



WEST BENGAL STATE UNIVERSITY
B.Sc. Honours 5th Semester Examination, 2023-24

FNTACOR12T-FOOD AND NUTRITION (CC12)

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.*

Answer any four questions from the following

10×4 = 40

1. What is endospore? How is it formed? Write in brief the functions of dipicolinic acid and its formation. Name two names of microorganisms related to canned food spoilage. 2 2+2+4+2 4
2. How is the rate of growth of a microbial population controlled in a chemostat and in a turbidostat? What is the dilution rate? How does an open system differ from a closed culture system or batch culture? (2+2)+2+4
3. Write short notes on: 2½ × 4 = 10
 - (a) Botulism ½
 - (b) NK Cells ½
 - (c) RIA 1
 - (d) Innate Immunity. 26
4. What is epitope? How does it differ from paratope? Write briefly on the functions of different antibodies. How does antibody differ from antigen in structure and function? 2 3 1+2+4+3 ②
5. What are the different types of food-borne illness? What are the primary sources of microorganisms found in food? Differentiate between obligate aerobic microorganism and obligate anaerobic microorganism. 5+3+2
6. Define following terms: 2½ × 4 = 10
 - (i) Prions
 - (ii) Starter cultures
 - (iii) Streak plate
 - (iv) Antiserum
7. Why milk is considered as growth medium for bacteria? What is generation time? What is Chalky Bread? What do you mean by Ropy milk? 1½ 1 2½ + 2½ + 2½ + 2½ ⑥
8. Discuss briefly the health benefits of Probiotics. Write notes on Sauerkraut and Miso. 5+(2½+2½)
9. What is MHC? Discuss the types of antigen antibody reaction. Write a short note on humoral immune response. 2+5+3

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