

**B. Sc. MICROBIOLOGY
FOURTH SEMESTER
FOOD & DAIRY MICROBIOLOGY
BMB – 403**

(Use Separate Answer Scripts for Objective & Descriptive)

Duration : 3 hrs.

Full Marks : 70

[PART-A: Objective]

Time : 20 min.

Marks : 20

Choose the correct answer from the following:

1X20=20

1. Downy mildew is caused by
 - a. Erwinia
 - b. Xanthomonas
 - c. Phytophthora
 - d. Bacillus
2. Air belongs to _____ of contamination of food.
 - a. Secondary source
 - b. Primary Source
 - c. Tertiary source
 - d. None of the above
3. Eggs are categorized as
 - a. Low acid foods
 - b. High acid foods
 - c. Alkaline foods
 - d. Medium acid foods
4. The maximum limit for moisture content for growth of microbes is almost
 - a. 0
 - b. >1
 - c. <1
 - d. None of the above
5. Musty earthy favor in meat is caused by
 - a. Aspergillus
 - b. Actinomycetes
 - c. Leuconostoc
 - d. Pseudomonas
6. Phylloplane is the surface related to
 - a. Root
 - b. Plant
 - c. Leaf
 - d. Soil
7. *B. coagulans* is related to
 - a. Flat sour spoilage
 - b. Sulfide spoilage
 - c. Putrefactive anaerobic spoilage
 - d. TA spoilage
8. The predominant microorganisms in beef industry is
 - a. Pseudomonas
 - b. Aspergillus
 - c. Salmonella
 - d. E.coli O157: H7
9. Temperature and time required for Vat pasteurization is
 - a. 62.8°C for 30 minutes
 - b. 62.8°C for 2 minutes
 - c. 52.8°C for 30 minutes
 - d. 71.7°C for 30 minutes

10. Drying can be done through
- a. evaporation of water from the food
 - b. lowering A_w value
 - c. addition of salt and sugar
 - d. All of the above
11. Mechanism (s) involved in Preservation of food by high temperature is/are
- a. Hydrolysis
 - b. Oxidation
 - c. Both a) and c)
 - d. None of the above
12. Predictive microbiology
- a. Provides mathematical model
 - b. Predict microbial behavior in food
 - c. Concerned with food safety
 - d. All of the above
13. _____cheese have buttery taste and mushroom smell.
- a. Cheddar
 - b. Camembert
 - c. Mozzarella
 - d. Swiss
14. An example of Non-ionizing radiation is
- a. UV-ray
 - b. X ray
 - c. Γ -ray
 - d. Both b) and c)
15. The yogurt type fermented milk of Arab countries are known as
- a. Leban
 - b. Dahi
 - c. Zabady
 - d. Filmjolk
16. In yogurt the starter culture is/are
- a. Lactobacillus
 - b. Streptococcus
 - c. Leuconostoc
 - d. Both a) and b)
17. Mycotoxins are
- a. Cytotoxic
 - b. Primary metabolites
 - c. Secondary metabolites
 - d. Both a) and c)
18. "Keif" means
- a. Good feeling
 - b. Bad feeling
 - c. Cann't say
 - d. None of the above
19. Raw material used for Saurkraut production is
- a. Soyabean
 - b. Cabbage
 - c. Milk
 - d. Lentils
20. The secondary metabolites produced by *Claviceps purpurea* is known as
- a. Aflatoxin A1
 - b. Fumonsins
 - c. Ergot
 - d. Ochratoxin

(PART-B : Descriptive)

Time : 2 hrs. 40 min.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

1. Explain various intrinsic and extrinsic factors that affect growth and survival of microbes in foods. 10

2. Write short note on the following: 5+5=10
 - a. Saurkraut
 - b. Salmonellosis

3. Discuss briefly the microbial spoilage of meat and canned foods. 10

4. Write a short note on *any two* 5+5=10
 - a. Tempeh.
 - b. Infant botulism
 - c. Canning

5. Define mycotoxins. Write a note on most common mycotoxins which are involved in food borne intoxications. 2+8=10

6. Define Probiotics. Explain briefly the Health benefits of Probiotics. 2+8=10

7. Describe briefly the physical and chemical method of food preservation. 10

8. Write short note on: *any two* 5+5=10
 - a. Traveller's diarrhea
 - b. Predictive microbiology
 - c. Botulism

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