

Content

Chapter 1: Cell Biology	1
Chapter 2: Molecular Biology	29
Chapter 3: Biochemistry	51
Chapter 4: Genetics	79
Chapter 5: Plant Taxonomy	109
Chapter 6: Plant Anatomy	129
Chapter 7: Plant Physiology	149
Chapter 8: Plant Embryology	187
Chapter 9: Animal Taxonomy	217
Chapter 10: Animal Physiology	277
Chapter 11: Animal Embryology	329
Chapter 12: Immunology and Signaling	359
Chapter 13: Evolution	387
Chapter 14: Ethology	411
Chapter 15: Ecology	443
Chapter 16: Biotechnology	497
Chapter 17: Bio techniques	527
Chapter 18: Biostatistics	557

1

CHAPTER

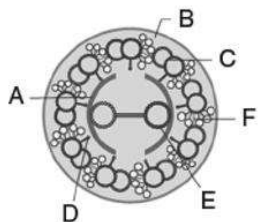
CELL BIOLOGY

- Proteins that are to be used outside the cell, are synthesized: **(AP ZOO- 2016)**
 - On ribosomes
 - In the mitochondria
 - On the rough endoplasmic reticulum
 - On the smooth endoplasmic reticulum
- All unicellular organism are capable of
 - Independent existence
 - Division of labour
 - Extracellular digestion
 - Photosynthesis
- Osmosis is a process that
 - involves the movement of particles from saturated solutions
 - moves water molecules from an area of higher concentration to an area of lower concentration
 - involves the active transport of dissolved solids
 - continues until the medium on each side of the membrane has become hypertonic
- All of the following statements regarding lysosome are correct except: **(AP ZOO- 2016)**
 - lysosomes contain hydrolytic enzymes
 - for the activity of hydrolases the lysosomes maintain a pH of 7.2 in its interior
 - the lysosome membrane contains transmembrane proteins
 - lysosomes exhibit polymorphism
- Where is genetic material located in prokaryotes –
 - Nucleus
 - Enveloped by Nuclear membrane
 - Naked in cytoplasm
 - None
- Who was the first one to see a live cell -?
 - Robert Hooke
 - Anton van Leuwenhoek
 - Robert Brown
 - None of these
- Which of the following statements is false? **(G1 - 2018)**
 - Cells at the end of prophase do not show golgi bodies and ER.
 - Small disc shaped structures at the surface of the centromeres are called kinetochores.
 - Metaphase plate is formed at the equator of the spindle.
 - Chromosome splitting and separation of chromatids occurs at telophase.
- In which year Schwann studied different types of animal cell-
 - 1839
 - 1739
 - 1639
 - 1938
- Who was the one to describe that cells divided and new cells are formed from pre-existing cells-
 - Schleiden
 - Schwann
 - Virchow
 - All of these
- Structure made up of sphingolipid is - **(G1 -2019)**
 - Myelin sheath
 - Nissl's body
 - Neurolemma
 - Dendrone
- Cell containing membrane bound nucleus is called-
 - Eukaryotic
 - Prokaryotic
 - Both a and b
 - None of these
- Where are ribosomes found in prokaryotic cell -
 - Cytoplasm
 - Mitochondria
 - Chloroplast
 - All of these
- Which of the following is incorrect –
 - Prokaryotic cell – Mycoplasma
 - Smallest cell- Bacteria
 - Largest cell – Ostrich egg
 - Cell without nucleus – Mammalian mature RBC
- A glycoprotein within a plasma membrane has which of the following characteristics? **(AP ZOO- 2020)**
 - Attaches to cytoskeleton proteins.
 - Oriented towards the environment
 - Peripherally attached to the membrane.
 - Found both the membrane leaflets.

