Biotechnology (Final)

1. *Phytopthora parasitica* causes blight disease in

   A. Coconut
   B. Tomato
   C. Cotton
   D. Potato

2. Which of the following systems for plant classification is not phylogenetic?

   A. Bentham and Hooker's system
   B. Engler and Prantl's system
   C. Hutchinson's system
   D. Takhtajan's system

3. Which type of wood yields commercially valuable product?

   A. Manoxylic
   B. Pycnoxylic
   C. Polyxylic
   D. Spring

4. Cleavage polyembryony is a characteristic feature of

   A. Benettitales
   B. Cycadales
   C. Gnetales
   D. Coniferales

5. Heterospory is a common feature in

   A. Fungi
   B. Bryophytes
   C. Gymnosperms
   D. Algae

6. The type of sclereids that occurs in Nymphaea is

   A. Brachy sclereids
   B. Tricho sclereids
   C. Osteo sclereids
   D. Astro sclereids

7. Who proposed the Tunica Carpus theory?

A. Nageli
B. Schmidt
C. Hanstein
D. Plantefol

8. B chromosome helps the plant in

A. Inheritance of characters
B. Adaptation
C. Extranuclear control of characters
D. Genetic control of traits

9. Intrafacicular cambium is present in

A. Monocot stem
B. Monocot root
C. Dicot root
D. Dicot stem

10. Polyadelphous stamens are seen in

A. *Tridax*
B. *Citrus*
C. *Helianthus*
D. *Cucurbita*

11. Outer layer of pollen grain is made up of

A. Cellulose
B. Exosporium
C. Pectocellulose
D. Sporopollenin

12. Polysiphonous pollen grain is the common characteristic of this family

A. Malvaceae
B. Liliaceae
C. Solanaceae
D. Fabaceae

13. The term Taxonomy was coined by

A. A. P. de Candolle
B. Bauhin
C. Linnaeus
D. Theophrastus

14. Epicalyx is absent in

A. *Hibiscus*
B. *Althaea*
C. *Abutilon*
D. *Abelmoschus*

15. Radicle is enclosed by sheath known as

A. Coleorhiza
B. Coleoptile
C. Scutellum
D. Aleurone layer

16. Grafting in monocots is not possible because they

A. Lack cambium
B. Have scattered vascular bundle
C. Are herbaceous
D. Have parallel veins

17. Cytoplasmic bridge between two cells is called as

A. Torus
B. Simple pits
C. Bordered pits
D. Plasmodesmata

18. Unidirectional movement of cytoplasm is observed in

A. *Rheodiscolor*
B. *Tridax*
C. *Hydrilla*
D. *Helianthus*

19. Diagrammatic representation of karyotype is

A. Idiotype
B. Idiometer
C. Idiogram
D. Karyogram

20. How many number of nucleotides are present in each turn of DNA (34 A^{o}) ?

A. 10
B. 20
C. 15
D. 25

21. Botanical name of Rosewood is

A. *Tephrosia purpurea*
B. *Pterocarpus santalinus*
C. *Dalbergia latifolia*
D. *Santalum album*

22. The stage at which crossing over occurs in meiosis is

A. Diakinesis
B. Pachytene
C. Diplotene
D. Leptotene

23. Inversely-oriented cortical vascular bundles occur in the stem of

A. *Nyctanthes*
B. *Amaranthus*
C. *Helianthus*
D. *Polyanthus*

24. Tyloses are found in the walls of

A. Sieve plates
B. Xylem tracheids
C. Xylem vessels
D. Sieve tubes

25. The number of ATP molecules formed during aerobic respiration is

A. 36
B. 32
C. 38
D. 30

26. Plants living in arctic- and alpine regions are called as

A. Merotherms
B. Hekistotherms
C. Megatherms
D. Microtherms

27. N-Glycosyl linkage joins Carbon -1 of pentose sugar with

A. N-9 of pyrimidine
B. N-9 of purine
C. N-3 of pyrimidine
D. N-3 of purine

28. Changes in the protein conformation can be detected by

A. Circular dichorism
B. UV absorption spectroscopy
C. Fluorescence emission
D. All the above

29. Transpiration pull depends on the

A. Adhesion of water molecules to the walls of phloem cells
B. Capillarity
C. Very negative water potential of the atmosphere
D. Cohesion of water molecules to each other

30. Ethylene receptor is a

A. Membrane-bound dimer of two component system
B. Soluble protein present in cytoplasm
C. Chromophore similar to phytochrome
D. Pterin and flavin prosthetic group complex

