

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.

- The portion of the growth curve where rapid growth of bacteria is observed is known as _____.
a) Lag phase b) Logarithmic phase c) Stationary phase d) Decline phase
- Lag phase is also known as _____.
a) period of initial adjustment b) transitional period c) generation time d) period of rapid growth
- The generation time for *E.coli* is _____.
a) 20 minutes b) 35 minutes c) 2 minutes d) 13 minutes
- During exponential phase, growth rate is _____.
a) same as generation time b) reciprocal of generation time
c) time required for population to double d) rate of doubling population
- In which of the following phase secondary metabolites are produced during growth?
a) Lag phase b) Log/Exponential phase c) Stationary phase d) Death phase
- Which phase shows the reproduction rate equal to the equivalent death rate?
a) Log phase b) Stationary phase c) Death phase d) Lag phase
- Which of the following is used to grow bacterial culture continuously?
a) Chemostat b) Hemostat c) Coulter-Counter d) Turbidostat
- The average size of the cells in the exponential phase is _____.
a) larger than the initial size b) smaller than the initial size
c) equal to the initial size d) maybe smaller or larger than the initial size
- Which of the following is an indirect method for measuring bacterial growth?
a) Cell count b) Cell mass c) Cell activity d) Both Cell mass and Cell activity
- Which of the following method is used for a viable count of a culture?
a) Direct microscopic count b) Plate-count method
c) Membrane-filter count d) Plate-count method and membrane-filter count
- Which of the following is the relationship between optical density and cell mass?
a) exponentially proportional b) linearly proportional
c) inversely proportional d) not related
- How many cells present per milliliter in a bacterial culture can make the culture turbid?
a) 1 cell b) 1000 cells c) 1 lakh cells d) 10^7 - 10^8 cells
- Colony-forming units per ml is the unit of _____.
a) Microscopic count b) Electronic enumeration c) Plate count d) Turbidimetric measurement
- Erythrocyte glucose transporter is an example of _____.
a) Ion driven active transport b) Facilitated diffusion c) Active transport d) Simple diffusion
- Which out of the following is not mediated transport?
a) Facilitated diffusion b) Primary active transport c) Secondary active transport d) Simple diffusion
- Na^+ glucose transporter is an example of _____.
a) Symport b) Antiport c) Facilitated diffusion d) ATP driven active transport
- Which of the following is energy independent?
a) Active transport b) Primary active transport c) Secondary active transport d) Passive transport
- Semipermeable membrane allows _____.
a) Solute to pass b) Solution to pass c) Solvent to pass d) Proteins to pass
- The organisms which can use reduced inorganic compounds as electron donors are known as _____.
a) chemotrophs b) organotrophs c) lithotrophs d) phototrophs
- Which of the following bacteria can grow both as chemolithotrophs or as chemoorganotrophs?
a) *Nitrosomonas* sp. b) *Pseudomonas pseudoflava*
c) *Rhodospirillum rubrum* d) *Chromatium okenii*
- Which of the following acts as a chemical reductant in bacterial photosynthesis?
a) oxygen b) water c) hydrogen sulphide d) ammonia
- The region in which bacteriochlorophyll can absorb light is _____.
a) ultraviolet region b) infrared region c) visible region d) microwave region
- Which of the following steps during electron transfer in anoxygenic photosynthesis is the ATP production step?
a) Ferredoxin to ubiquinone b) ubiquinone to cyt b
c) cyt b to cyt f d) cyt f to excited bacteriochlorophyll
- An essential process connected with photosynthesis is?
a) photolysis b) synthesis of glucose c) photophosphorylation d) electron transfer
- RuBisCO enzyme plays an important role in _____.
a) light phase b) dark phase c) electron transport chain d) TCA cycle