15. Which of the following represents prokaryotic cells-
(a) Blue green algae (b) PPLO
(c) Bacteria (d) All of these
16. A loose sheath of Glycocalyx layer is called –
(a) Slime layer (b) Capsule
(c) Cell wall (d) Cell envelope
17. What is the term used to describe the movement of any material from high to low concentration called?
(a) facilitated diffusion (b) osmosis
(c) diffusion (d) active transport
18. Which term is used to describe the carrying of molecules across a membrane that require energy.
(a) osmosis (b) facilitated diffusion
(c) active transport (d) diffusion
19. Where are ribosomes found in eukaryotic cells?
(a) Cytoplasm (b) Mitochondria
(c) Chloroplast (d) All of these
20. The sedimentation coefficient of ribosomes found in bacteria is **(G1 -2011)**
(a) 70s (b) 55 S
(c) 80 S (d) 60 S
21. The latest model of plasma membrane is
(a) Lamellar model (b) Fluid mosaic model
(c) Unit membrane model (d) Molecular lipid model
22. Which of the following organelle is exclusively found in animal cells?
(a) Mitochondria (b) Centriole
(c) Chloroplast (d) Vacuole
23. Which is more abundant in R.E.R. (Rough Endoplasmic Reticulum)? **(AP ZOO- 2020)**
(a) Cisternae (b) Vesicle
(c) Annulate E.R. (d) Both (a) & (b)
24. Plasma membrane is
(a) Semipermeable (b) Selectively permeable
(c) Both a and b (d) None of the above
25. The presence of which organelle distinguishes a plant cell from animal cell
(a) Cell membrane (b) chloroplast
(c) mitochondria (d) nucleus
26. Eukaryotic cells do not have:
(a) A double stranded DNA, enclosed within a nuclear membrane
(b) Nucleoli for production and maturation of ribosomes
(c) Binary fission reproduction
(d) Cell division by mitosis, reproduction by "meiosis".
27. In fluid mosaic model of the plasma membrane
(a) Upper layer is non-polar and hydrophilic
(b) Upper layer is polar and hydrophobic
(c) Phospholipids form a bimolecular layer in the middle part
(d) Proteins form a middle layer.
28. "Cart wheel" structure is exhibited by: **(G1 -2011)**
(a) Ribosome (b) Lysosome
(c) Centriole (d) Nucleolus
29. Which of the following is not the correctly matched pair of structure with functions? **(AP ZOO- 2016)**
(a) Mitochondria: ATP production
(b) Golgi body: Breakdown of complex molecules
(c) Chloroplast: Photosynthesis
(d) Endoplasmic reticulum: Synthesis of proteins
30. In which stage, the colchicine inhibits mitosis? **(G1 -2011)**
(a) Prophase (b) Metaphase
(c) Anaphase (d) Telophase
31. Which of the following processes includes all others?
(a) Osmosis
(b) Diffusion of a solute across a membrane
(c) Facilitated diffusion
(d) Passive transport
32. Which of the following statements is correct about diffusion?
(a) It is very rapid over long distances.
(b) It requires an expenditure of energy by the cell.
(c) It is a passive process in which molecules move from a region of higher concentration to a region of lower concentration.
(d) It is an active process in which molecules move from a region of lower concentration to one of higher concentration
33. Formation of bivalents during meiosis occurs at: **(G1 - 2022)**
(a) Leptotene (b) Diplotene
(c) Pachytene (d) Zygotene

