

LIFE SCIENCE

1. Which of the glycosidic linkages given below occurs between the two glucose molecules of maltose?
 - (A) β 1, 4
 - (B) α 1, 4
 - (C) α 1, 6
 - (D) β 1, 6

2. In human beings, hyaluronic acid is present in
 - (A) Vitreous humor
 - (B) Adipose tissue
 - (C) Sperm
 - (D) Gall Bladder

3. Identify the sulphur containing non-essential amino acid among the following
 - (A) Methionine
 - (B) Proline
 - (C) Cysteine
 - (D) Serine

4. A tertiary protein lacks which of the bonds mentioned below
 - (A) Hydrogen Bond
 - (B) van der Waals force
 - (C) Ionic bond
 - (D) Hydrophilic interactions

5. Which of these are non-professional antigen presenting cells?
 - (A) Macrophages
 - (B) Dendritic cells
 - (C) Fibroblast
 - (D) B lymphocytes

6. How many Calcium ions can bind with the Calmodulin protein?
- (A) One
 - (B) Two
 - (C) Three
 - (D) Four
7. Name the antibiotic which inhibits the synthesis of oligosaccharides?
- (A) Tunicamycin
 - (B) Cephalosporins
 - (C) Penicillins
 - (D) Ofloxacin
8. Haematopoiesis process occurs in
- (A) Spleen
 - (B) Bone marrow
 - (C) Lymph nodes
 - (D) Thymus gland
9. Which of the following statements is correct with regard to Hapten?
- (A) It is a complete antigen
 - (B) It is immunogenic when binds with a carrier lipid
 - (C) It cannot induce an antibody production by itself
 - (D) Paracetamol is a typical example for Hapten
10. Identify the bone producing cell
- (A) Osteocyte
 - (B) Osteoblast
 - (C) Chondrocyte
 - (D) Chondroblast
11. In rDNA technology, competent cells are produced by using
- (A) MgCl_2
 - (B) MnCl_2
 - (C) CaCl_2
 - (D) FeCl_2

12. Cyanide inhibits the action of which of the following enzymes?

- (A) Malate dehydrogenase
- (B) ATP synthase
- (C) Cytochrome oxidase
- (D) PEP Carboxylase

13. The causative organism of Peptic ulcer is

- (A) *Helicobacter pylori*
- (B) *Yersinia pestis*
- (C) *Bordetella pertussis*
- (D) *Coxiella burnetii*

14. The fungus responsible for Bengal famine is

- (A) *Cochliobolus miyabeanus*
- (B) *Sphaerulina oryzina*
- (C) *Pyricularia oryzae*
- (D) *Xanthomonas oryzae*

15. The sexual stage (teleomorph) of *Aspergillus* is called as

- (A) *Emericella*
- (B) *Eurotium*
- (C) *Gibberella*
- (D) *Erysiphe*

16. The term 'meristem' was first coined by

- (A) Julius von Sachs
- (B) Karl Friedrich Schmit
- (C) Johannes von Hanstein
- (D) Carl Wilhelm von Nageli

17. In older stems, the outer light coloured regions are called as

- (A) Duramen
- (B) Dendrum
- (C) Alburnum
- (D) Phellem

18. Which enzymes are responsible for the detoxification of organic compounds carried out by the smooth endoplasmic reticulum?
- (A) Dehydrogenases
 - (B) Oxygenases
 - (C) Nucleases
 - (D) Ribonucleases
19. Most common local alignment search tool used in DNA databases is
- (A) EMBOSS Needle
 - (B) BLAST
 - (C) PLAST
 - (D) MUSCLE
20. Standard deviation is the square root of
- (A) Variance
 - (B) Range
 - (C) Frequency
 - (D) Regression
21. Which of the following green algae is parasitic on tea plants?
- (A) *Desmodesmus* sp.
 - (B) *Scenedesmus* sp.
 - (C) *Closterium* sp.
 - (D) *Cephaleuros* sp.
22. Agar, a polysaccharide is obtained from the cell wall of
- (A) Gelidiaceae
 - (B) *Porphyra umbilicalis*
 - (C) Coralline algae
 - (D) Euglenophytes
23. What is common to *Polysiphonia* (red algae) and *Ectocarpus* (brown algae)?
- (A) Cell wall composition
 - (B) Pigment constitution
 - (C) Storage compound
 - (D) Haplo-diplontic life cycle

