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MBI-003-001211 Seat No. _____

B. Sc. (Sem. II) (CBCS) Examination

March / April - 2018

Microbiology : MB - Paper-201

(Microbial Chemistry & Physiology)

(Old Course)

Faculty Code : 003

Subject Code : 001211

Time : $2\frac{1}{2}$ Hours] [Total Marks : **70**

1 Objective type questions : **20**

(1) What is active site?

(2) What is allosteric site?

(3) Give two examples of polysaccharides.

(4) Define Atom.

(5) Define Isotopes.

(6) Define pH.

(7) Define Redox potential.

(8) Give an example of non reducing sugar.

(9) Give an example of sulphur containing amino acid.

(10) Give examples of fat soluble vitamins.

(11) Lipids are organic substances that are _____ in water.

(12) What are steroids ?

(13) Organisms that utilize light as source of energy are known as _____

(14) Define Decarboxylation.

(15) Define Transamination.

(16) Define : V_{max}.

(17) Lactose is made up of _____ and _____ sugars.

(18) What are essential fatty acids ?

(19) Define Zwitter ion.

(20) Give examples microorganisms representing Photolithoautotrophy.

2 (A) Answer in brief : (Any **Three**) **6**

(1) Classification of bacteria on the basis of temperature.

(2) Classification of bacteria on the basis of carbon sources.

(3) Give functions of carbohydrates.

(4) Give functions of Lipids.

(5) Covalent Bond.

(6) What are obligate parasites ? Give examples.

(B) Answer in detail : (Any **Three**) **9**

(1) Define : Bacteriological media. Explain different types of media.

(2) Functions of nucleotides.

(3) Scope of Biochemistry.

(4) What is protein denaturation? Enlist different agents used for it.

(5) Classification of an enzyme.

(6) Write a note on Chargaff's rule.

(C) Write notes on : (Any **Two**) **10**

(1) Various modes of cell division.

(2) Detail note on RNA.

(3) Kinetics of an enzyme.

(4) Give Physical and Chemical properties of amino acids.

(5) Growth curve of bacteria.

3 (A) Answer in brief : (Any **Three**) **6**

(1) What is coagulation and flocculation?

(2) What is lactose intolerance?

(3) Properties of Steroids.

(4) Give properties of an enzyme.

(5) Functions of lipids

(6) Explain the structure of Sucrose.

(B) Answer in detail : (Any **Three**) **9**

(1) Write a note on pH.

(2) Structure of DNA.

(3) Give the functions of nucleotides.

(4) Classification of bacteria on the basis of oxygen requirement.

(5) What do you mean by Ribozyme?

(6) Give Physical and Chemical properties of enzymes.

(C) Write notes on : (Any **Two**) **10**

(1) Direct and indirect methods for estimating the bacterial population.

(2) Pure culture and cultural characteristics.

(3) Mechanism and regulation of Enzyme Synthesis.

(4) Write different reactions of monosaccharide.

(5) Hydrolysis and Condensation reactions.
