



WEST BENGAL STATE UNIVERSITY
B.Sc. Honours 4th Semester Examination, 2022

MCBACOR10T- MICROBIOLOGY (CC10)

FOOD AND DAIRY MICROBIOLOGY

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.*

Question No. 1 is compulsory and answer any four from the rest

1. Answer any **four** questions from the following: 2×4 = 8
- (a) Define spoilage and mention the possible causes of spoilage of canned food.
 - (b) Give example of one Food-borne intoxication and Food-borne Infection.
 - (c) What is time and temperature relationship used in LTH method of Pasteurization?
 - (d) How does “salt” help in preserving food?
 - (e) What is skimmed milk?
 - (f) What are perishable and nonperishable foods? Give example.
 - (g) Define Thermal death time.
 - (h) What will happen if milk is sterilized?
2. (a) How is yoghurt prepared and preserved. 1 $\frac{1}{2}$ + 1 $\frac{1}{2}$
- (b) Define ‘probiotics’? Write any two organisms used as probiotics. 2+2
- (c) Name one organism which cause spoilage in eggs. 1
3. (a) What will be your interpretation if the result of phosphatase test is positive for pasteurized milk? 2+4+2 = 8
- (b) Match the following:
- | COLUMN A | COLUMN B |
|--------------------------------|----------|
| Phosphatase Test | MBRT |
| <i>Alcaligenes viscolactis</i> | CQC |
| <i>Serratia marcescens</i> | Ropiness |
| Oxido reductase | Red Milk |
- (c) Name two desirable and two undesirable microbes present in milk.

4. (a) What are the symptoms and foods involved due to ‘*Campylobacter jejuni*’ infection? 2+2
(b) How “organic acids” help in food preservation? 2
(c) Write any two health benefits of ‘Probiotics’. 2
5. (a) Differentiate between the following: [(2×3)+2 = 8]
(i) Pasteurization and appertization
(ii) Quick freezing and slow freezing
(iii) Commercial and home canning
(b) Comment on the role of thermodurics in food spoilage.
6. (a) Discuss the role of bacteria associated with butter spoilage. Name two predominant microorganisms involved in butter spoilage. [(2+1)+(1+2)+2 = 8]
(b) What is the starter culture used for making cheese? What is the role of rennin in cheese making?
(c) Name the causative agent, foods involved, symptoms and preventive measures of botulism.
7. (a) How egg is naturally preserved? 2+2+2+2 = 8
(b) Why egg white is said to have antibacterial property? Explain.
(c) Why ground meat has more risk to be spoiled and contaminated with pathogenic bacteria?
(d) Why milk is considered as an excellent media for growth of microbes?
8. (a) Food preserved with sugar will have high proportion of osmophiles. Explain.
(b) How canning of food materials are done?
(c) What is ripened cheese? What changes occur during ripening of cheese. 1+1
(d) “Fermented food is digestible”. Justify.

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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