structure & examples.
4. Parts & derivatives of intra embryonic mesoderm.
5. Describe the microscopic structure hyaline cartilage.
6. Tympanic membrane.
7. Commissural fibers in brain.
8. Explain how cadaver acts as your first teacher during the first MBBS course

Short Answer: (Leave three lines gap between the answers) **10 X 3 = 30**

9. Structures piercing clavipectoral fascia
10. Pleural recess with its applied anatomy
11. Openings in lateral wall of nose
12. Draw a neat labelled diagram to show the T.S of mid brain at the level of superior colliculus
13. Microscopic structure of palatine tonsil
14. Placental barrier
15. Fibrous Joints
16. Wrist drop
17. Flexor digitorum Profundus
18. External jugular vein

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[Time :3 Hours] [Max. Marks:80]

ANATOMY – PAPER – II
QP CODE:1012

Your answer should be specific to the questions asked.
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Write Question No. in the middle of margin.

Long Essay: (Answer to be started on fresh page only) **2 X 10 = 20**

1. A man falls on a slippery surface at home and has pain at his hip. Describe hip joint under a) bones articulating, b) ligaments, c) movements and muscles causing them, d) blood supply, e) nerve supply (1+4+3+1+1)
2. Describe pancreas under a) location, b) gross features, c) relations, d) blood supply (1+3+3+3)

Short Essay: (Answer to be started on fresh page only) **6 X 5 = 30**

3. A young boy is diagnosed with flat foot. Explain the medial longitudinal arch of foot
4. Development of testis and its descent
5. Histology of ovary
6. Doctor centered approach in health care
7. Structural chromosomal anomalies
8. Boundaries and contents of ischiorectal fossa

Short Answer: (Leave three lines gap between the answers) **10 X 3 = 30**

9. Cutaneous nerve supply of dorsum of foot
10. Give the attachment of root of the mesentery and name the structures crossing it
11. Labeled diagram of histology of colon
12. Derivatives of paramesonephric duct in females and males
13. Turner syndrome
14. Lesser omemtum
15. Anterior relations of left and right kidneys – labeled diagram only
16. Features in interior of prostatic urethra – labeled diagram only
17. Name the structures in stomach bed
18. Interior of anal canal – labeled diagram only

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[Time :3 Hours] [Max. Marks: 80]

PHYSIOLOGY – PAPER – I
QP CODE:1013

Your answer should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.
Each answer should be written on new page only.
Write Question No. in the middle of margin.

Long Essay: (Answer to be started on fresh page only) **2 X 10 = 20**

1. A 65 year old male patient, a known hypertensive & diabetic, presented to medical OPD with complaint of exertional dyspnea & fatigue for the past 2 weeks. He has bilateral dependent pitting pedal edema. His vitals were as follows: BP: 90/60 mmHg, HR: 110 bpm (irregularly irregular), RR: 24 cycles per minute, Body temperature: 98.6^0 F& SpO_2:94%. His clinical examination of CVS revealed displacement of apical impulse (6^{th} ICS, lateral to MCL), S_3 gallop, Elevated JVP & No Murmurs. His clinical examination of RS showed bilateral basal crepitation. His ECG showed atrial fibrillation with rapid ventricular response. Chest X-Ray of the patient revealed cardiomegaly & pulmonary congestion. His Echocardiography showed LVEF: 30%, Global hypokinesia & Dilated left ventricle.
   a. What is the probable diagnosis?
   b. Define cardiac output & cardiac index with their normal values & describe the factors regulating cardiac output.
   c. Write in brief a note on a method to measure cardiac output in human being (1+6+3)
2. A male patient of age 56 years presented to respiratory medicine OPD with complaints of irregular breathing while asleep. His wife reports that he sometimes stops breathing for several seconds and then suddenly gasps for air. His vital signs were as follows: BP: 130/85 mm Hg, Pulse: 72 bpm, Respiratory rate: 14 breaths/min (awake) & Oxygen saturation: 94% (awake). His neurological examination was normal. He had Mild obesity (BMI: 29). Investigations: Polysomnography shows central sleep apnea with repeated episodes of cessation of airflow without respiratory effort. MRI brain reveals a small ischemic lesion in the medulla oblongata, near the ventral respiratory group.
   a. What is the probable diagnosis?
   b. With the help of a neat & labeled diagram of organization of respiratory centers in the brain, discuss about neural regulation of respiration.
   c. Write in brief about effects of lesions at various levels of brain on respiration (1+6+3)