31. Which of the following aminoacid has the maximum number of codons?

A. Trp
B. Gly
C. Met
D. Leu

32. An antibiotic that inhibits the translation in both prokaryotes and eukaryotes is

A. Chloromycetin
B. Actinomycin-D
C. Puromycin
D. Tetracycline

33. The dominant individual in the life cycle of Bryophytes is

A. Sporophyte
B. Endosperm
C. Gametophyte
D. Polyploid

34. Potato tubers are larger in plants grown in Darjeeling than in Andhra Pradesh; it is because there the rate of

A. Respiration is higher
B. Respiration is lower
C. Photosynthesis is higher
D. Protein synthesis is higher

35. The fruit of *Ficus bengalensis* is termed as

A. Sorosis
B. Hypanthodium
C. Composite fruit
D. Syconus

36. Azotobacter fixes molecular nitrogen by oxygen-sensitive Nitrogenase. Which one of the following conditions will allow the formation of colonies?

A. A synthetic nutrient medium covered with paraffin oil
B. A synthetic nutrient medium containing yeast extract and covered with paraffin oil
C. A synthetic nutrient medium lacking both nitrogen salt and glucose
D. A synthetic nutrient medium lacking nitrogen salt and not covered with paraffin

oil

37. *Agrobacterium tumefaciens* is a

A. Fungus used for large amount of antibiotic production
B. Bacterium used for production of transgenic plants
C. Virus used for transgenic animals' production
D. Bacterium used for recombinant insulin production

38. Enzymes which recognize and cleave 4 to 8 base pair sequence of DNA is

A. DNA ligase
B. Helicase
C. Restriction endonucleases
D. Topoisomerase

39. Artificial seeds are

A. Seeds produced through hybridization
B. Seeds produced by terminator seed technology
C. Seeds encapsulated with pesticides
D. Somatic embryos encapsulated with sodium alginate

40. Which one of the following gene discovery won the Noble prize in 2008 which had major contribution in transgenic research?

A. Antibiotic resistant gene
B. Green fluorescent protein gene
C. GUS marker gene
D. Cauliflower mosaic virus promoter gene

41. DNA synthesis occurs in

A. G1 phase
B. M phase
C. S phase
D. G2 phase

42. The presence of hydrolytic enzymes is most closely associated with the cell organelle known as?

A. Ribosome
B. Phagosome
C. Lysosome
D. Peroxisome

43. What is added to the 3' end of many eukaryotic mRNAs after transcription?

A. Introns
B. Poly A. tail
C. Trinucleotide 5' – CCA
D. Exons

44. In celluose, glucose molecules are linked by glycosidic linkage

A. α -1,4
B. α -1,2
C. α -1,3
D. β -1,4

45. GM edible crop that recently created more environmental issues in India is

A. Golden rice
B. Bt brinjal
C. Bt cotton
D. 'Flavr Savr' tomato

46. Which one is the most suitable plant for expression of oral vaccines?

A. Brinjal
B. Banana
C. Soybean
D. Rice

47. Which pigment regulates the photoperiodism in plants?

A. Chlorophyll
B. Phytochrome
C. Xanthophyll
D. Anthocyanin

48. Bio-fertilizers are the biologically active products and they also are/include
i) Microbial inoculants of bacteria, algae and fungi
ii) Organic fertilizers
iii) Symbiotic nitrogen fixers
Select the correct answer from the codes given below:

A. i, ii and iii
B. ii and iii

C. i and iii
D. i and ii

49. The ecosystem having the longest energy transfer time is

A. Tropical rain forest
B. Open ocean
C. Desert
D. Temperate deciduous forest

50. Which mitochondrial complex does not participate in the transport of protons across inner mitochondrial membrane?

A. Complex I
B. Complex II
C. Complex III
D. Complex IV

51. A pH drop in blood capillary

A. Increases O_2 affinity of hemoglobin
B. Decreases O_2 affinity of hemoglobin
C. Do not change O_2 affinity of hemoglobin
D. Dissociates oxyhemoglobin

52. In the cell wall of *E.coli* for linking adjacent glycan chains, transpeptidation reaction occurs between

A. D-Alanine and D-Alanine residues
B. L-Lysine and D-Alanine
C. D-Alanine and Diaminopimelic acid
D. D-Glutamic acid and L-Lysine residues

53. The innate immune system is different from the adaptive immune system. Indicate the right statement

A. It is not antigen-specific and does not have memory
B. Only macrophages are involved in mounting it
C. Only invertebrates have it
D. Dendritic cells are not involved in it

