



WEST BENGAL STATE UNIVERSITY
B.Sc. Honours 5th Semester Examination, 2022-23

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.*

Answer any four questions from the following

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| | 10×4 = 40 |
| 1. What is an endospore? How it is formed? Write down the functions of dipicolinic acid in endospore formation. Mention the names of microbes commonly present in foods. | 2+2+4+2 |
| 2. What do you mean by growth curve? Describe the stages of bacterial growth curve. Briefly describe the role of factors affecting growth curve of bacteria. | 2+5+3 |
| 3. What is MHC? Discuss the types of antigen antibody reaction. Write a short note on humoral immune response. | 2+5+3 |
| 4. Discuss the following (any <i>two</i>): | 5+5 |
| (a) Seafood poisoning | |
| (b) Spoilage of milk and dairy products | |
| (c) Spoilage of cereal and cereal products. | |
| 5. What do you mean by sterilization? Describe the moist heat and dry heat method of sterilization. | 2+4+4 |
| 6. What is stab culture? What are the differences between complex and defined media? Explain with suitable example. Describe streak plate and pour plate method of plate culture. | 1+(2+1)+
3+3 |
| 7. Write short notes on: | $2\frac{1}{2} \times 4 = 10$ |
| (a) Botulism | |
| (b) Mycotoxins | |
| (c) NK cells | |
| (d) ELISA. | |
| 8. What do you mean by Probiotics? Write down the methods of manufacture for sauerkraut and vinegar. | 2+4+4 |
| 9. Write in brief on: | $2\frac{1}{2} \times 4 = 10$ |
| (a) RIA | |
| (b) Principles of Staining | |
| (c) Cytokines complement system | |
| (d) Fermented milk products. | |

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