



**RAI-003-1014016**

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

**B. Sc. (Sem. IV) (CBCS) Examination**

**March / April - 2019**

**MB-401 : Applied Microbiology**

*(New Course)*

**Faculty Code : 003**

**Subject Code : 1014016**

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

[Total Marks : 70

- Instructions :** (1) All questions are compulsory.  
(2) Figures on right side indicates marks.  
(3) Draw the figure wherever necessary.

- 1 (a) Objective type questions : 4
- (1) What is pore space ?
  - (2) Define : Rhizosphere.
  - (3) Name any two plant disease caused by virus.
  - (4) Define : Wilting of plant.
- (b) Answer in brief : (any one) 2
- (1) What is humus ? Write its importance.
  - (2) What is Bio-fertilizer ?
- (c) Answer in detail : (any one) 3
- (1) Discuss Negative interactions among soil micro organisms.
  - (2) Discuss in brief about Soil Profile.
- (d) Write a note on : (any one) 5
- (1) Discuss in detail : Nitrogen cycle.
  - (2) Write note on biopesticides.

- 2 (a) Objective type questions : 4
- (1) What is Rancidity ?
  - (2) Enlist four fermented foods.
  - (3) Define : Single cell protein.
  - (4) Name two microorganisms which are responsible for spoilage of food.
- (b) Answer in brief : (any one) 2
- (1) What is functional food ? Give two examples.
  - (2) Write about sauerkraut.
- (c) Answer in detail : (any one) 3
- (1) Describe : AGMARK
  - (2) Write in brief about microbial flora of fresh food.
- (d) Write a note on : (any one) 5
- (1) Explain in detail food borne intoxication.
  - (2) Write a note on food preservation methods.
- 3 (a) Objective type questions : 4
- (1) What is ultra-heat treated milk ?
  - (2) Write full form of MBRT.
  - (3) What is Kefir ?
  - (4) Name different type of spoilage of milk.
- (b) Answer in brief : (any one) 2
- (1) What is starter culture ?
  - (2) What is Ropiness ? Name organisms responsible for it.
- (c) Answer in detail : (any one) 3
- (1) Write about the types of microorganisms found in milk.
  - (2) Microbial analysis of milk : SPC and direct count.

- (d) Write a note on : (any one) 5
- (1) Write note on types and manufacturing of cheese.
  - (2) Write note on spoilage of milk.
- 4 (a) Objective type questions : 4
- (1) What is sanitary surveys ?
  - (2) Name three methods for the analysis of water.
  - (3) Enlist two methods of disinfection of water.
  - (4) Define : Sludge.
- (b) Answer in brief : (any one) 2
- (1) Discuss : sedimentation process.
  - (2) Why E.coli is considered as an index organisms in detection of drinking water quality?
- (c) Answer in detail : (any one) 3
- (1) Discuss : Microorganisms other than coliforms as nuisance organism.
  - (2) Discuss : BOD.
- (d) Write a note on : (any one) 5
- (1) Solid waste management.
  - (2) Municipal waste water treatment.
- 5 (a) Objective type questions : 4
- (1) Define : Pharmacopeia.
  - (2) Give name of two methods used for sterility testing.
  - (3) Write down full form of WHO and ISO.
  - (4) What is GMP ?
- (b) Answer in brief : (any one) 2
- (1) What is quality control ?
  - (2) Sterility testing of ointments and creams.

- (c) Answer in detail : (any one) **3**
- (1) Principle requirements of good manufacturing practices.
  - (2) Write about GLP.
- (d) Write a note on : (any one) **5**
- (1) Write detail note on membrane filtration method for sterility testing.
  - (2) Write in detail about WHO and ISO certifications.
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