

2/1318

0719E335

Candidate's Seat No : _____

First M.B.B.S. Examination

Anatomy

Paper-I

Date : 24-07-2019, Wednesday]

[Max. Marks : 50

[Time : 3 Hours

- Instructions :** (1) Answer to the point.
(2) Figure to the right indicates marks.
(3) Draw diagrams wherever necessary.
(4) Write legibly.
(5) Use separate answer books for each section.

SECTION I

1. Write applied anatomy of (any two) 2x5=10
- a) Klumpke paralysis
 - b).Internal Capsule
 - c) Nerve supply of tongue
2. A) write short notes on (any two) 2x3=06
- 1) Transverse section of medulla oblongata at level of sensory decussation
 - 2) Lower motor neuron
 - 3) Inferior horn of lateral ventricle of brain
- B) Microanatomy of Trachea or submandibular gland 1x3=03
- 3) Write short notes on
- (a) Arteriovenous Shunt or Synovial joint 1x3=03
 - b) Capacitation or Decidual reaction 1x3=03

[P.T.O]

4. Write short notes on (any two)

2x5=10

- a) Muscles of Pharynx
- b) Extra ocular muscles
- c) Cartilages of larynx

5. A) write short notes on (any two)

2x3=06

- 1) Muscles causing Pronation and supination
- 2) Carpal tunnel syndrome
- 3) Quadrangular space

B) Development of parathyroid gland or branchial cyst

1x3=03

6. Enumerate (any six)

6x1=06

- 1) Extrinsic muscles of tongue
 - 2) Branches of external carotid artery
 - 3) Branches of Radial nerve in spiral groove
 - 4) Movements possible at shoulder joint
 - 5) Deep muscles of flexor compartment of forearm with their nerve supply
 - 6) Structures passing through jugular foramen
 - 7) Functional components of Facial nerve
 - 8) Sinuses meeting at confluence of sinuses of brain
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First M.B.B.S. Examination

Anatomy

Paper-II

Date : 26-07-2019, Friday]

[Max. Marks : 50

[Time : 3 Hours

- Instructions :** (1) Answer to the point.
(2) Figure to the right indicates marks.
(3) Draw diagrams wherever necessary.
(4) Write legibly.
(5) Use separate answer books for each section.

SECTION-I

1. Write applied anatomy of (any two) 2x5=10
- a) Inguinal canal
 - b) Pericardium
 - c).Pouch of Douglas
2. A) write short notes on (any two) 2x3=06
- 1) Typical intercostal space
 - 2) Borders and surfaces of lung
 - 3) Differences between right and left ventricle
- B) Microanatomy of Spleen or Thymus 1x3=03
- 3) Write short notes on 1x3=03
- (a) Turner syndrome or Mendels law of inheritance
 - (b) Identical Twin or Tubectomy 1x3=03

[P.T.O]

0719E346(2)
SECTION-II

- 4) Write short notes on (any two) 2x5=10
- a) Omental bursa
 - b) Anal canal
 - C) Prostate
5. A) write short notes on (any two) 2x3=06
- 1) Hamstring muscles
 - 2) Adductor canal
 - 3) Popliteal fossa
- B) Write a note on Annular pancreas or Development of interventricular septum 1x3=03
6. Enumerate (any six) 6x1=06
- 1) Branches of Lumbar plexus
 - 2) Branches of internal iliac artery
 - 3) Content of Femoral triangle
 - 4) Origin and insertion of Biceps femoris
 - 5) Everter muscles of foot
 - 6) Attachments of perineal membrane
 - 7) Attachments of Sacrotuberous ligament
 - 8) Parts of Fallopian tube
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First M.B.B.S. Examination

Physiology

Paper-I

Date : 30-07-2019, Tuesday]

[Max. Marks : 50

[Time : 3 Hours

- Instructions :** (1) Answer to the point.
 (2) Figure to the right indicates marks.
 (3) Draw diagrams wherever necessary.
 (4) Write legibly.
 (5) Use separate answer books for each section.

