



MAY-003-1014016 Seat No. _____

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

March/April – 2018

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.
 - (4) Write answers of all the questions in main answer sheet.

- 1** (a) Objective questions : **4**
- (1) What is mineralization ?
 - (2) Give two examples of Denitrifying bacteria.
 - (3) Exchange of nutrients between two species, a phenomenon called _____.
 - (4) What is necrotic lesion?
- (b) Answer in brief : (Any **one**) **2**
- (1) Define biopesticide
 - (2) What is Winogradsky column?
- (c) Answer in detail : (Any **one**) **3**
- (1) Describe physical characteristics of soil
 - (2) Discuss strategies to control plant diseases.
- (d) Write a note on : (Any **one**) **5**
- (1) Nitrogen fixation
 - (2) Explain Interactions among soil microorganisms.
- 2** (a) Objective questions : **4**
- (1) What is putrefaction ?
 - (2) Central AGMARK laboratory is at _____.
 - (3) Define functional foods.
 - (4) What are perishable foods ?

- (b) Answer in brief : (Any one) 2
- (1) Define Sauerkraut.
 - (2) What is the concept of Fresh food ?
- (c) Answer in detail : (Any one) 3
- (1) Explain single cell protein.
 - (2) Describe role of Clostridium botulinum in food poisoning.
- (d) Write a note on : (Any one) 5
- (1) Describe methods of food preservation
 - (2) Microbial spoilage of foods.
- 3** (a) Objective questions : 4
- (1) Write the name of cultures use in yogurt preparation.
 - (2) High temperature short time (HTST) method expose milk to _____.
 - (3) _____ sugar is mainly present in milk.
 - (4) Which enzyme is used for coagulation of milk during cheese manufacturing ?
- (b) Answer in brief : (Any one) 2
- (1) Define Kefir.
 - (2) What is MBRT ?
- (c) Answer in detail : (Any one) 3
- (1) Explain grading of milk.
 - (2) Describe spoilage of milk and milk products.
- (d) Write a note on : (Any one) 5
- (1) Types of microorganisms in milk
 - (2) Microbial analysis of milk.
- 4** (a) Objective questions : 4
- (1) Define potable water.
 - (2) What do you mean by oxidation ponds ?
 - (3) Sanitary sewers carry _____.
 - (4) What is the purpose of final treatment of waste water ?

- (b) Answer in brief : (Any one) 2
- (1) What are nuisance microbes of aquatic system ?
 - (2) Define BOD, COD.
- (c) Answer in detail : (Any one) 3
- (1) Discuss the procedure of water purification at municipal level with flow diagram.
 - (2) Explain Trickling filter.
- (d) Write a note on : (Any one) 5
- (1) Solid waste processing
 - (2) Describe methods used for Bacteriological analysis of water.
- 5** (a) Objective questions : 4
- (1) Write full name of GLP.
 - (2) What is WHO ?
 - (3) What is Pharmacopoeia ?
 - (4) ISO founded on _____ and headquartered in _____.
- (b) Answer in brief : (Any one) 2
- (1) Define pharmaceutical microbiology.
 - (2) What is Quality assurance ?
- (c) Answer in detail : (Any one) 3
- (1) Discuss Total Quality Management
 - (2) Explain GMP in detail.
- (d) Write a note on : (Any one) 5
- (1) Explain strategies for certifications of quality assurance and management in pharmaceuticals
 - (2) Methods of sterility testing of pharmaceutical products.
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