

001/18

The West Bengal University of Health Sciences  
MBBS 1st Professional Examination, 2018

Subject : Anatomy  
Paper : I

Full Marks: 50  
Time : 2 ½ hours

Attempt all questions. The figures in the margin indicate full marks

Group-A

1. Answer *any one* of the followings :

- a) Write in brief the movements of shoulder joint with muscles assisting such movements. What is the common dislocation seen in shoulder joint and what structure(s) is/are vulnerable in such dislocation? 6+3+3
- b) Describe different parts of male urethra in detail. What is hypospadias? 9+3

Group-B

2. Answer *any two* of the following :

- a) What is pronation and Supination? In which joint pronation and supination takes place? Give its axis of movement. Describe the muscles involved. 2+1+1+3
- b) Give an account of supports of uterus. 7
- c) Give an account of formation and tributaries of portal vein. Discuss in brief the development of portal vein. 4+3

Group-C

Write short notes on *any four* of the following :

- a) Spring ligament. b) Femoral sheath. c) Lumbar Plexus. 4 x 3
- d) Transitional Epithelium. e) Sesamoid bone.

Group-D

Explain the followings :

4 x

- a) Basilic vein is preferred to Cephalic vein in cardiac catheterisation.
- b) Cancer prostate with low back pain.
- c) Fracture scaphoid and avascular necrosis of proximal segment of bone.
- d) Which ureter is more prone to injury in cancer cervix of uterus?

**The West Bengal University of Health Sciences**  
**MBBS 1st Professional Examination, 2018**

Subject : Anatomy  
Paper : II

Full Marks: 50  
Time : 2 ½ hours

*Attempt all questions. The figures in the margin indicate full marks*

**Group -A**

1. Answer **any one** of the followings :

a) Describe interior of right atrium of heart. Discuss development of inter ventricular septum. 7+5

b) Enumerate muscles of soft palate. Give Origin, insertion, nerve supply and function of its muscles. What is passavant ridge? 2+8+2

**Group-B**

2. Answer **any two** of the followings :

a) Write briefly about formation and circulation of C.S.F. What are the parts of lateral ventricle of brain? Describe its Central part. 3+2+2

b) What is typical inter costal space? What are the contents of I.C space? Describe inter costal artery. 2+1+4

c) Describe extra cranial part of facial nerve. 7

**Group-C**

Write notes on **any four** of the following : 4 x 3

a) Fallots tetralogy.

b) Otic ganglion.

c) Inter peduncular fossa of brain.

d) Rima glottidis.

e) Coronary sinus.

**Group - D**

Explain the following : 4 x 3

a) Thyroid swelling moves with deglutition.

b) Left recurrent laryngeal nerve hooks around Ligamentum arteriosum and right nerve hooks around subclavian artery.

c) Fibrous pericardium is fused with central tendon of diaphragm.

d) Pituitary tumour leads to bitemporal hemianopia.



Subject : Physiology  
Paper : I

Full Marks: 80  
Time : 3 ½ hours

Attempt all questions. The figures in the margin indicate full marks

Group - A

1. a) Define Cardiac Output. Describe the factors affecting Cardiac Output. How does Fick's Principle determine Cardiac Output? 2+4+4

or

- b) Give an account of the cardio respiratory changes that occur during isotonic exercise. What are the effects of training? 8+4

Group - B

2. Answer any two questions :

- a) What is  $V_A/Q$  ratio? Explain the distribution of ventilation and perfusion in different regions of the lungs in erect posture. Why is tuberculosis common at the apex of the lung? 1+4+2
- b) What is the role of platelets in haemostasis? 7
- c) Describe the structure of Immunoglobulin. Write briefly about the different types of Immunoglobulins. 3+4

Group - C

3. Write short notes on any four of the following :

- a) Cells found in the stomach. 4 x 3
- b) ESR.
- c) Migrating Motor Complex.
- d) Gibbs-Donnan Equilibrium.
- e) Role of  $O_2$  therapy in hypoxia.

