

M. Sc. SEM-III (NEW COURSE)

Microbiology

Paper – 301: Bacteriology and Virology

કુલ સમય :- ૬૦ મીનીટ
 કુલ પ્રશ્નો : ૫૦
 વિદ્યાર્થીએ ટીક કરવાના પ્રશ્નો : ૩૫
 નોંધ : વિદ્યાર્થીએ માત્ર ૩૫ પ્રશ્નો જ ટીક કરવાના રહેશે. જો વધારે ટીક કરેલ હશે તો પ્રથમ ૩૫ પ્રશ્નો જ ગણતરીમાં લેવામાં આવશે.

- Which of these are cocci occurring in pairs?
 a) Diplococci b) Streptococci c) Tetrads d) None of the above
- Flagella in bacteria enable them to
 a) Reproduce b) Locomote c) Thrive in nutrient agar d) Adhere to tissue surfaces
- This about cell wall of gram-positive bacteria is true
 a) Cell wall comprises of many layers b) The cell wall is thicker than the associated gram-negative bacteria
 c) Cell wall comprises of teichoic acids d) All of the above
- Which of these is exposed on the outer surface of a gram-negative bacterium?
 a) Braun lipoprotein b) O-antigen of lipopolysaccharide (LPS)
 c) Polysaccharide portion of lipoteichoic acid (LTA) d) Electron transport system components
- The ability of bacteria to change their morphological from frequently is termed as
 a) Lysogeny b) Pleomorphism c) Alteromorphism d) None of these
- Which among the following is called as filamentous bacteria
 a) Mycoplasmas b) Spirochetes c) Actinomycetes d) Vibrios
- Bacterial cell wall is made up of
 a) Chitin b) Cellulose c) Dextran d) Peptidoglycan
- Which of the following group of bacteria is considered as a link between bacteria and virus
 a) Mycoplasmas b) Actinomycetes c) vibrios d) Spirochetes
- Bacterial flagella is made up of
 a) Microtubules b) Tubulin c) Flagellin d) Spinin
- Rocky mountain spotted fever is caused by
 a) *Rickettsiae prowazekii* b) *Coxiella burnetii* c) *Rickettsiae rickettsia* d) *Rickettsiae typhi*
- Chlamydiae occur in
 a) Elementary bodies b) Reticulate bodies c) Complex structures d) Both - a and b
- The mode of reproduction which occurs in mycoplasma is
 a) Budding b) Bursting c) Binary fission d) Binary fusion
- Actinomycetes are known as
 a) Fungi b) Algae c) True bacteria d) Eubacteria
- Which of the following bacteria thrive in extreme environmental conditions, such as high temperature and acidic pH, the absence of oxygen and high salt concentration?
 a) Eubacteria b) Cyanobacteria c) Archaeobacteria d) All of the above
- What is Bioluminescence?
 a) Light produced by lightbulbs. b) Light produced by living creatures.
 c) Glow in the dark paint. d) Light produced by glowsticks.
- Which of the following method can be used to determine the number of bacteria quantitatively?
 a) Streak-plate b) Spread-plate c) Pour plate d) Pour-plate and spread plate
- Which of the following are not performed in lyophilization?
 a) Agar slant is covered with mineral oil b) Cell suspension is frozen at -60 degree to -78 degree C
 c) Vials are connected to high-vacuum line d) Bacterial sample is dehydrated
- Which of the following is a function of cryoprotective agents?
 a) For long-term preservation of cultures b) Prevents cell damage due to ice crystal formation
 c) Prevents formation of ice d) To trap the liquid nitrogen
- Nichrome loop wire is used in which of the following techniques?
 a) Pour-plate b) Streak-plate c) Spread-plate d) Roll-tube technique
- What is the temperature of liquid nitrogen?
 a) -120 degree C b) 0 degree C c) -150 degree C d) -196 degree C
- Which device is used to pick a single bacterial cell from a mixed culture?
 a) Microscope b) Micropipette c) Microprobe d) Micromanipulator
- Which of the following is suitable for use on tissues for microbial control to prevent infection?
 a) Disinfectant b) Antiseptic c) Sterilant d) Water
- Which of the following best describes a microbial control protocol that inhibits the growth of molds and yeast?
 a) Bacteriostatic b) Fungicidal c) Bactericidal d) Fungistatic
- Thermo resistant bacteria are important in the preservation of foods by
 a) Freezing b) Canning c) Chemicals d) Irradiation
- Separation of a single bacterial colony is called
 a) Isolation b) Separation c) Pure culturing d) All of these

