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RG-9003-9005 Seat No. _____

Second Year B. Physiotherapy Examination

February - 2019

Pathology, Microbiology & Biochemistry

(Old Course)

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** indicates full marks.

SECTION - I (Pathology, Microbiology)

1 Answer any two : **20**

(a) Discuss Pathogenesis of Tuberculosis. Write in brief about Tuberculosis of Bone.

(b) Describe Morphology, Pathogenicity and Laboratory Diagnosis of "Salmonella typhi".

(c) Define Neoplasia. Discuss characteristics and differences of Benign and Malignant Tumors.

2 Write short notes on : (any **two**) **10**

(a) Immunoglobulin M.

(b) Discuss different types of Media

(c) Giardiasis.

3 Write answers in 2-3 sentences : (any five) **10**

(a) Enumerate four RNA viruses.

(b) Define biomedical waste.

(c) Enumerate four microorganisms that causes urinary tract infection (UTI).

(d) Rheumatoid Arthritis.

(e) Myasthenia Gravis.

(f) Nerve Biopsy.

4 Encircle most appropriate (Single) answer (all compulsory) : **10**

(1) Which of the following is acid fast ?

(A) Mycobacterium tuberculosis

(B) Nocardia

(C) M. leprae

(D) All of the above

(2) Organ of adhesion in bacteria is :

(A) Flagella (B) Fimbriae

(C) Capsule (D) Mesosomes

(3) Agar-agar is used in microbiology media for -

(A) Nutritive value (B) Solidifying media

(C) Carbon source (D) All of the above

(4) The arrangement of staphylococcus is -

(A) In chains (B) In clusters

(C) In pairs (D) None of the above

(5) In transmission of Malaria mosquito bite transfer -

(A) Sporozoites (B) Merozoites

(C) Hypnozoite (D) Gametocyte

(6) Cold sterilization refers to -

(A) Ionizing Radiation

(B) Non-ionising Radiation

(C) Filtration

(D) Ethylene oxide gas sterilization.

(7) The following contains a killed bacterial vaccine -

(A) BCG (B) OPV

(C) Tetanus Toxoid (D) DPT

(8) "Ghon Focus" is most frequently found in -

(A) Lungs (B) Intestine

(C) Heart (D) Brain

(9) Immunoglobulin can cross placenta -

(A) IgG (B) IgM

(C) IgE (D) IgA

(10) Lepromin Test is positive in -

(A) Lepromatous Leprosy

(B) Boderline Leprosy

(C) Tuberculoid Leprosy

(D) Boderline Lepromatous Leprosy

SECTION - II (Biochemistry)

5 Write long essay on any **two** of the following : **10×2=20**

(1) Describe the HMP pathway and its metabolic significance.

(2) Describe the functions and metabolism of heme.

(3) Discuss atherosclerosis and factors affecting cholesterol level in blood.

6 Explain any **two** of the following : **5×2=10**

(a) Calcium - sources and biochemical functions

(b) Vitamin - B_3 functions and deficiency manifestations

(c) Biologically active peptides

7 Write short notes on any **five** of the following : **2×5=10**

(a) Structure of cell membrane

(b) Function of Messenger Ribonucleic acid (m-RNA)

(c) Enzyme Linked Immunosorbant Assay (ELISA)

(d) Allosteric enzyme inhibition

(e) Inhibitors of electron transport chain (ETC)

(f) Rickets

8 Multiple Choice Questions : (Each question below contains four suggested answers. Select one best response to each question and write in answer book) **1×10=10**

(1) Oleic acid is an example of

(A) Saturated fatty acid

(B) Mono-unsaturated fatty acid

(C) Poly-unsaturated fatty acid

(D) Eicosanoids

(2) Serum lipase levels increases in

(A) Myocardial infarction (B) Pancreatitis

(C) Bone disorders (D) Scurvy

(3) Normal plasma urea level is -

(A) 03-07 mg/dl (B) 15-40 mg/dl

(C) 150-250 mg/dl (D) 75-110 mg/dl

(4) Alanine transaminase (ALT) is used as diagnostic marker for

(A) Pancreatic diseases (B) Liver diseases

(C) Renal diseases (D) Thyroid diseases

(5) Which of the following is a monosaccharide ?

(A) Ribose (B) Sucrose

(C) Inulin (D) Heparin

(6) Which of the following elements present in ceruloplasmin ?

(A) Sulphur (B) Magnesium

(C) Iodine (D) Copper

(7) The protein present in hair is

(A) Keratin (B) Elastin

(C) Myosin (D) Tropocollagen

(8) Aspirin acts by inhibiting the activity of the enzyme

(A) Lipoxygenase (B) Cyclooxygenase

(C) Phospholipase A_2 (D) Lipoprotein lipase

(9) Non functional plasma enzyme is

(A) Pseudocholinesterase

(B) Lipoprotein lipase

(C) Proenzymes of blood coagulation

(D) Lipase

(10) The enzyme involved in gluconeogenesis is

(A) Pyruvate carboxylase

(B) Pyruvate kinase

(C) Hexokinase

(D) Phosphohexose isomerase