24. The storage compound of fungi is
- (A) Starch
 - (B) Glycogen
 - (C) Chitin
 - (D) Lignin
25. Ascomycetes are called as 'sac fungi' because of
- (A) Ascocarp (fruit body)
 - (B) Ascus (ascospore bearing structure)
 - (C) Ascospore (reproductive unit)
 - (D) Heterokaryotic mycelium (plant body)
26. Dolipore septum is present in the members of
- (A) Phycomycetes
 - (B) Ascomycetes
 - (C) Basidiomycetes
 - (D) Deuteromycetes
27. Identify the heterosporous form from among the following ferns
- (A) *Adiantum*
 - (B) *Nephrolepis*
 - (C) *Pteris*
 - (D) *Marsilea*
28. The spore bearing structure of *Psilotum* is called as
- (A) Sorus
 - (B) Sporocarp
 - (C) Synangium
 - (D) Strobilus
29. Sporophyte developing from gametophyte without the fusion of gametes is known as
- (A) Syngamy
 - (B) Apogamy
 - (C) Polygamy
 - (D) Allogamy

30. Which of the following is called as a 'living fossil'?
- (A) *Gnetum*
 - (B) *Pinus*
 - (C) *Ginkgo*
 - (D) *Cycas*
31. The most common mode of pollination in gymnosperms is
- (A) Hydrophily
 - (B) Anemophily
 - (C) Entomophily
 - (D) Zoophily
32. The common blue green algae found in the coralloid root of *Cycas* is
- (A) *Nostoc* sp.
 - (B) *Spirulina* sp.
 - (C) *Chroococcus*
 - (D) *Oscillatoria* sp.
33. Which of the following types of inflorescence is present in *Euphorbia*?
- (A) Hypanthodium
 - (B) Cyathium
 - (C) Helicoid cyme
 - (D) Capitulum
34. Interpetiolar stipules are very common in the family of
- (A) Apocynaceae
 - (B) Asteraceae
 - (C) Rubiaceae
 - (D) Poaceae
35. The economically important plant of Anacardiaceae is
- (A) *Musa paradisiaca*
 - (B) *Mangifera indica*
 - (C) *Artocarpus heterophyllous*
 - (D) *Areca catechu*

36. The activated feeding stage in the life cycle of some protozoans is called as
- (A) Merozoite
 - (B) Sporozoite
 - (C) Trophozoite
 - (D) Tachyzoite
37. Which of the following is lacking in Poriferans?
- (A) Water vascular system
 - (B) Circulatory system
 - (C) Spongocoel
 - (D) Calcareous spicules
38. Cnidarians reproduce asexually by the process of
- (A) Fragmentation
 - (B) Budding
 - (C) Binary fission
 - (D) Amitosis
39. Bioluminescence is exhibited by
- (A) Ctenophores
 - (B) Cnidarians
 - (C) Poriferans
 - (D) Protozoans
40. The intermediate host of *Fasciola hepatica* is
- (A) Pork
 - (B) Snail
 - (C) Chicken
 - (D) Beef
41. Which of these is the characteristic feature of annelids?
- (A) Metacentric
 - (B) Metamorphism
 - (C) Metagenesis
 - (D) Metamerism

42. The absorptive surface of intestine is increased in earthworms by
- (A) Caecum
 - (B) Gizzard
 - (C) Typhlosole
 - (D) Ileum
43. Book lungs are the common respiratory organ of the class
- (A) Myriapoda
 - (B) Crustacea
 - (C) Insecta
 - (D) Arachnida
44. The primitive wingless insects without metamorphosis are represented in
- (A) Exopterygota
 - (B) Apterygota
 - (C) Endopterygota
 - (D) Pterygota
45. The balancing organ present in Phylum Mollusca is
- (A) Nematocyst
 - (B) Somatocyst
 - (C) Statocyst
 - (D) Blastocyst
46. Which of these is commonly called as shipworm?
- (A) *Siliqua patula*
 - (B) *Kuphus polythamia*
 - (C) *Laevicardium elatum*
 - (D) *Anomia simplex*
47. Which of the following genera is called as 'Basket star'?
- (A) *Ophioderma appressum*
 - (B) *Ophiothrix angulata*
 - (C) *Asteropora annulata*
 - (D) *Astrophyton muricatum*

