



AY-1815

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

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

March / April - 2018

**CC-6 : Fundamentals of Microbiology**

Time : 3 Hours]

[Total Marks : 70

1 Attempt all the following question. 15×1=15

Each Question Carry 1 mark :

- (1) Give two examples of the cultivation media for fungi.
- (2) Yeast extract is an excellent source of
  - (A) Vitamin A
  - (B) Proteins
  - (C) Vitamin B
  - (D) Carbohydrates
- (3) What is agar ?
  - (A) A nutrient
  - (B) A solidifying agent
  - (C) Vitamins
  - (D) Amino acid
- (4) Full form of CFUs
  - (A) Colony formal units
  - (B) Counting forming units
  - (C) Colony forming units
  - (D) None of these
- (5) Lysol is a
  - (A) Sterilent
  - (B) Antiseptic
  - (C) Disinfectant
  - (D) Antifungal agent

- (6) Antiseptic methods were first introduced by  
(A) Lord Lister  
(B) Iwanowski  
(C) Beijernick  
(D) Edward Jenner
- (7) In Hot Air Oven, the principle involved is  
(A) Dry heat  
(B) Moist heat  
(C) Steam under pressur  
(D) Both (B) and (C)
- (8) The spores of the bacteria which can withstand the moist heat effect also  
(A) Bacillus subtilis  
(B) Coxiella burnetti  
(C) Bacillus stearothermophilus  
(D) Pseudomonas
- (9) Factors on which disinfectivity of a disinfectant depends  
(A) Concentration of the substance  
(B) Time of action  
(C) pH of the medium and temperature suitable for the chemical  
(D) All of the above
- (10) Log-phase is also known as  
(A) Death phase  
(B) Exponential phase  
(C) Lag-phase  
(D) None
- (11) If the source of energy for bacteria is from chemical compounds they are said to be  
(A) Phototrophs  
(B) Autotrophs  
(C) Chemolithotroph  
(D) Chemotrophs

- (12) Write the mode of action of Heavy metal compound in microbial growth.
- (13) Algae use as indicator microorganism.  
(True / False)
- (14) Define Isolation.
- (15) Expand HIV.

2 Attempt any **Five** out of following. **5×5=25**

Each Question Carry 5 marks :

- (1) Write a short note on bacterial Nomenclature.
- (2) Explain the nutritional types of bacteria.
- (3) Explain in detail classification of bacteria based on pH requirement.
- (4) What is growth ? Describe various growth phases of Bacteria.
- (5) Write a note on Pure culture technique.
- (6) Describe the radiation as microbial control technique.
- (7) Explain Mode of action and application of Gaseous agent.

3 Attempt any **Three** out of following. **10×3=30**

Each Question Carry 10 marks :

- (1) Enlist various measurement methods of microbial culture. Discuss in detail any four methods.
- (2) Discuss in detail cell cycle of virus.
- (3) Write in detail economic importance of fungi.
- (4) Describe in detail Typhoid and AIDS.