Section-I

- Q1. Write briefly on only two: 2×5=10
 a) Write about the anaemia which is treated with injection of Vitamin B12.
 b) Different types of shocks
 c) Importance of recording lung volumes and capacities
- Q2. (A) Write briefly on only two: 2×3=6
 a) Rh incompatibility
 b) T-lymphocyte mediated immune response
 c) Erythropoiesis
- (B) Write briefly on any one: 1×3=3
 a) Action potential
 b) Primary active transport
- Q3. Write briefly on only two: 2×3=6
 a) GFR and factors affecting it
 b) Plasma clearance
 c) Micturition reflex

Section II

- Q4. Write briefly on only two: 2×5=10
 a) Cardiac action potentials
 b) Effect of posture on blood pressure
 c) Mechanical events during cardiac cycle
- Q5. (A) Write briefly on only two: 2×3=6
 a) Herring Breuer reflex
 b) O₂-Hb dissociation curve
 c) Respiratory membrane
- (B) Write briefly on any one: 1×3=3
 a) Mountain sickness
 b) O₂ toxicity at high pressure
- Q6. Describe briefly in 2-3 sentences (any six): 6×1=6
 a) Peripheral chemoreceptors
 b) Bohr's effect
 c) Circulatory shock
 d) Eosinophilia
 e) Resting membrane potential
 f) Starling forces
 g) Cardiac efficiency
 h) Fick's principle
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First M.B.B.S. Examination

Physiology

Paper-II

Date : 01-08-2019, Thursday]

[Time : 3 Hours

[Max. Marks : 50

- Instructions :** (1) Answer to the point.
 (2) Figure to the right indicates marks.
 (3) Draw diagrams wherever necessary.
 (4) Write legibly.
 (5) Use separate answer books for each section.

Section-I

- Q1. Write briefly on only two: 2×5=10
 a) Explain how fats are absorbed. Add a note on Steatorrhea.
 b) Biological effects of Thyroid hormones.
 c) Neuromuscular junction transmission blockers
- Q2. (A) Write briefly on only two: 2×3=6
 a) Mechanism of hormone action
 b) Hormones regulating serum calcium levels
 c) Actions of cortisol hormone
 (B) Write briefly on any one: 1×3=3
 a) Spermatogenesis
 b) Ovarian hormones
- Q3. Write briefly on only two: 2×3=6
 a) Enterohepatic circulation of bile salts
 b) Different movements of small intestine
 c) Mass reflex

Section II

- Q4. Write briefly on only two: 2×5=10
 a) Properties of synapses
 b) Tests used to check the coordination of muscle activity
 c) Stretch and Inverse stretch reflex
- Q5. (A) Write briefly on only two: 2×3=6
 a) Errors of refraction
 b) Transmission of sound waves in Cochlea
 c) Taste buds. Add a note on major taste modalities ;
 (B) Write briefly on any one: 1×3=3
 a) Different types of skeletal muscle contractile proteins
 b) Molecular basis of smooth muscle contraction
- Q6. Describe briefly in 2-3 sentences (any six): 6×1=6
 a) Migrating myoelectric complex (MMC)
 b) Jaundice
 c) Sympathetic and parasympathetic nervous system blockers
 d) Deafness
 e) Osteomalacia
 f) Rods and cones
 g) Analgesia system
 h) Cretinism
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First M.B.B.S. Examination

Bio-Chemistry

Paper-I

Date : 03-08-2019, Saturday]

[Max. Marks : 50

[Time : 3 Hours

- Instructions :** (1) Answer to the point.
 (2) Figure to the right indicates marks.
 (3) Draw diagrams wherever necessary.
 (4) Write legibly.
 (5) Use separate answer books for each section.

