

[23]
[A47]

Date: 7/04/2016
Day : Thursday

Time: 10:30 am to 1:30 pm
Total marks: 70

N.B: Figures on the right indicate marks.

Q.1 Select the correct answer for each M.C.Q. (01 - Mark each) **10**

- 1** Pasteurization efficiency can be checked by _____ test.
(a) Caseinase (b) Lactase
(c) Phosphatase (d) Amylase
- 2** _____ dye undergoes series of color changes during reduction test.
(a) Methylene blue (b) Basic fuchsin
(c) Methyl green (d) Resazurin
- 3** In the HTST method of pasteurization, milk is heated to _____.
(a) 145°F for 30 minutes (b) 161°F for 15 seconds
(c) 143°F for 30 minutes (d) 161°F for 15 minutes
- 4** When protein foods are degraded by proteolytic microorganisms, the process is known as _____.
(a) Purification (b) Pasteurization
(c) Putrefaction (d) None of these
- 5** The pH of the fruits restricts the growth of _____.
(a) Bacteria (b) Fungi
(c) Plant (d) a & b both
- 6** _____ gives Indole & Methyl Red test positive.
(a) *Enterobacter aerogenes* (b) *Proteus vulgaris*
(c) *Escherichia coli* (d) All of these
- 7** In the depth of the sea, microorganisms live at tremendous hydrostatic pressure up to _____ atmosphere
(a) 100 (b) 100000
(c) 10 (d) 1000
- 8** _____ is the simplest anaerobic treatment used extensively in rural area that lack sewage system.
(a) Oxidation ponds (b) Activated sludge
(c) Septic tank (d) Trickling filter
- 9** In deamination reaction one of the end product is always _____.
(a) SO₂ (b) NH₃
(c) NO₂ (d) PO₂
- 10** The key role is played in the transformation of rock to soil by _____.
(a) *Cyanobacteria* (b) *Nocardia*
(c) None of these (d) *Rhizobia*

- Q.2** Give short answers to the following questions. (02 - marks each) (Any Ten) 20
- 1 Define : Pasteurization
 - 2 Classify milk on the basis of decolourization in MBRT test.
 - 3 Enlist diseases of human origin that can be transmitted by milk.
 - 4 What are the advantages of sterilization as food preservation?
 - 5 Which is the most important organism to be eliminated in canned foods? Why?
 - 6 Write principles of food preservation.
 - 7 Draw a neat and labeled diagram of septic tank.
 - 8 Explain 'coliform' Give two names of coliform bacteria.
 - 9 Write the classes of natural waters.
 - 10 Explain : Rhizosphere.
 - 11 What is ammonification? Give one example with reaction.
 - 12 Explain CO₂ fixation by bacteria with its reaction.
- Q.3 (a)** Write short note on butter. 06
(b) Describe microorganisms found in milk on the basis of temperature response. 04
- OR**
- Q.3 (a)** Write short note on cheese. 06
(b) Write SPC method for microbial examination of milk. 04
- Q.4 (a)** Write a note on microbial spoilage of food. 06
(b) Explain Microscopic technique for the microbial examination of food. 04
- OR**
- Q.4 (a)** Write about use of high temperatures for food preservation. 06
(b) Write a note on dehydration for food preservation. 04
- Q.5 (a)** Write a note on Marine Microbiology. 05
(b) Write on disinfection methods for water purification. 05
- OR**
- Q.5 (a)** Explain : Activated sludge process. 05
(b) Write a note on trickling filter. 05
- Q.6** Write an exhaustive note on microorganisms present in soil. 10
- OR**
- Q.6** Describe in detail microbial interactions in soil. 10

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