54. Yolk sac placenta is present in

A. Eutheria
B. Prototheria

C. Metatheria
D. Primates

55. Main function of amniotic fluid in birds is

A. Protection from desiccation
B. Excretion
C. Nutrition
D. Respiration

56. *Erythroblastosis foetalis* is caused by

A. Anaemia
B. Rh factor
C. M-N factor
D. Male dominance

57. Hargobind Khorana was associated with

A. Desciphering the structure of DNA
B. Desciphering the structure of t-RNA
C. Defining the Central Dogma
D. Deciphering Genetic Code

58. Intron-free genes can be obtained through

A. Inverse transcription
B. Reverse transcription
C. Direct transcription
D. Sequence transcription

59. The predominant antibody in the saliva is

A. IgA
B. IgG
C. IgM
D. IgD

60. The protein which is critical in blood clotting missing in Haemophilia sufferers is

A. Factor III
B. Factor V
C. Factor VIII
D. Factor XI

61. The rate of oxygen consumption in an intact mammal would be controlled primarily by

A. Insulin : Glycogen ratio in the blood
B. Levels of $NADH_2$ in the cell
C. Nature of the substrates metabolized
D. Respiratory control in the mitochondria

62. Calcitonin inhibits the release of

A. Calcium from nerves
B. Calcium from bones
C. Calcium from muscles
D. Phosphorous from bones

63. Restriction endonucleases are so called because they

A. Have very restricted or specific endonuclease activity
B. Cut DNA with few restriction sites
C. Restrict the entry of foreign DNA into cell by cleaving the DNA due to their endonuclease activity
D. Are distributed only in bacterial cell

64. When you immunize a mouse with an immunogen, it will produce antibodies against it. The antibodies that will be produced after first immunisation will mostly be

A. Low affinity antibodies of IgM isotype
B. Mixtures of IgM, IgA, IgG and IgE antibodies of various affinities
C. Very high affinity antibodies of IgG isotype
D. Difficult to predict the nature of the antibodies produced

65. Allosteric enzymes often do not show typical Michaelis-Menten kinetics, because they

A. Do not reach a steady-state [ES]
B. Have two conformational forms with different activities
C. Loose activity during the reaction assay
D. Have no enzyme-substrate [ES] complex

66. Which of the following is the last to occur after fertilization of sea urchin egg?

A. Increase in cytosolic pH
B. Activation of protein synthesis
C. Increase in Ca^{+2} level
D. Initiation of mRNA synthesis

67. Retting is a process of biodegradation involving degradation of

A. Cellulose
B. Pectin and starch
C. Lignin
D. Retinol

68. If the stomach does not produce HCl, which enzyme will be able to work longer?

A. Ptylin
B. Pepsin
C. Trypsin
D. Rennin

69. Respiratory pigment that is never enclosed in blood corpuscles is

A. Haemocyanin
B. Haemerythrine
C. Haemoglobin
D. Chlorocruorin

70. Lactose has a five anomeric carbon on the

A. Glucose residue
B. Galactose residue
C. Has no free anomeric carbon
D. None of the above

71. Deletion of a single base pair from the *Lac Z* structural gene in the *LacZYA* operon of *E.coli* would result in

A. Altered *Lac Z* and functional *Lac Y* and *Lac A*
B. Altered *Lac Z* and no synthesis of *Lac Y* and *Lac A*
C. Alteration in all three polypeptides
D. Premature truncation of mRNA after the deleted nucleotide

72. In which of the following tissues, glycogen is not stored?

A. Brain
B. Skeletal muscle
C. Heart muscle
D. Adipose tissue

73. The net charge on the tripeptide Gly-Lys-Glu at pH 7.0 will be

A. +2
B. –2
C. 0
D. –1

74. The precise function of the hair-pin loops in the regulation of tryptophan operon in *E.coli* is that it acts as a

A. Transcriptional terminator
B. Translational terminator
C. Corepressor
D. Site for binding of *trp* repressor

75. Northern blotting differs from Southern blotting in that

A. RNA molecules are used as probes in Northern while DNA in Southern
B. RNA molecules are used as targets in Northern while DNA in Southern
C. RNA molecules are used as both probes and target in Northern while DNA in Southern
D. DNA is electrophoresed in the presence of denaturing agents while RNA is electrophoresed under non denaturing conditions

