



AG-526

Seat No. _____

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

March / April - 2019

CC-I-6 (402) Fundamentals of Microbiology

Time : 3 Hours]

[Marks : 70

- 1 (1) Full form of CFUs.
- (A) Colony formal units.
 - (B) Counting forming units.
 - (C) Colony forming units.
 - (D) None of these.
- (2) Lysol is a :
- (A) Sterilent
 - (B) Antiseptic
 - (C) Disinfectant
 - (D) Antifungal agent
- (3) Antiseptic methods were first introduced by :
- (A) Lord Lister
 - (B) Iwanowski
 - (C) Beijernick
 - (D) Edward Jenner
- (4) In Hot Air Oven, the principle involved is :
- (A) Dry heat
 - (B) Moist heat
 - (C) Steam under pressure
 - (D) Both (B) and (C)
- (5) The spores of the bacteria which can withstand the moist heat effect also :
- (A) Bacillus subtilis.
 - (B) Coxiella burnetti.
 - (C) Bacillus stearothermophilus.
 - (D) Pseudomonas.

- (6) The most common mode of cell division in bacteria is :
- (A) Binary fission.
 - (B) Transverse binary fission.
 - (C) Longitudinal binary fission.
 - (D) None of these.
- (7) The organisms which can grow both in presence and absence of oxygen :
- (A) Aerobes
 - (B) Anaerobes.
 - (C) Faculative anaerobes.
 - (D) Strict aerobes.
- (8) What is an enrichment culture ?
- (A) Something that provides growth for all microorganisms.
 - (B) Something that inhibits growth for all microorganisms.
 - (C) An infectious culture.
 - (D) Something that provides growth for a certain microorganisms but not for others.
- (9) Which of the following is ionizing radiation ?
- (A) U.V. rays
 - (B) Infrared rays
 - (C) Y - rays
 - (D) None of these
- (10) Bacterial sexual reproduction is possible due to presence of _____
- (A) Flagella
 - (B) Cilla
 - (C) Pili
 - (D) None of these

- (11) T4 Phages are called
- (A) virulent phages
 - (B) Temperate phages
 - (C) Bacteriophages
 - (D) None of these
- (12) Bacteria that use chemical as source of energy and inorganic carbon as electron source are called
- (A) Chemolithotrophs
 - (B) Chemoorganotrophs
 - (C) Heterotrophs
 - (D) Autotrophs
- (13) Lactic acid is produced during _____ phase of Bacterial growth curve.
- (A) Lag
 - (B) Log
 - (C) Stationary
 - (D) Death
- (14) Bacterial growth curve is obtained by plotting :
- (A) number of cells versus time.
 - (B) number of spores versus time.
 - (C) log of number of cells versus time.
 - (D) log of number of cells survived versus time.
- (15) Size of HEPA filter is
- (A) $0.3 \mu m$
 - (B) 0.22 mm
 - (C) 0.3 mm
 - (D) None of these.

2 Attempt any Five out of following. $5 \times 5 = 25$

Each Question Carry 5 marks

- (1) Write a short note on bacterial Nomenclature.
- (2) Explain the microbial nutritional diversity.
- (3) Explain in detail classification of bacteria based on pH requirement.
- (4) What is growth? Describe various growth phases of Bacteria.
- (5) Write down the Economic importance of Fungi.
- (6) Explain the methods for measurement of microbial growth.
- (7) Describe the General Characteristics of Viruses.

3 Attempt any Three out of following. $10 \times 3 = 30$

Each Question Carry 10 marks.

- (1) Discuss in detail cell cycle of virus.
 - (2) Write a short note on classes of antibiotic with examples.
 - (3) Describe in detail Typhoid and AIDS.
 - (4) Explain the effect of Chemical agent on growth of microbes.
 - (5) Explain the economical importance of Algae & Protozoa.
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