



# Shree H. N. Shukla College

(Affiliated to Saurashtra University)

Shree H. N. Shukla College Campus, Nr. Lalpari Lake, Bh. Marketing Yard,  
Amargadh – Bhichri, Rajkot. Mo. : 97277 53360, 90990 63150

## S.Y. B.Sc. Semester 4

### Applied and environmental Microbiology MB-401

### Question bank

#### Unit – 1 soil microbiology

##### One Marks Questions.

1. What is soil?
2. Give the Property of Soil.
3. Give the name of chemical property of soil.
4. Give the name of organic component of soil.
5. Give the name of inorganic components of soil.
6. Which Essential components are required for soil?
7. Define Ammonification.
8. Define Nitrification.
9. Define Denitrification.
10. Give the name of nitrogen fixing bacteria.
11. Define commensalism.

##### ► Describe in short (2 & 3 marks)

1. Which Factors Affecting Distribution, Activity and Population of Soil Microorganisms.
2. How many type of Interactions among soil microorganisms.
3. Write a note on Nitrogen fixation by Symbiotic bacteria
4. Write a biochemical reaction of Nitrogen fixing.
5. Write a note on Winogradsky's Column.

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6. Discuss Phosphorus cycle.
7. Discuss factors affecting soil rhizosphere Microbes.
8. Discuss factors affecting soil Microbes.
9. write a regulation of nitrogen fixation.
10. write a rolw of hydrogenase in nitrogen fixation.

## **Describe in detail (5 marks)**

1. Write a note on Physical and Chemical Property of soil .
2. Write a note on Nitrogen Cycle.
4. Write a note on Sulphur Cycle.
5. Write a note on Carbon cycle.
6. Write a note on Phosphorus cycle.

## **Unit – 2 food microbiology**

### **One Marks Questions.**

1. Which are microbial flora of fresh food? ,
2. What is pasteurization?
3. What are fresh foods and canned foods?
4. Define: putrefaction
5. Define: rancidity
6. A Differentiate infection and intoxication.
7. What is role of C. botulism in food poisoning?
8. What changes Salmonella causes in food? 9.
9. What is role of S. aureus in food poisoning? 10
10. Which are fermented foods?
11. What is sauerkraut?
12. What are Pickles?
13. What are Sausages?
14. what is AGMark?

### **► Describe in short (2 & 3 marks)**

1. What are changes caused in food due to microorganisms?
2. What is spoilage of food?
3. Explain in detail about mushrooms.

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4. Discuss Single Cell Protein (SCP).
5. Write on food borne infections.
6. Intrinsic factors affecting food spoilages.
7. Extrinsic factors affecting food spoilages.
8. Write a two methods for food preservation.
9. Write a role of radiation in food preservation.
  
10. Write a brief note on fermented food Pickles.
11. Write a brief note on fermented food Sauerkraut
12. Write a brief note on fermented food Silage

## **Describe in detail (5 marks)**

- 1 Write a note on spoilage of foods.
- 2 Write a note on Spoilage of Breads.
3. Write a note on Spoilage of Eggs.
4. Write a role of *S. aureus* in foodborne infection.
5. Write a role of *C. botulinum* in food poisoning
6. *Salmonella* Spp. in food poisoning hilling
7. Write different methods for food preservations.
8. Write a different methods for food drying process.
9. Write a note on functional foods.

## **Unit -3 Dairy Microbiology**

### **One Marks Questions.**

1. What is milk?
- 2 Where does milk comes from?
3. Give composition of normal milk.
4. Which are various types of milk?
5. What is flavoured milk?
6. Name various general flora found in the milk.
7. Discuss types of microorganisms in the milk.
- 8 What do you understand by spoilage of milk?
9. How milk gets spoiled?
10. Enlist organisms responsible for spoilage of milk.
11. Discuss various types of spoilage.

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12. What is microbial analysis of milk?
13. What is SPC, explain in detail.
14. Explain MBRT.
15. What is RRT?

## ► Describe in short (2 & 3 marks)

1. Write a note on yoghurt.
2. Discuss butter milk What in Bulgarian butter milk?
3. Write a note on kefir.
4. Write about preservation of milk.
5. What is pasteurization of milk?
6. Write a note on Acidophilic milk.
7. Coloured spoilage of milk
8. Sources of spoilage of milk
9. Discuss milk as food.
10. Write a note on preservation of milk by drying
12. Discuss spoilage of milk at different temperatures.
13. Discuss various changes in flavours of milk due to spoilage.

## Describe in detail (5 marks)

- 1 Write a note on milk preservation.
- 2 Write a note on Spoilage of milk
3. Write a note on cheese.
4. Write a note MBRT and Resazurin test.
5. Write a note on Yogurt.
6. Write a homogenization of milk.
7. Write a note on grading of milk.

## unit – 4 Microbiology of drinking and waste water

### One Marks Questions.

1. Define Sanitary Survey of water.
2. Define coliform.

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3. What are faecal coliform.
4. Give two example of coliforms.
5. Give methods of bacterial analysis of water.
6. Define BOD.
7. Define COD.
8. Give the name of filter for water purification.
9. Give the name of chemical used in disinfection of water.
10. Define waste water.
11. Define Composting.
12. The filtering medium of trickling filters is coated with microbial flora, known as\_\_\_\_\_.

## ► Describe in short (2 & 3 marks)

1. Write a different characteristic of water
- 2 Write a note on BOD.
- 3 Write a note on COD.
4. Write a physical characteristics of water.
5. Write a Chemical characteristics of water.
6. Write a Biological characteristics of water.
7. Write note on Primary treatment of waste water.
8. Write a note on Secondary treatment of waste water.
9. write a note Anaerobic sludge digestion.

## Describe in detail (5 marks)

1. Write a note on waste water treatment plant.
2. Write a short note on composting.
3. Write a note on biodisc system.
4. Write a note on water purification.
5. Write a note on solid waste management.
6. Bacterial analysis of waste water.

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## One Marks Questions.

1. what is pollution?
2. What is pollutant?
3. Define pesticides.
4. Define biomagnification.
5. Full form of DDT.
6. Which are various types of detergents?
7. Define biodeterioration.
8. What is metal corrosion?
9. What is bio-leaching?
10. What is oil recovery?
11. What are biofuels.

## Describe in short (2 & 3 marks)

1. Define pollution and describe types of pollution.
2. Write a note on acid rain.
3. Write a note on global warming.
4. What are the particulates of air pollution?
5. Write a full form of CPCB and NAAQM.
6. Write a note on problem with use of pesticides.
7. write a note on effect of marine pollution.
8. Write a note on biodeterioration, paper and paint biodeterioration.
9. Write a note on biomagnification.

## Describe in detail (5 marks)

1. Write a note on bioleaching.
2. Write a note on paper, pulp and metal and biodeterioration.
3. Write a note on bioenhanced oil recovery.
4. Write a note on biofuel.
5. write a note on bio fertilizers.
6. Write a note on bioplastic.



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