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**M.Sc. (Fourth Semester)
EXAMINATION, May - June, 2022
MICROBIOLOGY
Paper Third (A)
(Food Microbiology)**

Time : Three Hours]

[Maximum Marks:80

Note: Attempt all sections as directed.

**(Section - A)
(Objective/Multiple Choice Questions)
(1 mark each)**

Note: Attempt all questions.

1. Possible bacterial colony can present in contaminated Panipuri water is:
(A) Escherichia coli, Staphylococcus aureus, Bacillus
(B) E. coil, S. aureus, Vibrio, S. typhi
(C) Escherichia coli, Klebsiella sp., Vibrio cholerae
(D) None of these

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2. Quality of milk sample can be checked by:
(A) Methylene blue reductase test
(B) Both (A) and (B)
(C) Filtration Methods
(D) None of these
3. FDA is related to:
(A) Food Data Analysis
(B) Food and Drug Administration
(C) Both (A) and (B)
(D) None of these
4. First Pasteur conducted fermentation experiments in:
(A) Milk
(B) Food material
(C) Fruit juices
(D) Both (A) and (C)
5. CDC is a government organization which is directly related to:
(A) Communicable Disease Control
(B) Disease Control
(C) Climate Control
(D) Both (A) and (C)

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6. The ability of a pathogen to spread in this host tissues after establishing the infection is known as:
- (A) Adhesion
 - (B) Invasiveness
 - (C) Toxigenicity
 - (D) None of these
7. Mycobacterium lepre was discovered by:
- (A) Robert Koch
 - (B) Hansen
 - (C) Edward Jenner
 - (D) Louis Pasteur
8. The Bacterium that is most commonly used in genetic engineering is:
- (A) Escherichia
 - (B) Klebsiella
 - (C) Proteus
 - (D) Serratia
9. Nagler reaction detects
- (A) Corynebacterium diphtheriae
 - (B) Clostridium tetani
 - (C) Clostridium perfringens
 - (D) Clostridium botulinum

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10. Food Microbiology has major application in:
- (A) Dairy Technology
 - (B) Medical Sector
 - (C) Genetic Engineering
 - (D) YAC
11. Which *Vibrio cholerae* strains is responsible for diseases in India patients:
- (A) O1
 - (B) PBR32
 - (C) Both (A) and (D)
 - (D) O1 and O139
12. DNA Biosensors plays an important role for the detection of food pathogen because of:
- (A) High Sensitivity
 - (B) Low Detection Limit
 - (C) Good Dynamic Range
 - (D) All of the above
13. Frozen and packed materials can be preserved for long time because of:
- (A) Low Degradation
 - (B) Good storage condition
 - (C) Low Temperature
 - (D) None of these

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14. Aflatoxins are poisonous carcinogens that are produced by:
- (A) Bacteria
 - (B) Protozoa
 - (C) Fungus
 - (D) Both (A) and (B)
15. Best environmental condition for the growth of Microorganism is:
- (A) 22 - 37 °C
 - (B) 20 - 40 °C
 - (C) 20 - 30 °C
 - (D) Both (B) and (C)
16. Microorganisms play an important role in the preparation of beverages by which process:
- (A) Fermentation
 - (B) Pasteurization
 - (C) Degradation
 - (D) All of the above
17. Canned food is not good for health because of:
- (A) Its not fresh
 - (B) Container may contain BPA
 - (C) Lacking in good hygiene
 - (D) All of the above

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18. CSIR laboratory CFTRI is basically a
- (A) Food Safety Laboratory
 - (B) Food Processing Laboratory
 - (C) Central Food Technological Research Institute
 - (D) None of the above
19. Probiotic foods are good for health because of:
- (A) Live bacteria and yeasts
 - (B) Good source of protein
 - (C) Good for digestion
 - (D) All are correct
20. Canning is related to:
- (A) Milk Testing
 - (B) Food preservation
 - (C) Pasteurization
 - (D) Both (A) and (B)

Section - B

(Very Short Answer Type Questions)

(2 marks each)

Note: Attempt all questions. Each answer should be in two-three sentences.

Explain the following-

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1. Microbial flora of fruits
2. Microbial flora of Meat
3. Role of temperature in microbial growth
4. F - Value
5. What is fermentation?
6. What is food preservative?
7. Protozoa
8. USDA

Section - C

(Short Answer Type Questions)

(3 marks each)

Note: Attempt all questions.

1. What is direct microbial examination of food?
2. What is preservative?
3. What is Mold?
4. What is ergot?
5. What is Food born outbreak?
6. What is environmental reservoir?
7. What is Mycotoxin?
8. What is plant sanitation?

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Section - D

(Long Answer Type Questions)

(5 marks each)

Note: Attempt all questions.

1. Explain the microbial flora of egg and fish.

OR

Write on Food as a substrate for micro-organism.

2. Describe on Canning.

OR

Describe the role of micro-organisms in beverages.

3. Elaborate laboratory testing procedures.

OR

Describe the role of microorganisms in food industry.

4. Write on Government Agency and Food Safety Policy.

OR

Write on FDA and CDC.

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