

Subject : Anatomy
Paper : I

Full . Mar
Time : 2.

Use Separate answer Script for each group
Attempt all questions. The figures in the margin indicate full marks

Group – A

1. Answer any one :

- a) Describe the intrinsic muscles of hand. What is total claw hand?
- b) Name the bones forming the knee-joint. Describe the locking and unlocking movements of the knee-joint.

Group – B

2. Answer any two of the following :

- a) Describe the common bile duct in short. Importance of Calot's triangle.
- b) Describe the development of Placenta in short. What is placenta praevia?
- c) What is metaphysis of a growing bone? Give its importance.

Group – C

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

- a) Capacitation
- b) Internal trigone of urinary bladder.
- c) Difference between transitional epithelium & stratified squamous epithelium
- d) Anatomical snuff box of hand
- e) Broad ligament of uterus.

Group - D

4. Explain the following statements:

- a) Painful arc syndrome.
- b) Osteoclast
- c) Varicocele of left testis is common.
- d) Carcinoma of the head of pancreas may produce jaundice

001/14

**The West Bengal University of Health Sciences
 MBBS 1st Professional Examination 2014**

Subject : Anatomy
 Paper : II

Full . Marks :50
 Time : 2.1/2. hours

Use Separate answer Script for each group
 Attempt all questions. The figures in the margin indicate full marks

Group - A

I. Answer any one of the following :

- a) Give the arterial supply of supero-lateral surface of the brain. What is macular sparing? : 10+2=12
- b) Describe the transverse pericardial sinus with development .What is the clinical importance of it ? 8+2+2=12

Group - B

Answer any two of the following :

- a) Give the development of atrio-ventricular septum. A pin pricked through the right side of the septum will reach which part of the heart? 5+2 = 7
- b) Name the paranasal air sinuses. Mention the factors that help to drain out the content of the maxillary air sinus. Why these sinuses are developed around the nose? 2+3+2=7
- c) Name the muscles of the pharynx. Give their nerve supply. What is killian's dehiscence? 3+2+2=7

Group - C

Write short notes on any four of the following :

4 x 3 = 12

- a) Piriform fossa with clinical importance.
- b) Ligamentum arteriosum.
- c) Muscles of the first branchial arch with their nerve supply.
- d) Nerve supply of apical pleura.
- e) Dangerous area of scalp.
- f) Styloid apparatus.

Group - D

Explain the following statements (any four)

4 x 3 =12

- a) Pain is referred to the middle ear in ulcer of the posterior part of the tongue.
- b) Central tendon of the thoraco-abdominal diaphragm is blended with the basal part of fibrous pericardium.
- c) A pituitary tumour causes bitemporal hemianopia.
- d) A patient having fracture of sphenoidal spine complains of loss of taste sensation at a later date.
- e) Inflammation of parotid gland is very painful.

Year - 2013 - 2014

001/14

**The West Bengal University of Health Sciences
MBBS 1st Professional Examination 2014**

Subject ; Physiology
Paper : I

Full . Marks :50
Time : 2.1/2. hours

Use Separate answer Script for each group
Attempt all questions. The figures in the margin indicate full marks

Group – A

1. ☒ a) Describe the structure of platelets. Mention the contents of their granules and their functions. What are the functions of platelets? 4+5+3=12

OR

- b) Describe the different waves of ECG and segments with a neat diagram of its. Mention their importance. What is heart block? 6+2+4=12

Group - B

2. Answers any two of the following :

- ☒ a) Define Jaundice. Describe the differences between hemolytic and obstructive jaundice. 2+5 = 7
☒ b) Describe the oxygen dissociation curve and the factors influencing it. 3+4 = 7
c) Describe briefly the molecular basis of muscular contraction. What is Myasthenia gravis ? 5 + 2 = 7

Group – C

3. Write short notes on any four of the following ; 4 x 3 = 12
☒ a) Gibbs Donnan Equilibrium.
☒ b) Haldane effect.
☒ c) Maximum Ventilation Volume
☒ d) Why the intestine is not digested by enzymes? Name the gastrointestinal hormones.
e) Ion Channels

Group – D

4. Give the physiological explanation of the following : 4 X 3=12
☒ a) Regular low dose of Aspirin prevents thrombosis.
☒ b) RBCs in venous blood is slightly larger than in arterial blood
☒ c) Normal Plasma protein prevent oedema.
☒ d) Diastolic pressure rises on assuming the standing posture from supine position.

