

B.Sc. Semester - 2 (CBCS) Examination
March/April – 2024 (As Per Syllabus Year-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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- Que.1(A) Give specific answers. (04)
- (1) Define: Buffer.
 - (2) Draw the structure of water.
 - (3) List the types of bonds use in microbial chemical reaction.
 - (4) Define: Biochemistry.
- Que.1(B) Answer in Brief. (Any one out of two) (03)
- (1) Difference between Molecule and atom.
 - (2) Write the difference between pH and pOH.
- Que.1(C) Write a Note on. (Any one out of two) (07)
- (1) Explain: Physical and Chemical Properties of water.
 - (2) Properties of buffers and its type.
- Que.2(A) Give specific answers. (04)
- (1) Define: Lipid.
 - (2) Explain: ATP.
 - (3) Write the full form of PUFA.
 - (4) Starch is disaccharide. (True/False)
- Que.2(B) Answer in Brief. (Any one out of two) (03)
- (1) Explain alpha helix and beta sheets.
 - (2) Write the short note on disaccharides.
- Que.2(C) Write a Note on. (Any one out of two) (07)
- (1) Classification of Polysaccharides with examples.
 - (2) Draw and explain Watson and Crick's model.
- Que.3(A) Give specific answers. (04)
- (1) All enzymes are _____. (Protein/ lipids)
 - (2) Define: Enzyme activity.
 - (3) Define: Coenzyme.
 - (4) Glucagon enzyme is useful for glucose regulation in body (True/False).
- Que.3(B) Answer in Brief. (Any one out of two) (03)
- (1) Write the chemical Properties of enzyme.
 - (2) Inhibition of enzyme activity.

- Que.3(C) Write a Note on. (Any one out of two) (07)
- (1) Nature and mechanism of enzyme activity.
 - (2) Difference between prokaryotic and eukaryotic enzyme regulation.
- Que.4(A) Give specific answers. (04)
- (1) Define: Microbial Control.
 - (2) Ethanol is widely used as chemical agent for microbial control. (True/False).
 - (3) Write the two names of chemical dye use for microbial control.
 - (4) How uv - rays act as microbial control?
- Que.4(B) Answer in Brief. (Any one out of two) (03)
- (1) Explain: Sterilization and Antiseptic.
 - (2) Write any six physical agents used as microbial control.
- Que.4(C) Write a Note on. (Any one out of two) (07)
- (1) Chemical agents as microbial control.
 - (2) Which are the properties of ideal antimicrobial agent.
- Que.5(A) Give specific answers. (04)
- (1) Explain: Antibiotics.
 - (2) Tetracycline has cell wall inhibition activity. (True/False)
 - (3) Penicillin is produced by _____.
 - (4) Write the two names of semisynthetic penicillin.
- Que.5(B) Answer in Brief. (Any one out of two) (03)
- (1) Write two names of antibiotics which inhibited nucleic acid synthesis.
 - (2) Short note on non-medical use of antibiotics.
- Que.5(C) Write a Note on. (Any one out of two) (07)
- (1) Which are the characteristics of ideal chemotherapeutic agent?
 - (2) Microbiological assay of antibiotics.