P.T.O

Short Essay: (Answer to be started on fresh page only) **6 X 5 = 30**

3. Describe passive Transport across cell membrane
4. What are immunoglobulins? What are their functions?
5. Explain the fibrinolytic system of blood
6. What is PAH Clearance? Mention its clinical significance
7. What is gastric emptying? Explain the factors that alter it.
8. Describe the professional qualities & roles of a good doctor

Short Answer: (Leave three lines gap between the answers) **10 X 3 = 30**

9. What is A-V nodal delay? Mention its significance
10. What is meant by: a. Bezold-Jarisch reflex b. Bainbridge reflex
11. Draw a neat & labeled diagram of Oxygen- Hemoglobin dissociation curve & list the factors influencing it
12. Define hypoxia. Classify it. Mention one cause for each
13. What is meant by dysbarism. Mention the cause for it. List its features. Mention the mode of its treatment
14. List the functions of saliva
15. List the peculiarities of renal blood flow
16. Left ventricular pressure & volume changes during a normal cardiac cycle
17. What is meant by cystometrogram? Mention its importance
18. Draw a neat & labeled diagram to show innervation of urinary bladder

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[Time :3 Hours] **[Max. Marks: 80]**

PHYSIOLOGY – PAPER – II
QP CODE:1014

Your answer should be specific to the questions asked.
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Each answer should be written on new page only.
Write Question No. in the middle of margin.

Long Essay: (Answer to be started on fresh page only) **2 X 10 = 20**

1. A 55-year-old male complaints of tremors at rest, gait disturbances, and slowness in movements. On examination, he has a short shuffling gait, mask-like facial expression, and pill-rolling tremors in both hands.
   a. What is the probable diagnosis and what is its cause?
   b. Describe the connections and functions of the part of the brain involved in this disease.
   c. Describe the physiological basis of the clinical features associated with the condition. (2+6+2)
2. A 35-year-old male complaints of an increase in foot size, stating that he had to change his shoes twice in the last 6 months. He also notices his hands and jaw growing out of proportion. His random blood sugar is markedly elevated.
   a. What is the probable diagnosis and the associated endocrine abnormality?
   b. Give the major presenting features associated with this endocrine abnormality with the physiological basis.
   c. Describe the physiological functions and regulation of the hormone involved. (1+3+6)

Short Essay: (Answer to be started on fresh page only) **6 X 5 = 30**

3. Describe the thermoregulatory responses activated on exposure to cold.
4. Describe the neurological deficits seen in Brown-Séquard Syndrome.
5. Describe the pain pathways. Give examples for referred pain.
6. Define empathy. Explain its importance in a doctor patient relationship.
7. Describe the endometrial changes during menstrual cycle and correlate with the hormonal fluctuations.
8. A 58-year-old woman complaints of difficulty in threading needles and reading fine print, especially at close range. She says she has to hold objects at a distance to see them clearly.
   a. Name the condition and its correction. (1 mark)
   b. Explain the mechanism by which the eye focuses on objects at varying distances? (4 marks)

P.T.O

Short Answer: (Leave three lines gap between the answers) **10 X 3 = 30**

9. What is impedance matching?
10. Explain the physiological basis of phantom limb?
11. What are the functions of thalamus?
12. What is the physiological basis for a) hyperpigmentation in Addison's disease b) Mental retardation in congenital hypothyroidism
13. What is permissive action of hormones? Give examples
14. What are the actions of testosterone?
15. Explain the formation, functions and fate of corpus luteum.
16. Draw a labelled diagram of olfactory pathway. Define olfactory fatigue.
17. Enumerate the events at the neuromuscular junction during transmission of nerve impulse.
18. Define refractory period. What are its types? Give its physiological significance in a nerve.

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[Time: 3 Hours] [Max.Marks: 80]

BIOCHEMISTRY – PAPER – I
QP CODE:1015

Your answer should be specific to the questions asked.
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Each answer should be written on new page only.
Write Question No. in the middle of margin.

Long Essay: (Answer to be started on fresh page only) **2 X 10 = 20**

1. Define enzymes. Describe the various factors influencing enzyme activity with neat labelled graph to illustrate the effect. (2M+8M)
2. A 58-year-old male, Mr. Rakesh Kumar, a known Type 2 Diabetic and Hypertensive presents to the emergency department with a 3-day history of generalized weakness, progressive shortness of breath, nausea and vomiting. He reports decreased appetite and inconsistent blood sugar monitoring recently. On examination, he appears lethargic and mildly dehydrated. His vitals are: HR 105 bpm, BP 95/60 mmHg, RR 28 breaths/min (deep and labored – Kussmaul breathing).