48. Identify the jawless vertebrate among the following
- (A) *Petromyzon*
 - (B) *Hippocampus*
 - (C) *Scoliodon*
 - (D) *Pristis*
49. *Amphioxus* possesses light sensitive spots called
- (A) Stigma
 - (B) Floaters
 - (C) Ocelli
 - (D) Stemma
50. The migration of adult fish from sea to fresh water for spawning is known as
- (A) Catadromous
 - (B) Diadromous
 - (C) Monodromous
 - (D) Anadromous
51. Which of the following animals is ureotelic?
- (A) Salamander
 - (B) Parrot
 - (C) Toad
 - (D) Lizard
52. Bones in reptiles are covered by
- (A) Collagen
 - (B) Calcium
 - (C) Keratin
 - (D) Phosphorous
53. Which of the following reptiles is devoid of urinary bladder?
- (A) Snake
 - (B) Chameleon
 - (C) Lizard
 - (D) Tortoise

54. The bone that helps in the strengthening of thoracic skeleton to withstand the rigors of flight is
- (A) Furculum
 - (B) Hollow
 - (C) Synsacrum
 - (D) Palatine
55. The mammalian muscles which help in breathing are
- (A) Intercostal
 - (B) Diaphragm
 - (C) Abdominal
 - (D) Pulmonary
56. Which of the following Indian birds is not endangered?
- (A) Sea Gull
 - (B) Himalayan Quail
 - (C) Indian Vulture
 - (D) White Bellied Heron
57. The angiosperm commonly used for genetic experiments is
- (A) *Mirabilis jalapa*
 - (B) *Pisum sativum*
 - (C) *Arabidopsis thaliana*
 - (D) *Lathyrus odoratus*
58. The deficiency of Hexosaminidase A enzyme causes
- (A) Alzheimer's disease
 - (B) Tay-Sachs disease
 - (C) Patau Syndrome
 - (D) Addison's disease
59. Edwards' syndrome is caused due to
- (A) 18 trisomy
 - (B) 21 Trisomy
 - (C) 13 Trisomy
 - (D) 22 trisomy

60. Which of the following promotes somatic embryogenesis?
- (A) Polyamines
 - (B) Absciscic acid
 - (C) Nicotinoids
 - (D) Triazines
61. Phytosiderophores are generally secreted by the plants of the family
- (A) Palmae
 - (B) Cruciferae
 - (C) Graminae
 - (D) Orchidaceae
62. The endocrine pineal gland secretes
- (A) Melatonin
 - (B) Melanocyte releasing hormone
 - (C) Calcitonin
 - (D) Aldosterone
63. Water in plants is transported by
- (A) Xylem
 - (B) Epidermis
 - (C) Phloem
 - (D) Cambium
64. Which of the following is not a component of chlorophyll?
- (A) Calcium
 - (B) Carbon
 - (C) Magnesium
 - (D) Hydrogen
65. Number of chromosomes in Down's syndrome is
- (A) 46
 - (B) 47
 - (C) 48
 - (D) 49

66. Human blood is a viscous fluid due to the presence of

- (A) Platelets in plasma
- (B) Protein in blood
- (C) RBC and WBC in blood
- (D) Sodium in serum

67. Which fungus is known as 'Green Mold'?

- (A) *Tricoderma* sp.
- (B) *Rhizopus* sp.
- (C) *Mucor* sp.
- (D) *Penicillium* sp.