Group - D

4. Give the physiological explanation of the following :

- a) Bleeding tendency occurs in Obstructive Jaundice.
- b) RBCs in venous blood are larger than in arterial blood.
- c) Pulmonary ventilation is not affected till  $pO_2$  is below 60 mm Hg.
- d) ATP helps in contraction and relaxation of skeletal muscle. 4 x

Subject : Physiology  
Paper : II

**The West Bengal University of Health Sciences**  
**MBBS 1st Professional Examination, 2018**

Attempt all questions. The figures in the margin indicate full marks

Total Marks : 50  
Time : 2 hours

1. a) Define muscle tone. How is it maintained? What are the types of hypertonia? Mention their differences. 2+5+2+3

**Group – A**

or

- b) With the help of a neat, labelled diagram, trace the pathway of pain sensation. What is stress analgesia and what is its physiological basis? 2+5+2+3

**Group – B**

2. Answer any two of the following :

- a) What are the hormones of placenta? Though genetically different, why is the fetus not rejected immunologically? 3+4

- b) Mention the functions of each part of the nephron in relation to its histological structure. 7

- c) Outline the steps of synthesis of thyroid hormones. What is Wolff-Chaikoff effect? 5+2

**Group – C**

3. Write short notes on any four of the following :

4 x 3

a) Corpus luteum

b) Dark adaptation.

c) Cochlear interphonics.

d) Dwarfism.

e) Endocrine functions of kidney.

**Group – D**

Give the physiological explanation of the following :

4 x 3

a) Golgi tendon reflex protects the muscle from tear.

b) Chronic renal disease may lead to brittleness of bones. ✓

c) Patients with sexual precocity are dwarfed. ✓

d) Pigmentation is found in Addison's disease. ✓



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**The West Bengal University of Health Sciences  
MBBS 1st Professional Examination, 2018****Subject : Biochemistry  
Paper : I****Full Marks : 50  
Time : 2½ hours***Attempt all questions. The figures in the margin indicate full marks***Group – A**

1. a) Describe different types of enzyme-inhibition. Write the clinical importance of enzyme inhibitors. 8+4

or

- b) Describe the mitochondrial electron transport chain with a diagram indicating the sites of ATP synthesis. 12

**Group – B**

2. Answer *any two* of the following :

2 x 7

- a) Describe the methods of determination of primary structure of proteins.
- b) Write a brief note on phospholipids and their biological functions.
- c) Describe the oxido-reductase group of enzymes.

**Group – C**

3. Write short notes on *any four* of the following :

4 x 3

- a) Ribozymes.
- b) Glycated haemoglobins.
- c) Melting of DNA.
- d) Alkali reserve.
- e) Structure and functions of IgG.

**Group – D**

4. Explain the following statements :

4 x 3

- a) Molecular chaperons play role in protein folding.
- b) Glucose and Fructose produce identical osazone.
- c) Nucleotide analogs are used as anticancer agents.
- d) Clearance tests are indicative of renal function.

**The West Bengal University of Health Sciences**  
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Subject : Biochemistry  
Paper : II

Full Marks : 50  
Time : 2½ hours

*Attempt all questions. The figures in the margin indicate full marks*

**Group – A**

1. a) Define 'operon'. Describe the Lac-operon model for regulation of gene expression in E. Coli. 2+10

or

- b) Write the metabolism of Very Low Density Lipoprotein. Explain the reverse-cholesterol transport. 6+6

**Group – B**

2. Answer *any two* of the following :

- a) Explain the role of glutamic acid in removal of ammonia from amino acids. Write the reasons why ammonia is toxic to Central Nervous System. 4+3
- b) Write about various repair mechanism of DNA damages. 7
- c) Write the reactions of gluconeogenesis from Lactate and mention the hormonal regulation of gluconeogenesis. 4+3

**Group – C**

3. Write short notes on *any four* of the following : 4 x 3

- a) Polymerase chain Reaction.      b) Folate trap.      c) Purine Salvage Pathway.
- d) Proto-oncogenes.      e) Hyperbilirubinemias.

**Group – D**

4. Explain the following statements : 4 x 3

- a) Urinary urobilinogen is increased in haemolytic jaundice.
- b) Genetic code is degenerate.
- c) Hyperuricemia occurs in Von-Gierke-Disease.
- d) Thiamine deficiency is detected by measuring transketolase activity in blood.