

E-6832

M.Sc. (IIIrd Semester) Examination, 2021

MICROBIOLOGY

(Food and Agriculture Microbiology)

Time Allowed : Three Hours

Maximum Marks : 70

SECTION - A

Note : Attempt any ten questions. Each question carries one mark. **1×10=10**

Q. 1. Objective type questions :

- (i) Glucose is used as _____ source in fermentation.
- (ii) Microbial population maintained in _____ phase for long time using continuous culture system.
- (iii) Rhizobium has symbiotic association with _____.
- (iv) Microbial community in area of low pH is dominated by _____.

(2)

(v) Founder of modern bacteriology is _____.

Multiple Choice Questions :

(vi) Which is a vector of citrus canker :

- (a) Planococcus citri
- (b) Thrips nilgiriensis
- (c) Phyllocnistis citrella
- (d) Diphorina citri

(vii) Rhizobium has symbiotic association with :

- (a) Legumes
- (b) Non-legume crops
- (c) Sugarcane
- (d) Paddy

(viii) The purity of the _____ source may also affect the choice of substrate :

(3)

- (a) Carbon
 - (b) Nitrogen
 - (c) Sulphur
 - (d) Phosphorus
- (ix) Bacitracin is produced by :
- (a) *Bacillus subtilis*
 - (b) *Aspergillus niger*
 - (c) *E. Coli*
 - (d) Yeast
- (x) Factor which does not affect legume root nodulation :
- (a) Temperature
 - (b) Light
 - (c) Combined N_2
 - (d) H^+ ion concentration

(4)

- (xi) Spoilage in food because of microbial activity can be prevented or delayed by :
- (a) Prohibiting the entry of micro-organism in food
 - (b) Physical removal of micro-organism
 - (c) Hindering the activity of micro-organism
 - (d) All of the above
- (xii) An agent which frees from infection by killing the vegetative cells of micro-organism :
- (a) Surfactant
 - (b) Disinfectant
 - (c) Antiseptic
 - (d) None of these

SECTION - B

Note : Attempt any five questions. Each question carries 2 marks. **5×2=10**

Q. 2. Write short notes (short answer in 25-30 words) :

(5)

- (i) Mycotoxin
- (ii) Pasteurization
- (iii) Single cell protein production
- (iv) Biofertilizers
- (v) Citrus canker
- (vi) Food poisoning
- (vii) Perishable food

SECTION - C

Note : Attempt any five questions. Each question carries 4 marks. **5×4=20**

Q. 3. Write short answer in 250 words :

- (i) Types of spoilage organism. Describe.
- (ii) Enumerate the methods of food preservation.
- (iii) Name any two biofertilizers and any two biopesticides.

(6)

- (iv) Give description on any two bacterial diseases in plant.
- (v) What are pasteurization and appertization.
- (vi) Discuss the importance of prebiotic & probiotic.
- (vii) Explain the factors affecting microbial activity in food.

SECTION - D

Note : Attempt any three questions. Each question carries 10 marks. **3×10=30**

Q. 4. Write essay type answer in 500 words :

- (i) Enumerate different techniques involved in microbiological examination of foods.
- (ii) Describe methods of refrigeration & freezing as food preservation technique.

(7)

(iii) Give an account of how microbes are helpful
in human-welfare.

(iv) Discuss different methods of control of plant
disease.

OR

(v) What is mushroom ? Describe the cultivation
of mushroom.