68. Which tissue of plants conducts food in its body?

- (A) Xylem
- (B) Phloem
- (C) Parenchyma
- (D) Sclerides

69. The constituent monosaccharide in Chitin is

- (A) D-Glucose
- (B) D-Xylose
- (C) N-acetyl D-glucosamine
- (D) D-Galactose

70. An example for aromatic amino acid is

- (A) Methionine
- (B) Valine
- (C) Glycine
- (D) Tyrosine

71. Which of these is not a true group of amino acids?

- (A) NH_2
- (B) COOH
- (C) CHO
- (D) $-\text{SH}$

72. Co-enzyme A is derived from
- (A) Thiamin
 - (B) Vitamin B12
 - (C) Pantothenic acid
 - (D) Pyridoxine
73. All steroids originate from
- (A) Lanosterol
 - (B) Squalene
 - (C) Farnesal
 - (D) Cholesterol
74. Unit of distance in Linkage map is
- (A) Centimeter
 - (B) Centimendel
 - (C) Centimorgan
 - (D) Centimuller
75. The core of the Nucleosome consists of
- (A) H₁, H₂A, H₂B, H₄
 - (B) H₂A, H₂B, H₃, H₄
 - (C) H₁, H₂A, H₂B, H₃
 - (D) H₁, H₂A, H₃, H₄
76. A condition where one gene influences more than one trait is referred to as
- (A) Phenocopy
 - (B) Pleiotropy
 - (C) Epistasis
 - (D) Linkage
77. In which of the following organisms, the environment does not influence sex determination?
- (A) *Melandrium album* (Plant)
 - (B) *Bonellia viridis* (Marine worm)
 - (C) *Agama agama* (Lizard)
 - (D) *Chrysema picta* (Turtle)

78. Holliday model of chromosome recombination during cross over is of
- (A) Copy choice model
 - (B) Duplication theory model
 - (C) Torsion theory model
 - (D) Breakage and reunion model
79. Iojob (ij) gene is an example for maternal inheritance found in
- (A) Yeast
 - (B) Corn
 - (C) Chlamydomonas
 - (D) Drosophila
80. The Ziehl–Neelsen staining technique is used for the detection of
- (A) Endospores
 - (B) Capsule
 - (C) Flagella
 - (D) Cell wall
81. Which one of the given antibiotics inhibits synthesis of bacterial cell walls?
- (A) Penicillin
 - (B) Rifampin
 - (C) Tetracyclines
 - (D) Streptomycin
82. Which is the Nitrogen fixing Cyanobacteria?
- (A) *Westiellopsis* sp.
 - (B) *Plectonema* sp.
 - (C) *Oscillatoria* sp.
 - (D) *Lynbya* sp.
83. Caspases play essential role in
- (A) DNA replication
 - (B) Mutation and recombination
 - (C) Apoptosis
 - (D) Antibody synthesis

84. An example for Gap gene is
- (A) Evenskipped
 - (B) Kruppel
 - (C) Goose-berry
 - (D) Fushi-tarazu
85. The class of switch gene that controls muscle cell formation in both vertebrates and invertebrates is
- (A) SEP genes
 - (B) Myo D Genes
 - (C) Apetala
 - (D) Bicoid
86. Which sequence is the best to evaluate the phylogeny of the closely related mammals?
- (A) Coding sequences
 - (B) Ribosomal proteins
 - (C) SINES and LINES
 - (D) Centromeric and telomeric regions
87. A particular allele can have different effects if it was inherited from a male rather than a female. This phenomenon is known as
- (A) Extranuclear inheritance
 - (B) Prader Willi syndrome
 - (C) Sex linkage
 - (D) Genome imprinting
88. Zinc fingers are classified as
- (A) Blood clotting proteins
 - (B) RNA chaperons
 - (C) DNA binding proteins
 - (D) Protein – protein binding motifs
89. Split genes are
- (A) Genes with intervening sequences
 - (B) Genes without intervening sequences
 - (C) Genes without regulatory sequences
 - (D) Genes with a part of the sequence on one chromosome and other part of the gene sequence on another chromosome

90. The region where RNA polymerase binds to promoter in prokaryotes is called
- (A) Hogness Box
 - (B) Pribnow Box
 - (C) Homeo Box
 - (D) Shine-Dalgarno Box
91. The absence of sigma factor (σ) in the RNA polymerase affects
- (A) Elongation only
 - (B) Initiation only
 - (C) Both Initiation and Elongation
 - (D) Does not affect transcription
92. In *lactose* operon, which is not true?
- (A) Regulator Gene --- Codes for inducer
 - (B) Operator Gene --- Binding site for RNA polymerase
 - (C) Structural Gene *y* --- Encodes permease
 - (D) Structural gene *z* --- Encodes β -galactosidase
93. Interaction of acrydine dyes with DNA causes
- (A) Alkylation
 - (B) Intercalation
 - (C) Dimerization
 - (D) Cross linking
94. This mutation does not cause a change in any amino acid
- (A) Frameshift
 - (B) Transition
 - (C) Transversion
 - (D) Silent
95. An open reading frame is that, which has
- (A) No start and stop codons
 - (B) A start and a stop codon
 - (C) No start but stop codon
 - (D) A start but no stop codon