34. If the concentration of solutes in a cell is less than the concentration of solutes in the surrounding fluid, then the extracellular fluid is said to be:
(a) hypertonic. (b) hypotonic.
(c) isotonic. (d) stable.
35. Facilitated diffusion:
(a) requires a transmembrane protein.
(b) requires ATP.
(c) can move molecules against a concentration gradient.
(d) is typically used to transport small nonpolar molecules.
36. What is the voltage across a membrane called?
(a) Water potential (b) Chemical gradient
(c) Membrane potential (d) Osmotic potential
37. The sodium-potassium pump is called an electrogenic pump because it
(a) pumps equal quantities of Na⁺ and K⁺ across the membrane.
(b) pumps hydrogen ions out of the cell.
(c) contributes to the membrane potential.
(d) ionizes sodium and potassium atoms.
38. If a membrane protein in an animal cell is involved in the co-transport of glucose and sodium ions into the cell, which of the following is most likely true?
(a) The sodium ions are moving down their electrochemical gradient while glucose is moving up.
(b) Glucose is entering the cell along its concentration gradient.
(c) Sodium ions can move down their electrochemical gradient through the cotransporter whether or not glucose is present outside the cell.
(d) A substance that blocked sodium ions from binding to the cotransport protein would also block the transport of glucose.
39. Which among the following cell organelles is not surrounded by any membrane? **(G1- 2015)**
(a) Lysosome (b) Ribosome
(c) Plastid (d) Endoplasmic reticulum
40. The Chloroplast DNA is **(AP ZOO- 2020)**
(a) Like the nuclear DNA
(b) Single stranded linear
(c) Double stranded circular
(d) Single stranded circular
41. Mesosomes are not associated with **(G1- 2015)**
(a) cell wall formation (b) DNA replication
(c) respiration (d) protein synthesis
42. The vesicles which collect and fuse at equatorial plane to form primary cell plate during cytokinesis are derived from which cell organelle? **(AP BOT - 2020)**
(a) Mitochondria (b) Golgi complexes
(c) Lysosomes (d) Vacuoles
43. In meiotic prophase I, there are five sub-stages:
(i) Pachytene
(ii) Zygotene
(iii) Diplotene
(iv) Diakinesis
(v) Leptotene
The correct sequence of these 5 sub-stages is **(G1- 2013)**
(a) (i), (iii), (ii), (v), (iv) (b) (ii), (iii), (v), (iv), (i)
(c) (iv), (i), (v), (ii), (iii) (d) (v), (ii), (i), (iii), (iv)
44. pH of lysosome interior is **(AP ZOO- 2020)**
(a) 10-12 (b) 8-10
(c) 5-7 (d) 4-5
45. What are the membrane structures that function in active transport?
(a) peripheral proteins (b) carbohydrates
(c) cholesterol (d) Integral proteins
46. Which of the following is true of integral membrane proteins?
(a) They lack tertiary structure.
(b) They are loosely bound to the surface of the bilayer.
(c) They are usually transmembrane proteins.
(d) They are not mobile within the bilayer.
47. What kinds of molecules pass through a cell membrane most easily?
(a) large and hydrophobic (b) small and hydrophobic
(c) large polar (d) ionic
48. Who first time explained that cells are formed from pre-existing cells? **(G1- 2015)**
(a) Robert Brown (b) Robert Hooke
(c) Theodore Schwann (d) Rudolf Virchow
49. The main organelle involved in modification and routing of newly synthesized secretory proteins to their destinations is

- (a) mitochondria (b) endoplasmic reticulum
(c) lysosome (d) chloroplast
50. The cell organelle responsible for cell plate formation at the time of cell division is **(G1- 2013)**
(a) Chloroplast (b) Endoplasmic reticulum
(c) Golgi body (d) Mitochondria
51. Which of the following organelle has a continuous connection with nuclear membrane:
(a) Golgi apparatus (b) Lysosome
(c) RER (d) SER
52. Which of the following statements were true regarding ER:
(a) ER provides structural framework to the cell
(b) ER acts as intra cellular transporting system
(c) SER is involved in the synthesis of lipid
(d) All of the above
53. Which one of the following cell organelles is enclosed by a single membrane?
(a) Mitochondria (b) Chloroplasts
(c) Lysosomes (d) Nuclei
54. Which of the following organelle is called 'Suicidal Bag'
(a) Mitochondria (b) Endoplasmic reticulum
(c) Lysosome (d) Ribosome
55. Which of the following statements are correct regarding Golgi apparatus:
(a) sorting and packaging of proteins
(b) synthesis of proteins
(c) N-linked glycosylation
(d) None of the above
56. Which of the following organelle control intracellular digestion of macromolecules with the help of hydrolytic enzymes?
(a) Plastid (b) Peroxisome
(c) Lysosome (d) Actin
57. Which of the following is the function of lysosomes:
(a) autophagy (b) autolysis
(c) digestion (d) all of the above
58. White blood cells engulf bacteria through what process?
(a) exocytosis (b) phagocytosis
(c) pinocytosis (d) osmosis
59. Pinching in of fluids by a unicellular organism is the process of:
(a) phagocytosis (b) osmosis
(c) pinocytosis (d) exocytosis
60. Which of the following cell organelles is responsible for extracting energy from carbohydrates to form ATP?
(a) Lysosome (b) Ribosome
(c) Chloroplast (d) Mitochondrion
61. Which one of the following has its own DNA?
(a) Mitochondria (b) Dictyosome
(c) Lysosome (d) Peroxisome
62. Cellular organelles with membranes are:
(a) Lysosomes, Golgi apparatus and mitochondria
(b) Nuclei, ribosomes and mitochondria
(c) Chromosomes, ribosomes and endoplasmic reticulum
(d) Endoplasmic reticulum, ribosomes and nuclei
63. It is involved in oxidative phosphorylation:
(a) Plastid (b) Mitochondria
(c) ER (d) Golgi
64. Select the wrong statement from the following
(a) Both chloroplasts and mitochondria have an internal compartment, the thylakoid space bounded by the thylakoid membrane
(b) Both chloroplasts and mitochondria contain DNA
(c) The chloroplasts are generally much large than mitochondria
(d) Both chloroplasts and mitochondria contain an inner and an outer membrane.
65. Which of the following is Plastid responsible for Photosynthesis
(a) Leucoplast (b) Amyloplast
(c) Chromoplast (d) Chloroplast
66. During germination of barley seeds, the enzyme α -amylase is secreted by: **(AP BOT - 2020)**
(a) Seed coat (b) Coleorhiza
(c) Aleurone layer (d) Coleoptile
67. Which type of Ribosome is present in the chloroplast?
(a) 70S (b) 80S
(c) 50S (d) 30S

