

Term End External Examination 1st Semester (Session-Feb 2025)

Subject: Food Science and Technology

Course No and Title: FST122M/ Food Microbiology and Food Chemistry-I

Time: 2.15 hours

Max Marks:100

Min. Marks:40

Section A: Objective Type Questions

Q1. Choose the appropriate Answer: (8x1.5=12)

i. Yeasts are:

- A Prokaryotes B Non-filamentous fungi
C Filamentous fungi D Both (A) and (C)

ii. Positive oxidation-reduction potential supports the growth of:

- A Aerobic microorganisms B Viruses
C Anaerobic microorganisms D None of the above

iii. Bacteria used for the development of sauerkraut is:

- A *Lactobacillus bulgaricus* B *Candida kefir*
C *Saccharomyces cerevisiae* D *Leuconostoc mesenteroides*

iv. Most of the bacteria grow on _____ foods.

- A Alkaline B Acidic
C Neutral D Highly acidic

v. Starch is a polymer of:

- A Glucose B Galactose
C Fructose D Lactose

vi. Proteins consist of _____ in their molecules:

- A Carbon B Nitrogen
C Hydrogen D All of the above.

vii. _____ is a rich source of vitamin A:

- A Mango B Carrot
C Papaya D All of the above

viii. Deficiency of vitamin B1 causes:

- A Night blindness B Pellagra
C Beri beri D Anaemia

Section-B: Descriptive Type Questions (Short Type)

Q2: Answer all the Questions (8 x 4 =32)

- i. How is microbial growth affected by the pH of food?
- ii. Write a note on structure of viruses.
- iii. Briefly discuss the role of microbes in food industry.
- iv. Define fermentation. What are its various types?
- v. Define food chemistry. What is its importance?
- vi. What are oligosaccharides? Illustrate with examples.
- vii. Define enzyme. What is the application of enzymes in meat and milk processing industries?
- viii. What is the role calcium in maintaining human health?

Section – C: Descriptive Type Questions (Medium Type)

Answer all the questions: (4 x 7=28)

- Q3. What are the extrinsic factors that affect microbial growth in foods?
OR
Discuss the economical importance of fungi.
- Q4. What is chemical spoilage? Discuss its effects on food quality.
OR
Discuss the health benefits of probiotics.
- Q5. Discuss the classification of carbohydrates.
OR
What is water activity? What is its relationship with shelf-life of foods?
- Q6. Discuss the classification of lipids.

OR

What is enzymatic browning? Write any two methods that can be used to control enzymatic browning in foods.

Section – D: Descriptive Type Questions (Long Type)

Answer any two of the following: (2 x 14=28)

- Q7.** Discuss the classification of bacteria.
- Q8.** What is botulism? What are the conditions necessary for its outbreak?
- Q9.** Define proteins. Discuss the classification of proteins.
- Q10.** What is Maillard reaction? Describe the factors affecting Maillard reaction.