96. RAF protein is a
- (A) Serine – threonine protein kinase
 - (B) Tyrosine kinase
 - (C) GTPase activity
 - (D) MAP Kinase
97. During photosynthesis, the process of splitting of water to release hydrogen and electron occurs during
- (A) light independent reactions
 - (B) light dependent reactions
 - (C) carbon fixation
 - (D) the regeneration of Rubilose bis phosphate(RuBP)
98. Which of the following activate Pyruvate carboxylase in gluconeogenesis?
- (A) Acetyl CoA
 - (B) Fructose 2,6 bis phosphate
 - (C) ADP
 - (D) ATP
99. Mitochondria and Chloroplasts carry out Oxidative phosphorylation and Photophosphorylation by
- (A) Conformational coupling
 - (B) Sliding filaments
 - (C) High energy intermediate coupling
 - (D) Chemiosmotic coupling
100. Which of the transgenic animals have both knock-in and knock-out genes?
- (A) Hamster
 - (B) Sheep
 - (C) Mouse
 - (D) Guinea Pig
101. The vector system which is suitable for cloning a DNA fragment larger than 100kb;
- (A) pUC 19
 - (B) pBR 322
 - (C) bacterial artificial chromosome
 - (D) λ phage

102. Transfer of RNA on to the nylon membrane is called
- (A) Southern blotting
 - (B) Western blotting
 - (C) Northern blotting
 - (D) tRNA binding
103. The method used to identify the coding sequence of the gene is
- (A) DNA sequencing
 - (B) cDNA sequencing
 - (C) Restriction mapping
 - (D) Linkage mapping
104. Which of the following metabolite intermediates is involved in the biosynthesis of phenylalanine and tyrosine in bacteria?
- (A) Chorismate
 - (B) Pantothenate
 - (C) Alpha ketobutyrate
 - (D) Indole 3- Phosphate
105. Attenuation was first discovered in
- (A) Lac operon
 - (B) Arabinose operon
 - (C) trp operon
 - (D) Gal operon
106. The region of the chromosome which takes up stain strongly during Giemsa banding technique is
- (A) GC rich regions
 - (B) AT rich regions
 - (C) Whole chromosome
 - (D) Only centromeric region
107. The telomeric repeat sequence in humans is
- (A) TTAAGG
 - (B) TTGGGG
 - (C) TTTAGG
 - (D) TTAGGG

108. Alkaptonuria is a condition due to the failure to produce the enzyme

- (A) Tyrosinase
- (B) Homogentisic acid oxidase
- (C) Phenylalanine hydroxylase
- (D) Alkaline phosphatase

109. The enzyme catalase occurs in

- (A) Lysosome
- (B) Sphaerosome
- (C) Peroxisome
- (D) Peroxisome and Glyoxysome

110. Glyoxisomes are predominantly present in

- (A) Leaf cells
- (B) Oil seeds
- (C) Root
- (D) Meristematic cells

111. Grana is present in

- (A) Mitochondria
- (B) Chloroplasts
- (C) Golgi bodies
- (D) Ribosomes

112. Cellulose microfibrils get bound to pectin of matrix through

- (A) Hemicellulose
- (B) Lignin
- (C) Peptidoglycan
- (D) Glycoprotein

113. In plant cells, the microbodies are known as

- (A) Glycosomes
- (B) Glyoxysomes
- (C) Glycogenomes
- (D) Glycogen granules

114. The non-condensed chromosomes which extend during interphase are called

- (A) L-chromosomes
- (B) Heterochromosomes
- (C) M-chromosomes
- (D) Euchromosomes

115. The first part of interphase is called

- (A) Synthetic phase
- (B) G₁ phase
- (C) G₂ phase
- (D) M phase

116. In human, mature sperms are stored in the

- (A) Epididymis
- (B) Seminiferous tubules
- (C) Vas deferens
- (D) Seminal vesicles

