



**Shree H.N.Shukla College of Science Rajkot**

**B.Sc. (Sem. II) (CBCS)**

**[MB-201]: Microbiology**

**Prelims Paper-2021**

[Time: 2:30 Hour]

[Total Marks: 70]

**Instructions:** 1. all questions are compulsory.

2. The right side figure indicates total marks of the question.

3. Draw the figure wherever necessary.

4. Write answers of all the questions in main answer sheets.

**Section-I**

**Que-1: Answer the following**

**(2 Marks)**

- 1) Define oxidation and reduction.
- 2) A.....is a solution which resist the change in pH.

**Que-2: Give the short answers (any two)**

**(4 Marks)**

- 1) What are ions? How they formed?
- 2) What is orbit? What is its role?
- 3) Define redox potential.

**Que-3: Answer the following (any one)**

**(3 Mark)**

- 1) Define covalent bond with two examples.
- 2) What is isotops. Give their examples and importance.

**Que-4: Answer the following (any one)**

**(5 Mark)**

- 1) Acid-base reaction
- 2) Chemical bonds

**Section-II**

**Que-1: Answer the following**

**(2 Marks)**

- 1) Give the examples of sugar alcohols.
- 2) An example of a hydroxy fatty acid is.....

**Que-2: Give the short answers (any two) (4 Marks)**

- 1) What are ribozymes?
- 2) What are ergosterol, give its importance.
- 3) Define Zwitterion and isoelectric pH.

**Que-3: Answer the following (any one) (3 Marks)**

- 1) Write a note on Disaccharides with examples.
- 2) Enlist various types of RNAs with their functions.

**Que-4: Answer the following (any one) (5 Marks)**

- 1) Write a note on heteropolysaccharides with examples
- 2) Write a note on quantitative test for fatty acids.

### **Section-III**

**Que-1: Answer the following (2 Marks)**

- 1) Enzymes are basically made up of.....
- 2) What is Km value of enzyme?

**Que-2: Give the short answers (any two) (4 Marks)**

- 1) What is active site?
- 2) Define: allosteric enzymes
- 3) What is co enzyme?

**Que-3: Answer the following (any one) (3 Mark)**

- 1) What is cofactor? Give its examples.
- 2) Competitive inhibition

**Que-4: Answer the following (any one) (5 Mark)**

- 1) Mechanism of Regulation of enzyme Synthesis.
- 2) Lock and key model

## Section-IV

**Que-1: Answer the following (2 Marks)**

- 1) Pasteurization is used for.....
- 2) Define Bacteriostatic.

**Que-2: Give the short answers (any two) (4 Marks)**

- 1) Comment “Moist heat is more efficient than dry heat”
- 2) What is DRT & TDT?
- 3) What is fractional sterilization?

**Que-3: Answer the following (any one) (3 Marks)**

- 1) Describe working of an autoclave.
- 2) Describe the pattern of death of bacteria.

**Que-4: Answer the following (any one) (5 Marks)**

- 1) Justify “Pasteurization is not sterilization”
- 2) Enlist practical application and mode of action of following chemicals.
  - a) Alcohols
  - b) Quarternary Ammonium Compounds
  - c) Heavy metals

## Section-V

**Que-1: Answer the following (2 Marks)**

- 1) Panicillin was discovered by the scientist.....
- 2) Give an examples of antifungal agents.

**Que-2: Give the short answers (any two) (4 Marks)**

- 1) Differentiate between antibiotic and chemotherapeutic agents.
- 2) Differntiate between narrow spectrum and broad spectrum antibiotics.
- 3) Enlist the mode of action of streptomycin and tetracyclines.

**Que-3: Answer the following (any one)**

**(3 Marks)**

- 1) Give the characteristics of an Ideal Antimicrobial agent
- 2) Sulfonamide drugs

**Que-4: Answer the following (any one)**

**(5 Marks)**

- 1) Mode of action of antibiotics affecting cell wall synthesis.
- 2) Antifungal agents.

**ALL THE BEST**

\*\*\*\*\*