

B.Sc. Semester - 2 (CBCS) Examination**March/April- 2018****MICROBIOLOGY****(CORE)****Time: 2:30 Hours****Marks: 70****Instructions:**

1. All questions are compulsory.
 2. Figures to the right indicate marks.
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Ques.1 A. Answer the following (One mark each) (4)

- 1) Define: Calomel Electrode
- 2) What are ions ? How are they formed ?
- 3) Define : Latent Heat of Water
- 4) What are redox reactions ?

Ques.1 B. Answer in brief (Any one out of two) (2)

- 1) Define: Isomer
- 2) Explain hydrolytic reactions.

Ques.1 C. Answer in detail (Any one out of two) (3)

- 1) What are covalent and ionic bonds ?
- 2) Write a note on "Properties of Water".

Ques.1 D. Write a note on (Any one out of two) (5)

- 1) Write a note on -Scope of Biochemistry.
- 2) Explain various chemical reactions in brief.

Ques.2 A. Answer the following (One mark each) (4)

- 1) Define: Chiral Carbon
- 2) Define: Waxes
- 3) What do you mean by major and minor groove in DNA ?
- 4) Give example of aromatic amino acid.

Ques.2 B. Answer in brief (Any one out of two) (2)

- 1) Mention the properties of Z-DNA.
- 2) Explain with diagram – formation of Triglyceride.

Ques.2 C. Answer in detail (Any one out of two) (3)

- 1) Explain : Structure of t-RNA.
- 2) Discuss the biological significance of lipids

Ques.2 D. Write a note on (Any one out of two) (5)

- 1) Explain the classification of Carbohydrates.
- 2) Write a note on Levels of Protein structure.

Ques.3 A. Answer the following (One mark each) (4)

- 1) Define: Operon
- 2) Define: Prosthetic Group
- 3) What are Riozymes ?

4) What is activation energy ?

Ques.3 B. Answer in brief (Any one out of two) (2)

- 1) Write the names of Six classes of enzymes.
- 2) What is competitive enzyme inhibition.

Ques.3 c. Answer in detail (Any one out of two) (3)

- 1) Write a note on enzyme nomenclature.
- 2) Explain general mechanism of enzyme action.

Ques.3 d. Write a note on (Any one out of two) (5)

- 1) Regulation of enzyme synthesis.
- 2) Physical and Chemical Properties of enzymes.

Ques.4 A. Answer the following (One mark each) (4)

- 1) Define: Z Value
- 2) Define: Tyndallization
- 3) Give examples of Gaseous sterilizing agents.
- 4) What is the mode of action of UV light as sterilizing agent ?

Ques.4 B. Answer in brief (Any one out of two) (2)

- 1) Explain heavy metals in brief.
- 2) What are microbiological filters ?

Ques.4 c. Answer in detail (Any one out of two) (3)

- 1) Discuss the mode of action of Autoclave.
- 2) Describe Phenol Coefficient method in brief.

Ques.4 d. Write a note on (Any one out of two) (5)

- 1) Explain Characteristics of an ideal antimicrobial agent.
- 2) Explain Phenol, Alcohol and Halogen.

Ques.5 A. Answer the following (One mark each) (4)

- 1) What is 6 APA ?
- 2) What is the mode of action of Tetracyclin ?
- 3) Give example of antifungal antibiotic.
- 4) What is Zone of inhibition ?

Ques.5 B. Answer in brief (Any one out of two) (2)

- 1) What are antiviral agents ?
- 2) Give names of organisms that produce Bacitracin and Streptomycin

Ques.5 c. Answer in detail (Any one out of two) (3)

- 1) Nonmedical uses of antibiotics
- 2) Explain the discovery of Penicillin.

Ques.5 d. Write a note on (Any one out of two) (5)

- 1) Bioassay of antibiotic
- 2) Antibiotics that inhibit Protein synthesis
