



**NE-9003-04-05**    Seat No. \_\_\_\_\_  
**Second Year B. Physiotherapy Examination**  
**January – 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.
- (4) Attend all the questions.

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

- 1**    Answer any **Two** : **20**
  - (a) Define necrosis. Describe in brief various types of necrosis.
  - (b) Describe Morphology, Pathogenicity and Laboratory Diagnosis of "Mycobacterium tuberculosis".
  - (c) Define Neoplasm. Write difference between benign and malignant neoplasm and describe different modes of spread of malignant neoplasm.
  
- 2**    Write short notes on any **Two** : **10**
  - (a) Enzyme linked immunosorbent assay (ELISA).
  - (b) Describe in brief wound healing and factors affecting wound healing.
  - (c) Laboratory diagnosis of Malaria.
  
- 3**    Write answers in **2-3** sentences : (any five) **10**
  - (a) Define sterilization and disinfection.
  - (b) Draw labelled diagram of egg of Hookworm.
  - (c) Classify Immunity.
  - (d) Define thrombosis and draw virchow's triad.
  - (e) Define and draw a granuloma.
  - (f) Enumerate types of hypersensitivity reaction.

4 Encircle most appropriate (Single) answer : (All Compulsory) 10

- (1) Father of microbiology is :
  - (a) Louis Pasteur
  - (b) Robert Koch
  - (c) Antony van Leeuwenhoek
  - (d) Joseph Lister
- (2) Function of flagella.
  - (a) Adhesion
  - (b) Antibody
  - (c) Protection
  - (d) Locomotion
- (3) Which immunoglobulin is increased in allergic condition ?
  - (a) Ig M
  - (b) Ig E
  - (c) Ig D
  - (d) Ig A
- (4) Typhoid fever is caused by :
  - (a) Salmonella
  - (b) Shigella
  - (c) Proteus
  - (d) E.coli
- (5) Following eggs are bile stained EXCEPT
  - (a) Ascaris lumbricoides
  - (b) Taenia
  - (c) Enterobius vermicularis
  - (d) Trichuris
- (6) All of the following are risk factors of atherosclerosis EXCEPT
  - (a) Family history
  - (b) Hyperlipedemia
  - (c) Cigarette smoking
  - (d) Female gender
- (7) All of the following are seen in iron deficiency anaemia EXCEPT
  - (a) Microcytosis
  - (b) Hypochromia
  - (c) Elliptocytosis
  - (d) Macroovalocytes
- (8) All of the following tests are used for diagnosis of Myocardial Infarction EXCEPT
  - (a) CK-MB
  - (b) RBS
  - (c) Troponin
  - (d) ECG
- (9) Which of the following cell is increased in number in allergic conditions ?
  - (a) Neutrophil
  - (b) Lymphocyte
  - (c) Eosinophil
  - (d) Monocyte
- (10) All of the following are occupational lung disease EXCEPT
  - (a) Farmer's lung
  - (b) Pneumonia
  - (c) Asbestosis
  - (d) Silicosis

**SECTION – II**  
**(BIOCHEMISTRY)**

- 5** Long Essays : (Any **Two**) **2×10=20**
- 1) Isoenzymes and its Clinical Importance.
  - 2) Vitamin A, E and K.
  - 3) Adipose tissue and Triglyceride metabolism.
- 6** Explain the following : (Any **Two**) **2×5=10**
- 1) Regulation of Blood Glucose level.
  - 2) Inhibitor of Electron transport chain and Uncoupler of Oxidative Phosphorylation.
  - 3) Digestion and absorption of Carbohydrates.
- 7** Write Short Notes : (Any **Five**) **5×2=10**
- 1) Primary structure of proteins
  - 2) Function of Lecithin
  - 3) Immunoglobulin M
  - 4) Example of Transport Proteins
  - 5) Function of PUFA
  - 6) Example of Tumor markers.
- 8** Multiple Choice Questions : (Write correct response in answer book) **10×1=10**
- (1) Which metal poisoning leads to anemia ?  
(a) Iron (b) Calcium  
(c) Lead (d) Mercury
  - (2) Dietary fibre useful in all condition EXCEPT –  
(a) Constipation (b) Hypo-cholesterolemia  
(c) Hyperglycemia (d) Obesity
  - (3) Which cholesterol is known as bad cholesterol ?  
(a) HDL-Cholesterol (b) LDL-Cholesterol  
(c) VLDL-Cholesterol (d) IDL-Cholesterol

- (4) Which RNA is known as adaptor molecule ?  
(a) t-RNA (b) m-RNA  
(c) r-RNA (d) hn-RNA
- (5) Oxygen dissociation curve is shifted to right by  
(a) High pH (b) Low  $p\text{CO}_2$   
(c) Low  $\text{H}^+$  concentration (d) 2, 3 BPG
- (6) Deficiency of which vitamin leads to Megaloblastic anemia?  
(a) Cobalamine (b) Pyridoxine  
(c) Thiamine (d) Niacin
- (7) Muscle glycogen cannot contribute to blood glucose due to deficiency of enzyme –  
(a) Glucose 1-phosphatase (b) Glycogen phosphorylase  
(c) Glucose 6-phosphatase (d) Glycogen synthase
- (8)  $K_m$  value is increased in which enzyme inhibition ?  
(a) Non-competitive enzyme inhibition  
(b) Un-competitive inhibition  
(c) Suicide inhibition  
(d) Competitive enzyme inhibition
- (9) Which enzyme is common in cholesterol and ketone body metabolism ?  
(a) HMG Co-A reductase (b) HMG Co-A lyase  
(c) HMG Co-A synthetase (d) HMG Co-A hydratase
- (10) Serotonin is synthesized from –  
(a) Arginine (b) Tryptophan  
(c) Tyrosine (d) Glycine
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