Section I**1. Write Notes on (Any Two)****2x5=10 Marks**

1. Tumour Markers
2. Type I Fatty Liver
3. Metabolic derangements in Diabetes Mellitus

2. Write Short Notes on (Any Three)**3x3=9 Marks**

1. Functions of Prostaglandins
2. Homopolysaccharides
3. Acute Intermittent Porphyria
4. Diagnostic Applications of Enzymes
5. Effect of Substrate Concentration and pH on enzyme action

3. Write Short Notes on (Any Two)**2x3=6 Marks**

1. Applications of ELISA
2. Tests to detect on Glomerular Function
3. Role of Hemoglobin as a buffer

Section II**4. Write Short Notes on (Any Two)****2x5=10 Marks**

1. Ketone body Metabolism
2. Amphibolic Role of Tricarboxylic acid (TCA) cycle
3. Gluconeogenesis

5. Write Short Notes on (Any Three)**3x3=9 Marks**

1. Immunoglobulin structure
2. Inhibitors of Electron Transport Chain and Oxidative Phosphorylation
3. Oncogenes
4. Therapeutic Applications of Radioisotopes
5. Carcinogens

6. Case Study (Answer any Six)**1x6 = 6 Marks**

A 10 year old boy residing in a slum was brought to the pediatric OPD with complaints of fever, anorexia, nausea vomiting headache, weakness and myalgia, for 2 weeks. The boy had developed jaundice since 1 day and also passed dark yellow colored urine. There were other patients with similar complaints in the neighborhood. Physical examination: Patient showed signs, icterus and tenderness in the right hypochondriac region Laboratory Investigations: Serum Bilirubin: Total – 3 mg/dl, Indirect – 1.2 mg/dl, Direct – 1.8 mg/dl, Serum Total protein – 7.5 g/dl, Serum albumin – 4.9 g/dl, SGOT – 500 IU/L, SGPT – 675 IU/L, Serum Alkaline phosphatase – 17KAU/100ml, Urine routine: Fouchet test & Hays sulfur test : +Ve

1. What is your probable diagnosis?
2. The boy is suffering from which type of Jaundice?
3. Comment on the levels of liver enzymes.
4. Why both direct and indirect bilirubin have raised?
5. Comment on serum total proteins and albumin levels.
6. How will you differentiate between three types of jaundice based on enzyme assays.
7. What is the cause of dark yellow color urine?
8. How you will confirm the same?

First M.B.B.S. Examination
Bio-Chemistry
Paper-II

Date : 06-08-2019, Tuesday]
[Time : 3 Hours

[Max. Marks : 50

- Instructions :** (1) Answer to the point.
(2) Figure to the right indicates marks.
(3) Draw diagrams wherever necessary.
(4) Write legibly.
(5) Use separate answer books for each section.

Section I**1. Write Notes on (Any Two)****2x5=10 Marks**

1. Primary Gout
2. Phenylketonuria
3. Vitamin B12 and Folate Trap

2. Write Short Notes on (Any Three)**3x3=9 Marks**

1. Post Translational Modifications
2. Properties of Genetic Code
3. tRNA
4. Biologically important free nucleotides
5. Lac Operon Model

3. Write Short Notes on (Any Two)**2x3=6 Marks**

1. Metabolic Changes during prolonged Starvation
2. Balanced Diet
3. Interlinking of metabolism at tissue level

Section II**4. Write Short Notes on (Any Two)****2x5=10 Marks**

1. Functions of Plasma Proteins
2. Maintenance of Serum Calcium and Phosphorus balance
3. Trace elements

5. Write Short Notes on (Any Three)**3x3=9 Marks**

1. Functions of Vitamin C
2. Pellegra
3. Vitamin A deficiency
4. Purine Salvage Pathway
5. Vitamin E: Sources and Biochemical Functions

6. Case Study (Answer any Six)**1x6 = 6 Marks**

A 25 yr old woman was admitted in hospital with complaints of breathlessness, palpitations with generalized edema. She also complained of weakness of muscles, difficulty in walking. She gave history of having consumed ultra-refined, polished rice for past two years. She also avoided pulses, nuts and oil seeds in her daily intake in an attempt to lose weight. Erythrocyte transketolase activity was measured to be low.

1. What is your probable diagnosis?
2. Which micronutrient is deficient in diet?
3. Mention its active forms.
4. Why this woman suffered from deficiency of this micronutrient?
5. Erythrocyte Transketolase is associated with which Pathway?
6. Give biochemical basis above of signs and symptoms.
7. What is Wernicke's Korsakoff encephalopathy associated with deficiency of this micronutrient?
8. Mention any one biochemical reaction where this micronutrient is acting as coenzyme.

