



**JV-003-001525**

Seat No. \_\_\_\_\_

**B. Sc. (Microbiology) (Sem. V) (CBCS) Examination**

**October - 2019**

**MB - 501 : Applied Microbiology**

**Faculty Code : 003**

**Subject Code : 001525**

Time :  $2\frac{1}{2}$  Hours]

[Total Marks : 70

- Instructions :** (1) All questions are compulsory.  
(2) Draw figure wherever necessary.

- 1 Answer the following questions : 20
- (1) Explain the term Proteolysis.
  - (2) What is parasitism?
  - (3) What is denitrification?
  - (4) What is mutualism?
  - (5) What are benthic microorganisms?
  - (6) What is estuary?
  - (7) Give full form of NOAA.
  - (8) What is the use of Chopstick equipment in aquatic microbiology?
  - (9) What are thermophilic microorganisms?
  - (10) What is radiation Pasteurization?
  - (11) What information does the phosphatase test reveal about milk?
  - (12) Which Organism is responsible for 'Q' fever?
  - (13) What is Rancidity?
  - (14) What is cold sterilization?
  - (15) How salt kills microorganisms in food?
  - (16) What is the role of sorbic acid and propionic acid in the preservation of food?
  - (17) What are droplet nuclei?
  - (18) What are xenobiotic compounds?
  - (19) What is biomagnification?
  - (20) Enlist various techniques of air sampling.

- 2 (A) Answer the following questions : (any **three**) **6**
- (1) Name any organism responsible for Nitrification and Denitrification each.
  - (2) What is food intoxication?
  - (3) What is silage?
  - (4) Give examples of bacteria responsible for ropiness.
  - (5) How hydrostatic pressure affect microorganisms in aquatic environment ?
  - (6) What is bioaugmentation?
- (B) Answer in brief : (any **three**) **9**
- (1) Give conditions that affect the microbial flora of soil.
  - (2) How humus is formed and what is its importance?
  - (3) What is Agmark? What is its significance?
  - (4) What is grading of milk? How it is assign to milk?
  - (5) How microbes are distributed in the aquatic environment?
  - (6) How water is polluted by oil? What steps can be taken to prevent oil pollution?
- (C) Write short notes on any **two** : **10**
- (1) Discuss in detail positive interaction among soil microorganisms.
  - (2) Write in detail about purification of water.
  - (3) Discuss in detail about spoilage of fresh and canned food.
  - (4) Explain in detail about types of microorganisms present in milk.
  - (5) How microorganisms helpful in controlling pollution? Discuss control of pollution caused by pesticides and heavy metal.

- 3** (A) Answer the following questions : (any **three**) **6**
- (1) What is mineralization? What is the role of microorganisms in mineralization?
  - (2) What is Rhizome and Rhizosphere?
  - (3) What is Sauerkraut?
  - (4) Why milk is considered as medium for the growth of microorganisms?
  - (5) How inorganic and organic constituents in water affect microorganisms in water?
  - (6) Give role of heavy metals in pollution.
- (B) Answer in brief : (any **three**) **9**
- (1) Discuss Chemical characteristics of soil.
  - (2) How food is preserved? Discuss any three techniques with their principles.
  - (3) How microbes enter milk? Which are the normal floras of milk?
  - (4) How microbial load of milk be assayed?
  - (5) Some microbes in water other than coliforms are considered as nuisance. Why?
  - (6) What is air sanitation? Give role of HEPA filter in air sanitation.
- (C) Write short notes on any **two** : **10**
- (1) How microbes are important economically with respect to biodeterioration?
  - (2) What is advanced and final treatment of waste water? How solid generated from waste water is processed?
  - (3) Discuss in detail about the manufacturing of cheese and Kefir.
  - (4) Discuss in detail about food borne infection.
  - (5) Discuss genetics of Nitrogen fixation.