68. The site for photophosphorylation is:
 (a) Mitochondria (b) Cytoplasm
 (c) Chloroplast (d) Peroxisome
69. Which of the following is not correct about chloroplast?
 (a) Chloroplast is a semi-autonomous organelle
 (b) Chloroplast contains single-stranded circular DNA
 (c) Chloroplast is double-membrane organelle
 (d) Lumen is the site for photolysis of water
70. Stroma is the ground material of which of these:
 (a) Ribosomes (b) Lysosomes
 (c) Mitochondria (d) Chloroplasts
71. An elaborate network of filamentous, proteinaceous structure present in the cytoplasm is referred to as:
 (a) Golgi complex (b) ER
 (c) Cytoskeleton (d) Chromosomes
72. Cytoskeleton helps in:
 (a) Mechanical support to cell
 (b) Providing mobility to cell
 (c) Maintenance of shape of cell
 (d) All of these
73. Cytoskeleton is made up of:
 (a) Cellulosic microfibril
 (b) Proteinaceous filaments
 (c) Calcium carbonate granules
 (d) Callose deposits
74. Which of the following structure- function pair is mismatched?
 (a) Nucleolus- ribosome synthesis
 (b) Lysosome – intracellular digestion
 (c) Ribosome – protein synthesis
 (d) Microtubules – muscle contraction
75. In human body most, abundant protein present is:
 (a) Collagen (b) Myosin
 (c) Actin (d) Albumin
76. Axonema is:
 (a) Bundle of actin filaments
 (b) Bundle of intermediate filaments
 (c) Bundle of microtubules
 (d) Bundle of myosin
77. Find out the incorrect statement:
 (a) Centrioles forms basal bodies of cilia or flagella.
 (b) Centriole gives rise to spindle fibres at the time of cell division in animal cell.
 (c) Centrosome is an organelle usually containing two cylindrical structures called centrioles.
 (d) Peripheral fibril of centriole is doublet.
78. The central part of the proximal region of the centriole is also proteinaceous and is called:
 (a) Spokes (b) Doublet
 (c) Hub (d) Linkers
79. Identify A, B, C, D, E and F given in the figure:
- 
- (a) A–Interdoublet bridge, B–Peripheral microtubules doublets., C–Central microtubule, D– Plasma membrane, E–Central bridge, F–Radial spoke
 (b) A–Central sheath, B–Radial spoke, C–Interdoublet bridge, D–Central microtubule, E–Plasma membrane, F–Peripheral microtubules doublets.
 (c) A–Central sheath, B–Plasma membrane, C–Peripheral microtubules doublets., D–Radial spoke, E–Central microtubule, F–Inter-doublet bridge
 (d) A–Plasma membrane, B–Radial spoke, C–Peripheral microtubules doublets., D–Central sheath, E–Central microtubule, F–Inter-doublet bridge
80. Select the incorrect statement:
 (a) Cilia and flagella are hair-like outgrowths of the cell membrane.
 (b) Cilia causes the movement of either the cell or the surrounding medium.
 (c) Bacterial flagella are structurally similar to eukaryotic flagella.
 (d) Flagella is responsible for cell movement.
81. Nucleus was first discovered by:
 (a) Robert Hook (b) Strasburger
 (c) Robert Brown (d) None of the above
82. The nucleus contains:
 (a) Mitochondria (b) Golgi apparatus
 (c) Chromosomes (d) Lysosomes