26. Growth period of the culture is
a) Inoculation b) Incubation c) Incineration d) Isolation
27. The viruses that live as parasites on bacteria are
a) Fungi b) Commensals c) Bacteriophages d) None of these
28. The Largest virus is
a) Parvo virus b) Pox virus c) Rota virus d) None of these
29. The extra cellular infections virus particle is called
a) Capsid b) Nucleocapsid c) Virion d) None of these
30. Special feature of Retro viruses
a) Reverse transcriptase b) RNA directed DNA polymerases c) Both a & b d) Boils
31. Screening test for AIDS is
a) Western blot test b) ELISA test c) Both a and b d) VDRL test
32. A virus is made up of _____.
a) Protein coat and nucleic acid b) Protein coat and mitochondria
c) Nucleic acid and cell membrane d) Nucleic acid, cell wall and cell membrane
33. The viral envelope is made up of _____.
a) Proteins b) Glycoproteins c) Lipids and Proteins d) All of the above
34. Which of the following is a helical virus?
a) TMV b) T4 phage c) Poxvirus d) Herpes virus
35. The viral genome is enveloped in a protein coat known as
a) Capsid b) Outer envelope c) Capsomere d) Nucleic
36. Animal viruses with capsids displaying helical symmetry include
a) Measles and mumps b) Influenza c) Rabies d) All of these
37. Which of the following reflects the correct order of events that take place during the multiplication of a virus?
a) Attachment, penetration, maturation, biosynthesis, release
b) Penetration, attachment, biosynthesis, maturation, release
c) Attachment, penetration, biosynthesis, maturation, release
d) Attachment, release, biosynthesis, maturation, penetration
38. Viruses range in size from:
a) 1-100 nm b) 25-300 nm c) 10-100 μ m d) 400-1000 nm
39. Which of the following is not an RNA virus?
a) Retrovirus b) Enterovirus c) Adenovirus d) Rubellavirus
40. Viral genome inserted to the bacterial DNA is termed as _____.
a) Lysogeny b) Prophage c) Lytic cycle d) Virulent phage
41. The genetic constituent of viruses is _____.
a) RNA b) DNA c) ss DNA d) DNA or RNA
42. Which of the following statements are true about the tobacco mosaic virus (TMV)?
a) RNA virus b) DNA virus c) Bacteriophage d) ss DNA or ds DNA
43. Why are viruses referred to as obligate parasites?
a) They cannot reproduce outside of a host cell. b) Viral DNA always inserts itself into host DNA.
c) They invariably kill any cell they infect. d) They can incorporate nucleic acids from other viruses.
44. Which of the following can be effective in preventing viral infection in humans?
a) Getting vaccinated b) Taking nucleoside analogs that inhibit transcription
c) Taking antibiotics d) Applying antiseptics
45. Which of the following characteristics, structures, or processes is common to both bacteria and viruses?
a) Metabolism b) Ribosomes c) Genetic material composed of nucleic acid d) Cell division
46. The host range of a virus is determined by
a) The proteins on its surface and that of the host. b) Whether its nucleic acid is DNA or RNA.
c) The proteins in the host's cytoplasm. d) The enzymes produced by the virus before it infects the cell.
47. Viruses can be isolated from clinical samples by cultivation in the following except:
a) Tissue culture b) Embryonated eggs c) Animals d) Chemically defined media
48. Which of the following is NOT the technique of preservation?
a) Storage on agar slants b) Storage under liquid nitrogen c) Dried cultures d) Storage in water
49. The cryoprotective agents are used to prevent cell damage.
a) True b) False
50. Which of the following is not the composition of N-agar plates/ slants?
a) Yeast/Beef extract b) Peptone c) NaCl d) Dextrose