001/14

**The West Bengal University of Health Sciences
MBBS 1st Professional Examination 2014**Subject : Physiology
Paper : IIFull . Marks :50
Time : 2.1/2. hours

Use Separate answer Script for each group
Attempt all questions. The figures in the margin indicate full marks

Group - A

1. a) With diagram write the component parts of the limbic system. What are the vegetative functions of the hypothalamus? What are the roles played by the hypothalamus in Reward and punishment. 3+5+4 = 12

OR

- b) What are the hormones secreted by Adrenal cortex? Describe the principal functions of the mineralocorticoids .What is Conn's syndrome? 3 + 7+2=12

Group - B

2. Answer any two of the following :

- a) Differentiate between cortical and Juxta medullary nephrons .Briefly discuss the counter current mechanism in the kidney. 2 + 5 =7
b) Trace the neural pathways that transmit visual information from photoreceptors to the visual cortex. Enumerate the visual field defects produced by lesions at various levels of visual pathway. 3 + 4 = 7
c) Describe spermatogenesis. What is Blood-Testis barrier ? 5 + 2 =7

Group - C

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

4 x 3 = 12

- a) Fluent Aphasia.
b) Taste buds
c) Oral contraceptive pills.
d) Antidiuretic hormone
e) EEG Waves

Group - D

4. Give the physiological explanation of the following :

4 x 3 = 12

- a) Babinsk's sign is a defining feature of upper motor neuron paralysis.
b) Pregnancy is associated with stoppage of menstruation.
c) Exercise is good for Diabetes Mellitus.
d) Albuminuria occurs in Nephrotic syndrome.

001/14

**The West Bengal University of Health Sciences
MBBS 1st Professional Examination 2014**

Subject ; Biochemistry
Paper : I

Full . Marks :50
Time : 2.1/2. hours

Use Separate answer Script for each group
Attempt all questions. The figures in the margin indicate full marks

Group – A

- 1 (a). Describe the salient features of alpha helix and beta pleated sheet structure of proteins. Mention the noncovalent interactions which stabilise protein conformation. Briefly discuss the role of peripheral and integral proteins in the network of plasma membrane. 4+3+5=12

OR

- 1(b) Compare and explain the oxygen binding curves of hemoglobin and myoglobin. Indicate the conformational changes that takes place in hemoglobin on oxygenation. Mention the basic variations in the chemical structure of hemoglobin S and hemoglobin M as compared to adult hemoglobin. 6+3+3=12

Group – B

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

- (a) Describe the principles of electrophoresis. Illustrate with diagram the electrophoretic separation of serum proteins indicating the significance of each separated band. Explain the importance of acute phase reactants. 3+2+2=7

- (b) Describe the renal mechanism for regulation of acid base balance. What is the bio-medical importance of anion-gap? 4+3=7

- (c) What is oxidative phosphorylation. Differentiate it from substrate level phosphorylation. Illustrate with a diagram how ATP is synthesized in mitochondria. 2+2+3=7

Group – C

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

3+3+3+3= 12

- (a) Receptor mediated endocytosis:
(b) Ionophores,
(c) Biochemical function of peroxisomes.
(d) Antioxidant enzymes:
(e) Radioisotopes.

Group – D

4. Explain the following statements :

3+3+3+3=12

- (a) DNA with higher GC content have relatively higher T_m
(b) Nonfunctional plasma enzymes are important only for clinical purpose:
(c) Lecithin is amphipathic as well as amphoteric molecule:
(d) Citric acid cycle operating in mitochondria can take part in the extramitochondrial fatty acid synthesis.

Year - 2013 - 2014

001/14

**The West Bengal University of Health Sciences
MBBS 1st Professional Examination 2014**

Subject ; Biochemistry
Paper : II

Full . Marks :50
Time : 2.1/2. hours

Use Separate answer Script for each group
Attempt all questions. The figures in the margin indicate full marks

Group – A

- 1 (a) Give an account of fatty acid synthase multienzyme complex. Describe the metabolic pathway for de novo synthesis of palmitate in the body. 3 + 9 = 12

OR

- ✓ 1(b) Describe how catabolism of heme produces bilirubin. Indicate in detail the process of uptake, conjugation and secretion involved in the transfer of bilirubin from blood to bile. 6+6=12

Group – B

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

- ✓ (a) Give a brief account of glycogen storage diseases. 7
✓ (b) Describe the process of transamination and oxidative deamination of amino acids in the body. 4+3=7
(c) Describe the operation and significance of glycerophosphate shuttle and malate shuttle. 3+4=7

Group – C

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

3+3+3+3=12

- ✓ (a) Eukaryotic topoisomerase :
✓ (b) Acute intermittent porphyria:
(c) Polyclonal antibodies :
✓ (d) Ceruloplasmin :
✓ (e) Tumor markers.

Group – D

4. Explain the following statements :

3+3+3+3=12

- ✓ (a) Both uncontrolled diabetes mellitus and prolonged fasting produce ketosis but magnitude is less in the case of prolonged fasting.
✓ (b) A renal clearance study is an early predictor of impending renal failure ;
✓ (c) Glucose – 6-phosphate dehydrogenase is responsible for erythrocyte membrane integrity.
✓ (d) Isoenzymes of alkaline phosphatase are of diagnostic significance.