117. Oogenesis begins with a diploid germ cell called

- (A) Ontogeny
- (B) Karyogamy
- (C) Isogamy
- (D) Oogonium

118. After how many instars, the larva of *Drosophila* changes into pupa?

- (A) One
- (B) Two
- (C) Three
- (D) Six

119. Diagnostic restriction site can be introduced artificially by

- (A) Matched PCR Primer
- (B) Mismatched PCR Primer
- (C) RADP
- (D) AFLP

120. Comparative DNA sequencing is done by using

- (A) Plasmid
- (B) Ribosomal DNA
- (C) Genomic DNA
- (D) Phage DNA

121. 'Steriotaxi' strategy is used in

- (A) Tumor gene therapy
- (B) AAV gene therapy
- (C) Cold treatment
- (D) Retroviral gene therapy

122. The blood bank of human body is

- (A) Liver
- (B) Spleen
- (C) Pancreas
- (D) Heart

123. The pace maker in heart is called

- (A) Papillary muscle
- (B) Purkinje fibres
- (C) Sino-atrial node
- (D) Atrio-ventricular node

124. The length of human female urethra is about

- (A) 2.1 to 3.5 cm
- (B) 4.8 to 5.1 cm
- (C) 8.2 to 9.2 cm
- (D) 10 to 12 cm

125. Hassall's corpuscles are found in

- (A) Thymus gland
- (B) Pineal gland
- (C) Kidneys
- (D) Skin

126. Which of these stimulates sertoli cells for spermiogenesis?
- (A) FSH
 - (B) TSH
 - (C) ADH
 - (D) ACTH
127. *Diabetes mellitus* is related with
- (A) Graafian follicles
 - (B) Peyer's patches
 - (C) Islets of Langerhans
 - (D) Glisson's capsules
128. Kala-azar is transmitted by
- (A) Tse-tse fly
 - (B) Sandfly
 - (C) *Aedes aegypti*
 - (D) *Culex pipiens*
129. Pick up the correct combination features of B-DNA.
- (A) 66% humidity, right handed, 11 base/turn helix, helix diameter 19
 - (B) 92% humidity, right handed, 10 base/turn helix, helix diameter 19
 - (C) 75% humidity, left handed, 9.3 base/turn helix, helix diameter 18
 - (D) 92% humidity, right handed, 12 base/turn helix, helix diameter 23
130. How many genetically different gametes can be made by an individual of genotype AaBbccDDEe, assuming they are independently assorting?
- (A) 3
 - (B) 5
 - (C) 8
 - (D) 32
131. In prokaryotic cells, the ribosome binds to the 5' end of the mRNA at a sequence which is popularly known as
- (A) Kozak sequence
 - (B) Shine-Dalgarno sequence
 - (C) Promoter region
 - (D) Polymerase enzyme binding site

132. Sickle-cell anaemia is a genetic disease caused by a single amino acid substitution in each β chain of haemoglobin. So, the substitution is between which two amino acids?
- (A) Gly⁶-Lys⁶
 - (B) Asp⁵-Asn⁴
 - (C) Glu⁶-Val⁶
 - (D) His⁴-Lys⁵
133. Plant shoot bends towards a light source as a result of
- (A) The increased amount of food synthesized by the leaves facing the light
 - (B) An unequal auxin distribution in their shoot apex
 - (C) The necessity of light for transpiration
 - (D) Increased elasticity on the light-facing side
134. Which non-covalent bond is responsible for the high melting and boiling points of water?
- (A) H-bond
 - (B) Peptide bond
 - (C) Hydrophobic bond
 - (D) Van der Waals force
135. Malignant cancer cells have all of the following properties except
- (A) Inhibition of angiogenesis
 - (B) Resistance to apoptosis
 - (C) Cellular immortality
 - (D) Unregulated cell division
136. Each individual antigenic determinants of the variable region of the antibody is referred to as
- (A) Idiotope
 - (B) Agreotope
 - (C) Epitope
 - (D) Paratope
137. Amphibian metamorphosis is controlled by
- (A) Thyroid hormone
 - (B) Oxytocin
 - (C) Vasopressin
 - (D) Gastrointestinal hormone

