NBI-003-001211 Seat No. _____

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

April / May - 2017

MBP - 201 : Microbial Chemistry & Physiology

(Old Course)

Faculty Code : 003

Subject Code : 001211

Time : Hours] [Total Marks : **70**

1 Objective type questions : **20**

(1) What is allosteric site ?

(2) Define Atom.

(3) Define pH.

(4) Define redox potential.

(5) Give an example of non reducing sugar.

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

(7) Define : V_{max}.

(8) Give examples of fat soluble vitamins.

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

(10) What are steroids ?

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

(12) Organisms require organic compounds as their Carbon source are termed as _____.

(13) Define pure culture.

(14) What is active site ?

(15) Define enzyme.

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

(17) What are essential fatty acids ?

(18) Define Zwitterion,

(19) Define isotopes.

(20) Give examples microorganisms representing Photolit-hoautotrohy.

2 (a) Answer in brief : (Any **three**) **6**

(1) What is coagulation and flocculation?

(2) What is lactose intolerance?

(3) Characteristics of lipids.

(4) Give the properties of triacylglycerols.

(5) Define liposome, micelle.

(6) Decarboxylation and Transamination

(b) Answer in detail : (Any **three**) **9**

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

(2) Which are the different categories of microorganisms on the basis of temperature required for their growth.

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

(4) Write a structure of purine and pyrimidine.

(5) Explain polysaccharides.

(6) Give the functions of carbohydrates.

(c) Writes Notes on : (Any **two**) **10**

(1) Various modes of cell division.

(2) Detail note on cholesterol.

(3) Write a different reaction occurs in monosaccharide.

(4) Give Physical property and chemical property of amino acids.

(5) Growth curve of bacteria.

3 (a) Answer in brief : (Any **three**) **6**

(1) What are obligate parasites ? Give examples.

(2) What is synchronous growth?

(3) Give properties of an enzyme.

(4) Functions of Proteins.

(5) Explain the structure of glucose.

(6) Oxygen requirement of bacteria.

(b) Answer in detail : (Any **three**) **9**

(1) Describe the phenomenon of inversion Give the functions of proteins

(2) Give the functions of nucleotides.

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

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

(5) What do you mean by Ribozyme?

(6) Classification of an enzyme.

(c) Writes Notes on : (Any **two**) **10**

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

(2) Scope of Biochemistry.

(3) Write a detail note on types of RNA.

(4) Kinetics of an enzyme.

(5) Hydrolysis and Condensation reactions.'
