



**HAX-9003-04-05** Seat No. \_\_\_\_\_

**Second Year B. Physiotherapy Examination**

**July - 2017**

**Pathology & Microbiology & Biochemistry**

Time : **3** Hours]

[Total Marks : **100**

- Instructions :** (1) Write SECTION-I and SECTION-II in separate answer sheet.  
(2) Draw figures wherever necessary.  
(3) Figures on right indicate full marks.

**SECTION - I (PATHOLOGY & MICROBIOLOGY)**

- 1** Answer any Two : **20**
- (a) Define chronic inflammation. Describe pathogenesis and morphology of tuberculous infection.
  - (b) Describe Morphology, Pathogenicity and Laboratory diagnosis of Corynebacterium Diphtheriae
  - (c) Define metastasis. Discuss various routes of metastasis in detail.
- 2** Write short notes on any Two : **10**
- (a) Immunity
  - (b) Define embolism and discuss in brief various types of embolism.
  - (c) Describe Life cycle & Pathogenicity of Hook worm.
- 3** Write answers in 2-3 sentences : **10**
- (a) Quellung Reaction
  - (b) Define Sterilization & Disinfection.
  - (c) Define Nosocomial Infection.
  - (d) Enumerate cellular events of acute inflammation.
  - (e) Define Atrophy and Apoptosis.
  - (f) Define necrosis. Enumerate various types of necrosis.

- 4 Encircle most appropriate (Single) answer : (All Compulsory) 10
- (1) Transfer of genetic material from one bacterium to another by bacteriophage is known as
    - (a) Transformation
    - (b) Transduction
    - (c) Mutation
    - (d) Conjugation
  - (2) Indian ink is used to demonstrate bacterial
    - (a) Fimbriae
    - (b) Cell wall
    - (c) Capsule
    - (d) Spores
  - (3) Darting motility is shown by
    - (a) Vibrio
    - (b) Mycoplasma
    - (c) Leptospira
    - (d) Listeria
  - (4) The following parasite is Ovo-viviparous.
    - (a) T. spiralis
    - (b) B. malayi
    - (c) S. stercoralis
    - (d) W. bancrofti
  - (5) The first phase in bacterial growth curve is
    - (a) Stationary phase
    - (b) Log phase
    - (c) Phase of decline
    - (d) Lag phase
  - (6) Normal Calcium level is :
    - (a) 1-3 mg/dl
    - (b) 9-11 mg/dl
    - (c) 0.1-1.2 mg/dl
    - (d) 5-8 mg/dl
  - (7) HYPERTROPHY is a type of
    - (a) Cell injury
    - (b) Cellular adaptation
    - (c) Carcinoma
    - (d) Cell ageing
  - (8) Fixative used for electron microscope is :
    - (a) Methanol
    - (b) Rectified spirit
    - (c) 2% gluteraldehyde
    - (d) 90% spirit
  - (9) Normal value of total leucocyte count :
    - (a) 4000-11000/cumm
    - (b) 2000-5000/cumm
    - (c) 15000-20000/cumm
    - (d) 12000-15000/cumm
  - (10) Out of following which is not a physiologic giant cell Farmer's lung.
    - (a) Tumor giant cell
    - (b) Megakaryocyte
    - (c) Osteoclast
    - (d) Oocyte

## SECTION - II (BIOCHEMISTRY)

- 5 Long Essays : (Any Two) **2×10=20**
- 1) Fat Soluble Vitamins.
  - 2) Catabolism of Heme and Jaundice.
  - 3) Lipoprotein Metabolism.
- 6 Explain the Following : (Any Two) **2×5=10**
- 1) Digestion and absorption of Proteins. Write on Lactose Intolerance.
  - 2) Phenylketonuria.
  - 3) Sickle cell anemia and Thalassemia.
- 7 Write Short Notes : (Any Five) **5×2=10**
- 1) Importance of Creatinine measurement
  - 2) Dietary Sources of Iron
  - 3) Functions of Albumin
  - 4) Importance of Isoelectric pH
  - 5) Importance of anion-gap
  - 6) Antioxidant Vitamins.
- 8 Multiple Choice Questions : **10×1=10**
- (Write correct response in Answer Book)
- 1 Free fatty acid in blood can be transported by  
(a) Globulin (b) Albumin  
(c) Cholesterol (d) Lipoproteins
  - 2 Glutathione peroxidase is activated by  
(a) Selenium (b) Magnesium  
(c) Calcium (d) Iron
  - 3 Which of the following is Biological Important Peptide?  
(a) Insulin (b) Glucagon  
(c) Glutathione (d) Myoglobin
  - 4 Tyrosine can synthesize all Except  
(a) Dopamine (b) Epinephrine  
(c) Melanin (d) Serotonin

- 5 Hemoglobin can act as a buffer due to presence of amino acid .....
- (a) Alanine (b) Histidine  
(c) Serine (d) Threonine
- 6 Glucose transporter type 4 is present in
- (a) Skeletal muscle (b) Intestine  
(c) Pancreas (d) Liver
- 7 Salivary amylase can be activated by
- (a) Sodium (b) Potassium  
(c) Chloride (d) Calcium
- 8 Which of the following is more specific cardiac marker ?
- (a) Myoglobin (b) Aspartate transaminase  
(c) LDH (d) Troponin
- 9 Xerophthalmia is due to deficiency of
- (a) Vitamin K (b) Vitamin B<sub>12</sub>  
(c) Vitamin A (d) Vitamin Biotin
- 10 Which is non-reducing sugar ?
- (a) Starch (b) Galactose  
(c) Lactose (d) Maltose
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