



NBI-003-10120016 Seat No. _____

First Year B. Sc. (Microbiology) (Sem. II)

(CBCS) Examination

April / May - 2017

MB - 201 : Microbial Chemistry & Microbial Control

(New Course)

Faculty Code : 003

Subject Code : 10120016

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

Instructions : (1) All questions are compulsory.
(2) Figures on right indicate marks.

- 1 (A) Answer the following : (One mark each) 4
(1) Define: Isotopes
(2) Define: Oxidation reduction reactions
(3) How atomic number of an element is determined?
(4) In water molecule when electrons are distributed unequally than it causes _____.
- (B) Answer in brief : (Any **one** out of two) 2
(1) Define an atom and draw a diagram of carbon atom.
(2) How hydrogen bond forms? Write its two characteristics.
- (C) Answer in detail : (Any **one** out of two) 3
(1) What is isomerization?
(2) What is Buffer? Give example.
- (D) Write a note on : (Any **one** out of two) 5
(1) Write a note on types of chemical bonds.
(2) Define pH. Explain in detail pH and pl.

- 2 (A) Answer the following : (One mark each) 4
- (1) Define: Heteropolysaccharide.
 - (2) Define: Sterols
 - (3) Give an example of any unusual nucleotides found in tRNA.
 - (4) Which amino acid is having most complex structure?
- (B) Answer in brief : (Any **one** out of two) 2
- (1) Define: Reducing sugars. Give an example of any non reducing sugar.
 - (2) What is denaturation of protein?
- (C) Answer in detail : (Any **one** out of two) 3
- (1) What are fatty acids?
 - (2) Write a note on forms of DNA
- (D) Write a note on : (Any **one** out of two) 5
- (1) Write a brief note on aldo hexose sugar with its cyclic structure.
 - (2) Write a note on pyrimidines.
- 3 (A) Answer the following : (One mark each) 4
- (1) Define: Enzyme
 - (2) Define: Feedback Inhibition
 - (3) What is Cofactor?
 - (4) Enzymes are made up of _____
- (B) Answer in brief : (Any **one** out of two) 2
- (1) Define Apo Enzyme. How from it enzyme forms?
 - (2) Define: Constitutive Enzyme

- (C) Answer in detail : (Any **one** out of two) **3**
- (1) Define: Coenzyme, Cofactor and Prosthetic group.
 - (2) Explain competitive inhibition.
- (D) Write a note on : (Any **one** out of two) **5**
- (1) Classification of Enzymes
 - (2) Write a note on nomenclature of enzyme.
- 4 (A) Answer the following : (One mark each) **4**
- (1) Define: Disinfectant.
 - (2) Give an example of Quarternery Ammonium compound.
 - (3) Which organism is used as an sterilization indicator in Autoclave?
 - (4) Who had used phenol as a disinfectant for the first time?
- (B) Answer in brief : (Any **one** out of two) **2**
- (1) How Desiccation is useful in sterilization?
 - (2) Give any four characteristics of an ideal antimicrobial chemical agent.
- (C) Answer in detail : (Any **one** out of two) **3**
- (1) How dry heat is used for sterilization?
 - (2) Write a note on phenol coefficient method.
- (D) Write a note on : (Any **one** out of two) **5**
- (1) Gaseous Agents as a chemical disinfectant.
 - (2) How radiation can be employed as a sterilizing agent?

- 5 (A) Answer the following : (One mark each) 4
- (1) Define: Chemotherapeutic agent
 - (2) Who discovered streptomycin?
 - (3) Give an example of macrolide antibiotic.
 - (4) Give an example of antiviral antibiotic.
- (B) Answer in brief : (Any **one** out of two) 2
- (1) What is semisynthetic antibiotic? Give example
 - (2) Contribution of Sir Alexander Flemming
- (C) Answer in detail : (Any **one** out of two) 3
- (1) Antibiotics that damage cytoplasmic membrane,
 - (2) Tetracyclins
- (D) Write a note on : (Any **one** out of two) 5
- (1) Beta Lactum antibiotics.
 - (2) Antifungal antibiotic
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