



DAL-003-2014016

Seat No. _____

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

April - 2022

MB-401 : Applid & Environmental Microbiology

Faculty Code : 003

Subject Code : 2014016

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

[Total Marks :70

- Instructions :** (1) Answer all five questions.
(2) All questions carry 14 marks.

- 1 (A) Answer the following objective type questions : 4
(1) Define the term soil.
(2) What is antagonism ?
(3) What is Rhizosphere ?
(4) What is denitrification ?
- (B) Answer in brief : (Any one out of 2) 2
(1) Answer in brief - 'Ammonification'
(2) Answer in brief - Parasitism.
- (C) Answer in detail : (Any one out of 2) 3
(1) Write in detail about carbon cycle.
(2) Write in detail about - Soil profile.
- (D) Write notes on : (Any one out of 2) 5
(1) Write a note on : Nitrogen fixation.
(2) Write a note on : Winogradskii's columns.
- 2 (A) Answer the following objective type questions : 4
(1) What is putrefaction ?
(2) Define the term : Rancidity.
(3) What is microbial flora of fresh food ?
(4) What is AGMARK ?

- (B) Answer in the brief : (Any one out of 2) **2**
- (1) What is the difference between food borne infection and intoxication ?
 - (2) What is canning process ?
- (C) Answer in detail : (Any one out of 2) **3**
- (1) Write details of methods of preservation of foods.
 - (2) Write details on 'the role of S.aureus in food poisoning.
- (D) Write notes on : (Any one out of 2) **5**
- (1) Write a note on - Single - cell protein (SCP).
 - (2) Write a note on "Salmonellosis".
- 3** (A) Answer the following objective type questions : **4**
- (1) Give the full form of RRT.
 - (2) What is SPC ?
 - (3) What is the pasteurization of milk ?
 - (4) Define the term : Starter culture.
- (B) Answer in the brief : (Any one out of 2) **2**
- (1) Answer in brief about proteolysis of milk.
 - (2) Answer in brief "different types of Spoilage of Milk"
- (C) Answer in detail : (Any one out of 2) **3**
- (1) Write a note on cheese.
 - (2) Explain in detail : Methylene blue reduction test.
- (D) Write notes : (Any one out of 2) **5**
- (1) Write a note on : biochemical types of bacteria in milk.
 - (2) Write a note on : ropiness.
- 4** (A) Answer the following objective type questions : **4**
- (1) What is coliforms ?
 - (2) Define : Activated sludge process.
 - (3) Enlist two microbial water borne disease.
 - (4) Define the term : oxidation pond.

- (B) Answer in the brief : (Any one out of 2) 2
- (1) Answer in brief : What is disinfection ? Which chemical is used for disinfection.
 - (2) Write a brief on primary treatment of municipal waste water treatment plant.
- (C) Answer in detail : (Any one out of 2) 3
- (1) Write in details about the BOD- 'Biological Oxygen Demand.'
 - (2) Write in detail about the Chemical Oxygen Demand.
- (D) Write notes on : (Any one out of 2) 5
- (1) Write a note on advanced and final treatment of waste water.
 - (2) Write a note on Anaerobic sludge digestion.
- 5** (A) Answer the following objective type questions : 4
- (1) Define the term magnification.
 - (2) Give the full form of PGPR.
 - (3) Enlist two nitrogen - fixing microbial species.
 - (4) Define the term : primary pollutants.
- (B) Answer the brief : (Any one out of 2) 2
- (1) Define bioleaching & give the names of its different methods.
 - (2) Write a brief note on Biodeterioration.
- (C) Answer in detail : (Any one out of 2) 3
- (1) Write in detail about the Microbial Enhance oil Recovery.
 - (2) Write in detail about the Biofuels.
- (D) Write notes on (Any one out of 2) 5
- (1) Write a note on Biofertilizers.
 - (2) Write a note on (PHA) biodegradable polymers.