



Shree H.N. Shukla College of Science Rajkot
B.Sc. (Sem. IV) (CBCS)

[MIC-401]: APPLIED AND ENVIRONMENTAL MICROBIOLOGY
Microbiology Unit Test Paper-1

[Time: 2:30 Hours]

[Total Marks: 50]

Date: 20/4/2021.

- 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.

Question-1

[A] Objective type questions (5 question) [05]

1. Who is father of soil microbiology?
2. SKELETON is made from which soil particles?
3. Define Humus.
4. An example of non symbiotic nitrogen fixer is_____.
5. Which microorganisms is present in large amount in soil?

[B] Answer in brief. Write any[two out of three] [04]

1. Enlist physical properties of soil.
2. Write overall biochemical reaction for nitrogen cycle.
3. Which are the steps involved in carbon cycle?

[C] Answer in detail. Write any [two out of three] [06]

1. Describe various factors affecting distribution, activity and population of soil microorganisms.
2. Define various types of beneficial association among soil microorganisms with suitable example.
3. Describe various components of soil.

[D] Answer in detail. Write any [two out of three] [10]

1. Define soil profile and its each horizon.
2. define rhizosphere and note on microorganisms present in it.
3. Write a note on Nitrogen cycle.

Question-2

[A] Objective type questions (5 question) [05]

1. Define Metabiosis
2. What is optimal pH range for bacterial growth?
3. Which inhibitory substance present in garlic?
4. Give the Name of yeast which can tolerate high carbon dioxide level.
5. Write full form of AGMark.

[B] Answer in brief. Write any [two out of three]

[04]

1. Define putrefaction and Souring.
2. Describe various class of food by ease of spoilage.
3. Difference between intoxication and infection.

[C] Answer in detail. Write any [two out of three]

[06]

1. Write a note on AGMark.
2. Write a short note on SCP.
3. Write a principles of food preservation.

[D] Answer in detail. Write any [two out of three]

[10]

1. Enlist various intrinsic parameters effecting food spoilage.
2. Write a note on quantitative methods for estimation of microbes present in food.
3. Enlist various methods used for food preservation and describe any two methods in details.