

**WEST BENGAL STATE UNIVERSITY**

B.Sc. Honours 5th Semester Examination, 2021-22

**FNTACOR12T-FOOD AND NUTRITION (CC12)****FOOD MICROBIOLOGY AND IMMUNOLOGY**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.  
Candidates should answer in their own words and adhere to the word limit as practicable.  
All symbols are of usual significance.*

**Answer any four questions from the following**

10×4 = 40

1. What is sterilization? Discuss any two methods of media sterilization. What is pasteurization? 3+4+3
2. What is contamination of food? What are the common changes occur in milk and milk product due to microbial action? 2+4+4
3. Explain the importance of different phase in bacterial growth curve. Explain the factors affecting microbial growth. 5+5
4. What are the common contaminant of cereals, fish and meat? Name two types of fungus having industrial importance. (2×3)+4
5. Write notes on any **two** of the following: 5×2 = 10
  - (i) Vinegar and its manufacturing
  - (ii) Fungal food poisoning
  - (iii) Fermentation of cereals
6. Differentiate between the following:  $2\frac{1}{2} \times 4 = 10$ 
  - (i) Humoral and Cellular immunity
  - (ii) Food borne disease and Food poisoning
  - (iii) Selective and Differentiate media
  - (iv) Antigen and Antibody.

7. Define the following: 2×5 = 10
- (i) Selective media
  - (ii) Miso
  - (iii) Generation time
  - (iv) Ropy milk
  - (v) Yogurt.
8. Explain the principle of production of soy sauce. Explain your idea about spoilage of canned products. What is sauerkraut? 4+4+2
9. Write a note on:  $2\frac{1}{2} \times 4 = 10$
- (i) Susceptibility of bread for spoilage
  - (ii) Egg spoilage
  - (iii) Vegetable spoilage
  - (iv) Microbes responsible for fish spoilage.

**N.B.:** *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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