138. The Shannon-Wiener index is useful to measure
- (A) Species diversity in an ecological community
 - (B) Rate of biomass transfer in food chain
 - (C) Visibility in smog polluted areas
 - (D) Wetland pollution levels
139. Adjacent plant cells communicate with each other through cytoplasmic connections called
- (A) Plasmodesmata
 - (B) Desmosome
 - (C) Gap junction
 - (D) Septate junction
140. Which cofactor is present in the enzyme glutathione peroxidase?
- (A) Mo
 - (B) Se
 - (C) K^+
 - (D) Zn^{2+}
141. The component present only in the Ti plasmid and not in any other binary vector system is
- (A) Vir gene
 - (B) LB, RB
 - (C) Opine Gene
 - (D) Gus gene
142. Genetic disorder caused by mutation in the hexosaminidase enzyme A which hydrolyzes the GM2 to GM3 during membrane lipid turnover leads to
- (A) Tay-Sachs syndrome
 - (B) Fabry disease
 - (C) Gauche's disease
 - (D) Niemann-Pick disease
143. What is a sensitive technique to find out the number of template molecules originally present in a PCR reaction?
- (A) AP PCR
 - (B) Real time PCR
 - (C) Hot start PCR
 - (D) Reverse transcriptase PCR

144. A laboratory technique in Electrophysiology used to study ionic currents in individual living cells
- (A) ECG
 - (B) Patch clamp technique
 - (C) EEG
 - (D) Single neuron recording
145. The statistical test which can be utilized to validate the statement “People having high cholesterol suffer more from hypertension”
- (A) Students ‘t’ test
 - (B) Pearson correlation coefficient
 - (C) ANOVA
 - (D) Regression analysis
146. Among the following, which is responsible for nerve action potential?
- (A) Out-flux of Na^+ and K^+ ion
 - (B) Influx of Na^+ and outflux of K^+
 - (C) Influx of Na^+ and K^+ ions
 - (D) Out-flux of Na^+ and influx of K^+ ions
147. Which mineral ion plays important role in functioning of photosystem II?
- (A) Magnesium
 - (B) Molybdenum
 - (C) Iron
 - (D) Manganese
148. Muscular dystrophy, a devastating disease that cripple and kills children is caused by
- (A) Mutation in dystrophin
 - (B) Mutation in band 3 protein
 - (C) Mutation in glycoprotein A
 - (D) Mutation in ankyrin
149. A Trickling filter is used for
- (A) Antibiotic production
 - (B) Beer production
 - (C) Citric acid manufacturing
 - (D) Waste water treatment

150. Which of the following is used as a fusogen?

- (A) Polyethylene glycol
- (B) CaMV
- (C) Sendai Virus
- (D) Adenovirus

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ANSWER KEY**Subject Name: 611 LIFE SCIENCE**

SI No.	Key	SI No.	Key	SI No.	Key	SI No.	Key	SI No.	Key
1	B	31	B	61	C	91	B	121	A
2	A	32	A	62	A	92	B	122	B
3	C	33	B	63	A	93	B	123	C
4	D	34	C	64	A	94	D	124	B
5	C	35	B	65	B	95	B	125	A
6	D	36	C	66	B	96	A	126	A
7	A	37	B	67	D	97	B	127	C
8	B	38	B	68	B	98	A	128	B
9	C	39	A	69	C	99	D	129	B
10	B	40	B	70	D	100	C	130	C
11	C	41	D	71	C	101	C	131	B
12	C	42	C	72	C	102	C	132	C
13	A	43	D	73	B	103	B	133	B
14	A	44	B	74	C	104	A	134	A
15	A	45	C	75	B	105	C	135	A
16	D	46	B	76	B	106	B	136	D
17	C	47	D	77	A	107	D	137	A
18	B	48	A	78	D	108	B	138	A
19	B	49	C	79	B	109	D	139	A
20	A	50	D	80	D	110	B	140	B
21	D	51	C	81	A	111	B	141	C
22	A	52	C	82	A	112	A	142	A
23	D	53	A	83	C	113	B	143	B
24	B	54	A	84	B	114	D	144	D
25	B	55	B	85	B	115	B	145	B
26	C	56	A	86	B	116	A	146	B
27	D	57	C	87	D	117	D	147	A
28	C	58	B	88	C	118	C	148	A
29	B	59	A	89	A	119	B	149	D
30	D	60	A	90	B	120	B	150	A