

SECTION - B (35 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 7 = 35)

11. a) Explain the morphological characteristics of viruses.
(or)
b) Describe the intrinsic factors influencing growth of microbes.
12. a) Explain the principles and causes of spoilage of grains.
(or)
b) Describe the microbial spoilage of milk and milk products.
13. a) Discuss the steps in processing of bottled water.
(or)
b) Explain the standards of water for processed food industry.
14. a) Give the steps in culture media preparation.
(or)
b) Discuss the microbial standards and limits for food products.
15. a) Write briefly on food poisoning and intoxication.
(or)
b) Explain the symptoms, foods involved and causes by *Salmonella spp.*

SECTION - C (30 Marks)

Answer any THREE Questions

ALL Questions Carry EQUAL Marks (3 x 10 = 30)

- 16 Elaborate the morphology, growth and reproduction of bacteria in foods.
- 17 Explain in detail about the changes caused in protein, carbohydrate and other constituents of food by microorganism during spoilage.
- 18 Enumerate on TDT, F, Z and D value of thermal inactivation of microbes.
- 19 Explain the symptoms, causes and control measures for food borne disease caused by *Clostridium Botulinum* and *Shigella spp.*
- 20 Illustrate the importance of microbes in alcoholic beverages.

Z-Z-Z

END