83. Which of the following cells lack nucleus?
 (a) Platelets (b) Lymphocytes
 (c) Monocytes (d) Eosinophils
84. Transcriptionally active site is:
 (a) Euchromatin (b) Heterochromatin
 (c) Nucleolus (d) Nuclear membrane
85. The function of nucleolus is:
 (a) RNA synthesis
 (b) DNA synthesis
 (c) Histone synthesis
 (d) Ribosomal subunit synthesis
86. Who discovered cell for the first time? **(G1- 2015)**
 (a) Robert Brown (b) Robert Hooke
 (c) Antony Van Leeuwenhoek (d) Theodor Schwann
87. Nucleosome is made up of -
 (a) Nonhistone protein + RNA
 (b) Histone protein and DNA
 (c) Non-histone and histone protein
 (d) Phospholipid and protein
88. Which one is not a part of nucleus-?
 (a) Chromatin (b) Nucleoplasm
 (c) Karyosome (d) Centrosome
90. The chromatin material which takes darker stain in interphase is called:
 (a) Euchromatin (b) Heterochromatin
 (c) Primary constriction (d) Satellite body
91. The size of the nucleolus is large where-
 (a) Protein synthesis is active
 (b) Protein synthesis is less
 (c) No protein synthesis occurs
 (d) None of the above
92. In nucleus, nuclear envelope is derived from which of the cell organelles?
 (a) SER (b) RER
 (c) Mitochondria (d) Golgi apparatus
93. Which of the following cell organelle possesses a single unit membrane **(G1- 2013)**
 (a) Chloroplast (b) Lysosome
 (c) Mitochondria (d) Nucleus
94. In mitosis, the number of chromosomal and nuclear divisions, respectively, are: **(G1- 2013)**
 (a) one and one (b) one and two
 (c) two and two (d) two and one
95. Site of protein synthesis in a plant cell is: **(G1- 2013)**
 (a) Golgi body (b) Lysosome
 (c) Mitochondria (d) Ribosome
96. Endoplasmic reticulum was first observed by: **(G1- 2015)**
 (a) Flemming (b) Benda
 (c) Porter (d) Claude
97. Which cell organelle is not found in plant cell? **(G1- 2015)**
 (a) Chloroplast (b) Centriole
 (c) Smooth ER (d) Golgi apparatus
98. Which cell organelle is site of aerobic respiration? **(G1- 2015)**
 (a) Chloroplast (b) Ribosome
 (c) Mitochondria (d) Endoplasmic reticulum
99. Which pair is not correct? **(G1- 2015)**
- | | |
|--|---------------------|
| (a) Potassium ion (K^+) pump | Passive transport |
| (b) Fluid mosaic model | Singer and Nicolson |
| (c) Movement of water across semi-permeable membrane | Osmosis |
| (d) Plant cell | Plasmodesmata |
100. A nucleoside is made up of: **(G1- 2015)**
 (a) Phosphate group + Pentose sugar + Nitrogenous base
 (b) Pentose sugar + Nitrogenous base
 (c) Nitrogenous base + Phosphate group
 (d) None of the above
101. In which phase of cell cycle multiplication of mitochondria and chloroplast take place?
 (a) G_0 (b) G_1
 (c) G_2 (d) M
102. During which phase of meiosis does crossing over take place: **(G1- 2015)**
 (a) Zygotene (b) Leptotene
 (c) Pachytene (d) Diplotene
103. Enzymes present in lysosomes are: **(G1 - 2018)**
 (a) Peroxidases (b) Hydrolases
 (c) Catalases (d) Dehydrogenases

