

DA-216

December-2019

B.Sc., Sem.-I

**CC-3 (101) : Microbiology
Introduction to Microbial World**

Time : 2:30 Hours]

[Max. Marks : 70

- Instructions :**
- (1) Attempt **all** questions.
 - (2) Write correct answer numbers.
 - (3) Draw neat diagrams, wherever necessary.

1. (A) Explain Biogenesis and describe various experiments that **disapproved** Abiogenesis. **14**

OR

- (i) Describe contribution of Louis Pasteur in the development of vaccine. **7**
- (ii) Describe the development in Agricultural Microbiology. **7**

(B) Answer in **one** or **two** lines : (any **four** out of **six**) **4**

- (a) Who first suggested the use of **cotton plug** in microbiology ?
- (b) Name the antiseptic that was **first used** by Joseph Lister.
- (c) Give any one **contribution** of S. Winogradsky in Microbiology.
- (d) Give contribution of Dmitri Iwanowsky.
- (e) Who were awarded by Nobel Prize for the discovery of penicillin antibiotic ?
- (f) What are "**magic bullets**" ?

2. (A) Describe **general** characteristics of Bacteria and Algae. **14**

OR

- (i) Write a **note** on Importance of Fungi. **7**
- (ii) Write a note on natural habitats of microorganisms. **7**

(B) Answer in **one** or **two** lines : (any **four** out of **six**) **4**

- (a) Define prokaryotes.
- (b) What are prions ?
- (c) What are extremophiles ?
- (d) What is coenocytic hypha ?
- (e) Give two examples of protozoa which are pathogenic to human.
- (f) What is the difference between virus and virusoid ?

3. (A) Enlist and explain various methods for selective isolation of bacteria. 14
- OR**
- (i) Write down applications of r-DNA technology. 7
- (ii) Explain in brief industrial microbiology. 7
- (B) Answer in **one** or **two** lines: (any **three** out of **five**) 3
- (a) What is Lyophilization ?
- (b) Give full form of MTCC.
- (c) Define Axenic culture.
- (d) What is phycology ?
- (e) What is the function of Restriction Endonuclease enzyme ?
4. (A) Explain in brief Bright Field and Dark Field microscopy. 14
- OR**
- (i) Explain with examples Acidic and Basic dyes. 7
- (ii) Explain Gram staining method with importance of each steps. 7
- (B) Answer in one or two lines: (any **three** out of **five**) 3
- (a) What is "Fluorescence" ?
- (b) Give scientific name of any one gram negative bacterium.
- (c) Give one example of leuco compound.
- (d) What is source of illumination in Electron Microscopy ?
- (e) Who first described acid fast staining ?