26. Purple Sulphur Bacteria contains bacteriochlorophyll b and bacteriochlorophyll c.
a) True b) False
27. Ammonia oxidizers and nitrite oxidizers are _____
a) Gram-negative chemolithotrophs b) Gram-positive chemolithotrophs
c) Gram-negative photolithotrophs d) Gram-positive photolithotrophs
28. How much time does nitrifying bacteria require to grow at an incubation of 25° to 30° C?
a) 1 day b) 2-3 days c) 15 days d) 1 to 4 months
29. *Nitrosococcus nitrosus* is a nitrite-oxidizing bacteria.
a) True b) False
30. Which among the following is not an ammonia-oxidizing bacteria?
a) *Nitrosomonas europaea* b) *Nitrosovibrio tenuis*
c) *Nitrospina gracilis* d) *Nitrosococcus oceanus*
31. Agrobacterium is involved in which of the following processes?
a) Ammonification b) Nitrification c) Reduction of nitrate to ammonia d) Denitrification
32. Which of the following are not the features of component II of nitrogenase enzyme complex?
a) component II is nitrogenase reductase b) component II is known as the MoFe protein
c) contains sulphur d) not active without component I
33. Which of the following is symbiotic nitrogen fixing bacteria?
a) *Rhizobium trifolii* b) *Clostridium pasteurianum* c) *Azotobacter* sp. d)
Escherichia coli
34. Nitrate is reduced and ultimately produces N₂ through a series of intermediate gaseous nitrogen oxide products is called _____
a) Nitrogen fixation b) Nitrification c) Denitrification d) Nitrogen assimilation
35. Conversion of nitrogen to ammonia or nitrogenous compounds is termed as _____
a) Nitrogen fixation b) Nitrification c) Denitrification d) Nitrogen assimilation
36. The reaction of glutamate and NH₄⁺ to yield glutamine is catalyzed by _____
a) Uridyltransferase b) Adenylyltransferase
c) Glutamate synthase d) Glutamine synthase
37. Which one of the following is the one having highest redox potential?
a) Ubiquinone b) O₂ c) FMN d) NAD
38. Which of the following accepts only one electron?
a) Cytochrome b b) Coenzyme Q c) FMN d) FAD
39. Complex 2 is also called _____
a) NADH dehydrogenase b) Succinate dehydrogenase
c) Cytochrome bc1 complex d) Cytochrome oxidase
40. In mitochondria, hydride ions are removed from substrates by _____
a) NAD-linked dehydrogenases b) NADP-linked dehydrogenases
c) ATP synthase d) Succinate dehydrogenases
41. Which of the following is produced by the fermentation of apples?
a) Kvass b) Cider c) Kombucha d) Sauerkraut
42. Which of the following is obtained from blended wine spirits?
a) Brandy b) Armagnac c) Cognac d) Rum
43. Which of the following is a homofermentative lactic acid bacteria?
a) *Lactobacillus brevis* b) *Lueconostoc mesenteroides*
c) *Lactobacillus fermentum* d) *Lactobacillus delbruckii*
44. Which of the following substrate cannot be utilized by the LAB to produce gas?
a) Citrate b) Gluconate c) Amino acids d) Alkanes
45. Peptidoglycan layer is present in large quantity in?
a) Gram-positive bacteria b) Gram-negative bacteria c) Fungi d) Algae
46. Peptidoglycan is made up of _____
a) N-acetylglucosamine b) N-acetylmuramic acid
c) N-acetylglucosamine, N-acetylmuramic acid d) N-acetylglucosamine, N-acetylmuramic acid, amino acids
47. The outer membrane of the Gram-negative cell wall is anchored to the underlying peptidoglycan by means of which of the following?
a) Braun's Lipoprotein b) Phospholipids c) Proteins d)
Lipopolysaccharide
48. Which of the staining technique helps in demonstrating spore structure in bacteria as well as free spores?
a) Acid-fast stain b) Endospore stain c) Capsule stain d) Flagella stain
49. In Gram-staining, iodine is used as a _____
a) fixative b) mordant c) solublizer d) stain
50. What is the correct order of staining reagents in Gram-Staining?
a) Crystal violet, alcohol, iodine solution, safranin b) Crystal violet, iodine solution, alcohol, safranin
c) Crystal violet, safranin, alcohol, iodine solution d) Iodine solution, crystal violet, alcohol, safranin