647510 **BSC2MicC201x** **Seat No :_____**

B.Sc. Semester - 2 (*CBCS*) Examination
March/April – 2023 (New Course)
MICROBIOLOGY (CORE)

Time: 2:30 Hours **Marks: 70**

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate marks.

Q.1(A) Answer the following questions. **(04)**

1. Write the relation between pH and pOH.
2. _____ is boiling temperature of water.
3. List the types of bonds use in microbial chemical reaction.
4. Define: Microbial Chemistry.

Q.1(B) Answer the following question. (Any One) **(03)**

1. Short detailed on pH.
2. Draw the structure of Atoms.

Q.1(C) Answer the following question. (Any One) **(07)**

1. Explain: Physical and Chemical Properties of water.
2. Write short note on: Molecular and Chemical Bonds.

Q.2(A) Answer the following questions. **(04)**

1. Define: Protein.
2. Draw the structure of ATP.
3. Write the full form of LDL.
4. Maltose is Polysaccharide. (True/False)

Q.2(B) Answer the following question. (Any One) **(03)**

1. Give the basics of structure of protein.
2. Difference between saturated fatty acid and unsaturated fatty acid.

Q.2(C) Answer the following question. (Any One) **(07)**

1. Classification of Polysaccharides with examples.
2. Draw and explain Structure of DNA.

Q.3(A) Answer the following questions. **(04)**

1. The nature of an enzyme is _____. (Protein/ lipid/ Molecules)
2. Enzyme increases the rate of reaction by lowering the activation energy. (True/False)
3. Define: Coenzyme.
4. Write the name of enzyme/hormone useful for glucose regulation in body.

Q.3(B) Answer the following question. (Any One) (03)

1. Nomenclature of enzyme.
2. Write the brief about inhibition of enzyme.

Q.3(C) Answer the following question. (Any One) (07)

1. Mechanism and regulation of enzyme activity.
2. Explain: Enzyme synthesis is highly regulating process.

Q.4(A) Answer the following questions. (04)

1. Define: Sterilization.
2. DDT is widely used as chemical agent for microbial control. (True/False).
3. Write the two names of rays use for microbial control.
4. Explain: Phenol coefficient?

Q.4(B) Answer the following question. (Any One) (03)

1. Difference between Antiseptic and Disinfectant.
2. Write any six chemical agents used as microbial control.

Q.4(C) Answer the following question. (Any One) (07)

1. Physical agents as microbial control.
2. How to evaluate chemical antimicrobial agents using phenol coefficient method?

Q.5(A) Answer the following questions. (04)

1. Define: Chemotherapeutic agents.
2. Explain: Narrow spectrum antibiotics.
3. Streptomycin id produced by _____.
4. Tetracycline is narrow spectrum antibiotics. (True/False)

Q.5(B) Answer the following question. (Any One) (03)

1. Give the deference between antifungal, antiviral and antitumor agents.
2. Write any three criteria of ideal chemotherapeutic agent.

Q.5(C) Answer the following question. (Any One) (07)

1. Mode of action of inhibition to nucleic acid and protein synthesis.
2. Antibiotics and their activity of inhibition to cell wall synthesis and damage to cytoplasmic membrane.

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