76. The antibody molecules are not able to provide protection against viral infections because

A. They cannot neutralize viruses
B. They cannot activate T cytotoxic cells
C. They cannot help in phagocytosis of viruses
D. They are not effective in destruction of virus-infeted cells

77. The most important difference between gap junctions between animal cells and plasmodesmata in plants is

A. Ionic coupling occurs
B. Two adjacent plasma membranes are fused
C. Metabolic cooperation occurs
D. Pore diameter is 1mm

78. Which of the following sequences is most likely to be a restriction enzyme recognition site?

A. CGGCTT
B. CGCCGC
C. GTAATG
D. GTCGAC

79. Zinc finger protein and helix-turn-helix proteins are

A. Types of DNA-binding proteins
B. Involved in the control of translation
C. Subunits of RNA polymerases
D. Members of metal binding proteins

80. Transposons

A. Insert into DNA by homologous recombination
B. Cannot be transferred by phage-mediated transduction
C. Contain the equivalent of insertion elements (IS)
D. Can insert into plasmids but not the bacterial chromosome

81. Okazaki fragments

A. Require the activity of only a DNA polymerase for synthesis
B. Require only RNA polymerase activity for synthesis
C. Are made when DNA is exposed to UV radiation
D. Are composed of both DNA and RNA

82. Isonicotinic hydrazide and paramino salicylic acid are the drugs of choice against

A. *Yersinia pestis*
B. *Rickettsiae typhi*
C. *Mycobacterium tuberculosis*
D. *Treponema pallidum*

83. Which one of the following is an episome carrying a chromosomal fragment?

A. F^+
B. H*fr*
C. F^-
D. F'

84. Currently, bacterial phylogeny is based on

A. GC content analysis
B. DNA-DNA hybridization analysis
C. 16s rRNA analysis
D. DNA melting temperature analysis

85. Which of the following is not done by glial cells?

A. Receiving and conducting electrochemical signals
B. Giving metabolic support to neurons
C. Producing insulating sheaths around axons
D. removing debris after the death of a neuron

86. Earthworms are mainly

A. Ureotelic
B. Aminotelic
C. Ammonotelic
D. Uricotelic

87. The Reptilian ancestors of birds were

A. Ichthyosaurus
B. Dinosaurus
C. Plesiosaurs
D. Pleuosaurus

88. Courtship behaviour of animals is the form of

A. Taxis
B. Kinesis
C. Fixed action pattern
D. Imprinting

89. Who proposed the 'Fluid Mosaic Model' for plasma membrane?

A. Von Mohl
B. Robert Brown
C. Robert Hook
D. Singer and Nicholson

90. The cell organelles can better be isolated by

A. Chemical analysis
B. Autoradiography
C. X- ray diffraction
D. Differential centrifugation

91. Genetic elements which possess the dual capacity to exist either as chromosomal or extra chromosomal entity are called as

A. Autosomes
B. Oxysomes
C. Mesosomes
D. Episomes

92. Of the 64 codons, 61 code for amino acids while three are termination codons which do not specify for any amino acid. The three termination codons are

A. UAA AAA GGU
B. UAA UAG AAU
C. UAA UUU UAG
D. UAA UAG UGA

93. Which one of the following change occurs in Sickle cell anemia patient?

A. Glutamine change to Valine
B. Valine change to Glutamine
C. Aspartic acid change to Glutamic acid
D. Glutamic acid change to Aspartic acid

94. The genome of Ebola virus is

A. ds DNA
B. ss DNA
C. ds Virus
D. ss RNA

95. In monoclonal antibody technology, tumor cells that can replicate endlessly are fused with mammalian cells that produce an antibody. The result of this cell fusion is a

A. Hybridoma
B. Myeloma
C. Natural Killer Cells

D. Lymphoblast

96. Spindle fibre is made up of

A. Humulin
B. Intermediate filament
C. Flagellin
D. Tubulin

97. The necessary ingredients for DNA synthesis can be mixed together in a test tube. The DNA polymerase is from *Thermus aquaticus* and the template is from a human cell. The DNA synthesized would be most similar to

A. Human DNA
B. *T. aquaticus* DNA
C. Mix of *T. aquaticus* and human DNA
D. Human RNA

98. Sickle cell anemia is inherited by

A. Blood cells
B. Bone cells
C. Sex chromosomes
D. Autosomes

99. Which of the following substances can cure Parkinson's disease?

A. GABA
B. Acetylcholine
C. Dopamine
D. Glutamic acid

100. Diagnosis of chromosome aneuploidy of unborn baby is normally done by a combination of amniocentesis, cell culture, and

