



SEAT No. \_\_\_\_\_

[6/A-3]

No. of printed pages: 2

SARDAR PATEL UNIVERSITY  
B.Sc.(Semester IV) Examination 2022  
Date: 4<sup>th</sup> October

Subject-Microbiology US04CMIC02 – Applied microbiology

Time: 12.30am to 2.30pm

Total Marks: 70

N.B. (i) All questions are compulsory. (ii) Figures on right indicate marks.

Q.1. Select the right answer.

(10)

- 1) \_\_\_\_\_ dye is used to check quality of milk.  
(a) Eosin yellow (b) Crystal violet.  
(c) Methylene blue. (d) None of these.
- 2) \_\_\_\_\_ is an example of fermented milk product.  
(a) Cheese (b) Milk  
(c) Pizza (d) None of these.
- 3) \_\_\_\_\_ technique is used to treat raw milk.  
(a) Sterilization (b) Tyndallisation  
(c) Pasteurization (d) All of these.
- 4) Food preservation methods involve \_\_\_\_\_.  
(a) Canning (b) Pasteurization  
(c) Tyndallisation (d) All of these.
- 5) Food is highly spoiled by \_\_\_\_\_ anaerobic organism.  
(a) *Bacillus subtilis* (b) *Clostridium botulinum*  
(c) *Enterobacter aerogenes* (d) None of these.
- 6) \_\_\_\_\_ is water born disease.  
(a) Malaria (b) AIDS  
(c) Tuberculosis. (d) Typhoid
- 7) *E.coli* gives \_\_\_\_\_ test positive.  
(a) Citrate utilization (b) Indole production  
(c) Voges prausker (d) None of these .
- 8) Natural water includes \_\_\_\_\_ water.  
(a) Surface (b) Ground  
(c) Atmospheric (d) All of these
- 9) Proteolysis is conversion of \_\_\_\_\_ to amino acids.  
(a) Protein (b) Lipids  
(c) Carbohydrate (d) None of these.
- 10) Non symbiotic Nitrogen fixation occurs by \_\_\_\_\_ bacteria.  
(a) *Azotobacter* (b) *Rhizobium*  
(c) *Bacillus* (d) None of these.

continue.....

**Q.2) A) Fill in the blanks.**

**(08)**

- 1) In ultra-pasteurization milk is heated at \_\_\_\_\_ temperature.
- 2) Putrefaction is method for spoilage of \_\_\_\_\_.
- 3) Drinking water is also known as \_\_\_\_\_ water.
- 4) \_\_\_\_\_ organisms are present in highest amount in soil normal as flora.

**B) State True or False.**

- 1) Sauerkraut is fermented milk product.
- 2) Dehydration is one of the food preservation methods.
- 3) Effluent is a term used for waste water.
- 4) Competition is positive microbial interaction.

**Q.3) Answer in brief (Any10)**

**(20)**

- 1) What is phosphatase test?
- 2) Give examples of milk borne diseases.
- 3) Define: Pasteurization.
- 4) List microbial flora of fresh foods.
- 5) State the advantages of sterilization method for food preservation.
- 6) Give 2 examples of food spoiling organisms.
- 7) Define: coliform. Name typical coliform
- 8) What is septic tank used for?
- 9) Name tests used for examination of domestic water.
- 10) Define: Biogeochemical cycle.
- 11) Name 2 organisms that play key role in sulphur cycle.
- 12) Enlist soil microflora.

**Q.4) Answer in detail (Any 04)**

**(32)**

- 1) Short Note: Cheese and Butter.
- 2) Explain: Pasteurization in detail.
- 3) Short: Microbial examination of food.
- 4) Explain: Food spoilage.
- 5) Short note: Water purification.
- 6) Explain: IMVIC Test.
- 7) Explain: Positive microbial interactions in soil.
- 8) Short note: Carbon cycle.

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(2)