   Lab reports:
   Arterial Blood Gas (ABG): pH 7.18, $PaCO_2$-25 mmHg, HCO_3- 10 mEq/L
   Serum Electrolytes: Na^+ 132 mEq/L, K^+ 5.8 mEq/L, Cl^- 98 mEq/L
   Renal Function Tests: BUN 45 mg/dL, Creatinine 2.8 mg/dL
   Random Blood Sugar (RBS): 520 mg/dL
   Urine Analysis: Ketones (+++), Glucose (+++)

   a) What is the probable diagnosis? Justify with characteristic findings which support the diagnosis. (3M)
   b) Describe in detail the role of kidneys in maintaining the acid base balance. (4M)
   c) List the common causes of metabolic acidosis? (3M)

Short Essay: (Answer to be started on fresh page only) **6 X 5 = 30**

3. Give the clinical features of scurvy. Give the biochemical reasons for each of the deficiency manifestations. (2M+3M)
4. Describe the structure and functions of Mucopolysaccharides. (3M+2M)
5. Explain the Electron Transport Chain and the sites of ATP production with diagrammatic representation. (3M+2M)
6. Explain the HMP shunt pathway and add a note on its significance. (3M+2M)
7. What is Fatty liver? Give a note on lipotropic factors. (3M+2M)
8. What are the biochemical changes in major metabolic pathways during starvation?

Short Answer: (Leave three lines gap between the answers) **10 X 3 = 30**

9. Write a note on Peroxisomes.
10. List the Essential fatty acids and their functions. (1+2)
11. Give the diagnostic criteria for Diabetes mellitus -Type 2.
12. Write a note on active transport.
13. Iron is an one way element. Justify the statement
14. Write a note on Antioxidants.
15. Write a note on Glycogen storage diseases.
16. What is plasma osmolality?
17. Define BMR. List the factors affecting BMR. (2M+1M)
18. Enumerate the roles of a physician in health care system.

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BLDE (DEEMED TO BE UNIVERSITY)
MBBS PHASE – I EXAMINATION

[Time: 3 Hours] [Max. Marks: 80]

BIOCHEMISTRY – PAPER – II
QP CODE:1016

Your answer should be specific to the questions asked.
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Each answer should be written on new page only.
Write Question No. in the middle of margin.

Long Essay: (Answer to be started on fresh page only) **2 X 10 = 20**

1. A patient who complained of pain abdomen and was passing clay colored stools visits medicine OPD. On examination there was yellowish discoloration of sclera. Following Lab investigations the diagnosis of obstructive jaundice was made. (5+2+1+2)
   a) Explain the formation and fate of bilirubin.
   b) Give the differential diagnosis of jaundice based on Vandenberg test.
   c) Write the serum and urinary findings in obstructive Jaundice.
   d) Give two causes of obstructive jaundice.

2. Describe the process of protein biosynthesis (translation) in eukaryotes and Write about post translational modifications and inhibitors. (6+2+2)

Short Essay: (Answer to be started on fresh page only) **6 X 5 = 30**

3. What are tumor markers? Enlist different types of tumor markers with their significance.
4. A 60 year old man who has a history of diabetes mellitus and hypertension was brought to the nephrology OPD with swelling in the lower limb. His Serum creatinine value was 3.8 mg/dl. A diagnosis of chronic kidney disease was made. (1+2+2)
   a) Write the normal values of Serum and urinary Creatinine.
   b) Give reactions for synthesis of creatinine
   c) Explain creatinine clearance with its significance.
5. A 3-year-old child was brought to the pediatric OPD with complaints of fair skin, white hair and ocular manifestations suggesting the case of albinism. (1+2+2)
   a) What is the enzyme defect in albinism?
   b) Write the pathway of synthesis of melanin.
   c) Give two other important compounds synthesized from tyrosine.
6. What are blotting techniques? Explain Southern Blotting technique.
7. What is the genetic defect in sickle cell anemia? Give the biochemical basis of sickling in RBCs.
8. What are Immunoglobulins? Give the different types of immunoglobulins with their structure and functions

Short Answer: (Leave three lines gap between the answers) **10 X 3 = 30**

9. Acute phase proteins.
10. Quaternary structure of protein
11. Give the biochemical reasoning for use of Allopurinol in the treatment of gout
12. Acquired immunodeficiency syndrome (AIDS)
13. Mention any three biologically important nucleotides with their significance
14. Okazaki fragments
15. Mention three advantages of automation in clinical Biochemistry Laboratory
16. Give three examples for detoxification reactions by conjugation.
17. Characteristics of genetic code
18. Define transamination. Explain the clinically important transaminases.