A. Enzyme assay
B. RFLP analysis
C. Pedigree analysis
D. Karyotyping

101. Which one of the following 0.1M solutions has the lowest pH?

A. $NaNO_2$
B. NH_4Cl
C. NaCl

D. NH_3

102. Benzamide on treatment with $POCl_3$ gives

A. Benzonitrile
B. Aniline
C. Chlorobenzene
D. Benzyl amine

103. The basic oxide among the following is

A. Cl_2O
B. Na_2O
C. P_4O_{10}
D. SO_3

104. By heating a mixture of methylamine and chloroform with ethanolic KOH, a typical product is produced. Hydrolysis of the product with HCl gives back methylamine. Identify the typical product.

A. NH_2OH
B. $(CN)_2$
C. N_2H_4
D. CH_3CN

105. The degree of hydration for the compounds NaCl, KCl, $MgCl_2$ and $BaCl_2$ follows the order

A. $MgCl_2 > BaCl_2 < NaCl > KCl$
B. $MgCl_2 < BaCl_2 > NaCl = KCl$
C. $NaCl > KCl > BaCl_2 > MgCl_2$
D. $MgCl_2 > BaCl_2 > NaCl > KCl$

106. Yellow CrO_4^{2-} is easily converted to orange $Cr_2O_7^{2-}$ by any acid. This transformation is a

A. Dimerisation reaction
B. Disproportionation reaction
C. Oxidation reaction
D. Reduction reaction

107. What organic compound would be obtained when diazonium sulphate solution is boiled or steam-distilled?

A. Aniline
B. Biphenyl
C. Phenol
D. Benzoic acid

108. Phthalimide on treatment with a base will undergo Hoffman rearrangement to give

A. Aniline
B. Benzylamine
C. 2-aminobenzoic acid
D. 3-aminobenzoic acid

109. Which one of the following compounds is antiaromatic?

A. Cyclopentadiene
B. Cyclobutadiene
C. Azulene
D. Cycloheptatrienyl cation

110. Water gas is a mixture of

A. CO and H_2
B. CO and N_2
C. CO_2 and H_2
D. CO and H_2O

111. Bayer's reagent is

A. acidified $K_2Cr_2O_7$
B. acidified $KMnO_4$
C. alkaline $K_2Cr_2O_7$
D. alkaline $KMnO_4$

112. Amalgamation is a process of

A. Precipitation
B. Coprecipitation
C. Crystallisation
D. Alloy formation

113. Which of the following names is incorrect?

A. 1-butene
B. *trans*-2-butene
C. cyclohexane
D. 1,1-dimethylcyclopentane

114. The percentage of Oxygen in NaOH is

A. 40
B. 16
C. 18
D. 1

115. If 0.50 mole of $BaCl_2$ is mixed with 0.20 mole of Na_3PO_4, the maximum number of moles of $Ba_3(PO_4)_2$ that can be formed is

A. 0.70
B. 0.50
C. 0.20
D. 0.10

116. A molal solution is one that contains one mole of solute in

A. 1000 g of solvent
B. 1.0 L of solvent
C. 1.0 L of solution
D. 22.4 L of solution

117. The volume strength of 1.5 N H_2O_2 is

A. 4.8
B. 8.4
C. 3.0
D. 8.0

118. The equivalent weight of $MnSO_4$ is half of its molecular weight when it converts to

A. Mn_2O_3
B. MnO_2
C. MnO_4^-
D. MnO_4^{2-}

119. The outermost electronic configuration of the most electronegative element is

A. $ns^2\ np^3$
B. $ns^2\ ns^4$
C. $ns^2\ np^5$
D. $ns^2\ np^6$

120. The compound which contains both ionic- and covalent bonds is

A. CH_4
B. H_2
C. KCN
D. KCl

121. Which of the following relationships is wrong?

A. Molarity = $\frac{\text{Wt. in } \frac{\text{gm}}{\text{litre}}}{\text{molecular weight}}$
B. Molarity = $\frac{\text{number of moles}}{\text{molecular weight}}$
C. Molality = $\frac{\text{Wt.} \frac{\text{ingm}}{1000} \text{ gm solvent}}{\text{molecular weight}}$
D. Normality = $\frac{\text{Wt. in } \frac{\text{gm}}{\text{litre}}}{\text{equivalent weight}}$

122. The correct order of decreasing acidic nature of the hydrogens present in the following compounds will be

A. acetylene > benzene > ethane
B. ethane > benzene > acetylene
C. benzene > ethane > acetylene
D. acetylene > ethane > benzene

123. The product of reaction between a ketone and Grignard reagent, upon hydrolysis gives a

A. Primary alcohol
B. Tertiary alcohol
C. Secondary alcohol
D. Polyhydric alcohol

124. Thalium exhibits monovalency whereas Aluminium exhibits trivalency. This is due to

A. The energy required to unpair outer s-electrons in TI exceeds the energy involved in the bond formation
B. TI has only one electron in its outer most orbital
C. Al can use its vacant d-orbitals for the bond formation
D. TI is a non-metal

125. First ionization energy of C, N, O and Si follows the order

A. Si< O < N< C
B. C< N< O< Si
C. Si< C < N< O
D. Si < C < O < N

126. Which one of the following isoelectric ions has the largest ionic radius?

A. O^{2-}
B. F^{-}
C. Mg^{2+}
D. Na^{+}

127. During a cyclic process, which one of the following is not always zero?

A. Enthalpy change
B. Entropy change
C. Internal energy change
D. work done by the system

128. Which one of the following has the largest de Broglie wavelength provided all have equal velocity?

A. O_2
B. NH_3
C. SO_2
D. N_2

129. Which molecule has higher dipole moment?

A. H_2S
B. CO_2
C. CCl_4

D. BF_3

130. In a flourimeter use of secondary filter is to absorb

A. Radiations
B. Fluorescence
C. UV radiation
D. All electromagnetic radiations

131. Biothionol is used as

A. Tranquilizer
B. Antiseptic
C. Analgesic
D. Disinfectant

132. Balmer series of lines are visible in the spectra of

A. UV
B. IR
C. Visible
D. Hydrogen

133. In NaCl crystal, the arrangement and coordination number of the ions are

A. fcc and 6
B. fcc and 4
C. hcp and 6
D. hcp and 4

134. Which of the following compounds present in the urine is detected by Benedict's method?

A. Steroids
B. Urea
C. Aminoacids
D. Glucose

135. The molecule that does not absorb microwave radiation is

A. CO_2
B. H_2O
C. CO
D. NO

136. The hybridization of atomic orbitals of Sulphur in SF_4

A. sp2d
B. sp^3d^2
C. sp^3d
D. sp^3

137. Moderate electrical conductivity is shown by

A. Silica
B. Graphite
C. Diamond
D. None of the above

138. H_3BO_3 is

A. Monobasic acid and weak Lewis base
B. Monobasic acid and weak Bronsted base
C. Monobasic acid and strong Lewis base
D. Tribasic and weak Bronsted acid

139. Which one of the following oxides is neutral?

A. CO
B. SnO_2
B. ZnO
D. SiO_2

140. Iron is rendered passive by treatment with concentrated

A. H_2SO_4
B. H_3PO_4
C. HCl
D. HNO_3

141. Which of the following is soluble in water?

A. CS_2
B. C_2H_5OH
C. CCl_4
D. $CHCl_3$

142. *p*-chloroaniline and anilium hydrochloride can be distinguished by

A. Sandemeyer reaction
B. $NaHCO_3$
C. $AgNO_3$
D. Carbylamine

143. Acid rain is caused by

A. NO_2
B. SO_2
C. SO_3
D. CO_2

144. In ecosystem, which of the following receives the maximum energy?

A. Producers
B. Decomposers
C. Primary consumers
D. Secondary consumers

145. Identify the metal that absorbs large volume of H_2 on its surface

A. Iron
B. Nickel
C. Copper
D. Zinc

146. Which gas was absent during prebiotic environment?

A. CO_2
B. CH_4
C. O_2
D. SO_2

147. Identify the statistical tool involved in determining the effects of amino acids such as Trp, Phe, Pro on the growth of bacteria

A. X_2-test
B. F-test
C. t-test
D. Z-test

148. The receptor for which of the following hormone is a transcription factor?

A. Insulin
B. Glucagon
C. Estradiol
D. Adrenalin

149. Radioactive Iodine can be incorporated into

A. Serine
B. Threonine
C. Tyrosine
D. Leucine

150. Conversion of glucose to glucose-6-phosphate (G6P) requires ATP yet critically ill patients are given glucose solutions intravenously instead of G6P. The reason for not giving G6P directly is

A. G6P is degraded very fast in the blood before it enters cells
B. Commercial preparations of G6P are contaminated with toxic chemicals
C. High cost of G6P
D. Cells cannot take up G6P

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