104. Extra chromosomal DNA of bacteria is called **(G1 - 2018)**
 (a) Mesosome (b) Plasmid
 (c) Bacteriophage (d) Ribosomes
105. Who discovered that all cells arise from pre-existing cells by cell division? **(G1 - 2018)**
 (a) Rudolf Virchow (b) Robert Brown
 (c) T. Schwann (d) M. Schleiden.
106. Which of the following is absent in plant cells? **(G1 - 2018)**
 (a) Cell wall (b) Plastids
 (c) Centrioles (d) Large central vacuole
107. Smooth Endoplasmic reticulum is involved in the synthesis of: **(G1 - 2018)**
 (a) Proteins (b) Lipids
 (c) Carbohydrates (d) Nucleic acids
108. Total number of mitochondria in a cell remains constant after division because: **(G1 - 2018)**
 (a) De-novo synthesis of mitochondria
 (b) Fragmentation of Mitochondria new
 (c) Number is maintained due to fertilization
 (d) Mitochondria also divides by fission into two parts
109. In which cell organelle DNA is not present? **(G1- 2022)**
 (a) Mitochondria (b) Nucleus
 (c) Golgi apparatus (d) Chloroplast
110. The transport between Golgi cisternae (intra-golgi transport) involves the following steps:
 I. Donor cisternae gives rise to a coated bud
 II. The bud is uncoated and attaches to acceptor cisternae
 III. A complex of three proteins (fusion machine) helps in fusion of bud with acceptor cisternae releases the contents
 IV. The bud is detached and is targeted to acceptor cisternae **(AP ZOO- 2016)**
 (a) I, IV, II, III (b) III, II, I, IV
 (c) I, II, IV, III (d) I, III, IV, II
111. Match List I with List II and select the correct answer by using the codes given below in the List: **(AP ZOO- 2016)**
- | List I (site of mitochondria) | List II(enzymes) |
|-------------------------------|----------------------------|
| I. outer membrane | A. cytochrome b-c, complex |
| II. peri-mitochondrial space | B. fatty acid CoA ligase |
| III. inner membrane | C. Adenylate kinase |
| IV. matrix | D. enzyme of TCA cycle |
- (a) I-A, II-B, III-C, IV-D (b) I-C, II-D, III-A, IV-B
 (c) I-A, II-D, III-B, IV-A (d) I-B, II-C, III-A, IV-D
112. In order to enter a cell cycle, a cell must be stimulated from outside. What type of molecule provides this stimulation? **(AP ZOO- 2016)**
 (a) Cyclins
 (b) Tyrosine Kinases
 (c) Cyclin-dependent Kinases
 (d) Cytokines and growth factors
113. Mitotic anaphase differs from metaphase in possessing: **(AP ZOO- 2016)**
 (a) same number of chromosomes and same number of chromatids
 (b) same number of chromosomes and half number of chromatids
 (c) half number of chromosomes and half number of chromatids
 (d) half number of chromosomes and same number of chromatids
114. "pH" of lysozyme is maintained by: **(AP ZOO- 2016)**
 (a) Proton pump (b) Sodium pump
 (c) Calcium pump (d) Chloride pump
115. Copper is associated with which of the following mitochondrial enzymes? **(AP ZOO- 2016)**
 (a) Cytochrome oxidase
 (b) Succinate dehydrogenase
 (c) Catalase
 (d) Acid phosphatase
116. The 80s ribosomes of eukaryotes break into which of the following sub units? **(AP ZOO- 2016)**
 (a) 50s and 30s (b) 60s and 40s
 (c) 40s and 40s (d) 60s and 50s
117. The plasma membrane is detected to have caveolae. These structures are: **(AP ZOO- 2020)**
 (a) Cholesterol-enriched membrane invaginations.
 (b) Components of phospholipids.
 (c) Regions with high carbohydrate content.
 (d) Regions of protein dominating content.
118. A microtubule is observed quickly after a period of rapid growth. Which of the following most likely occupied to this microtubule to stimulate its break down? **(AP ZOO- 2020)**
 (a) Loss of its GTP (b) Loss of ATP
 (c) Severing by gelaolin (d) Twisting of cofilin

119. Mitochondrial matrix contains **(AP ZOO- 2020)**
(a) Enzymes (b) DNA & RNA
(c) Ribozyme (d) All of these
120. Cell organelles have content of DNA is/are **(AP ZOO- 2020)**
(a) Nucleolus (b) Plastid
(c) Mitochondria (d) All of these
121. Ki67 is molecular diagnostic target for **(AP ZOO- 2020)**
(a) Hyperthyroidism (b) Cancer
(c) Gastrointestinal problem (d) Headache and nausea
122. Mitotic apparatus consisting of **(AP ZOO- 2020)**
(a) Spindle fibre (b) Astral rays
(c) Centriole (d) All of these
123. Which one of them has absence of DNA content? **(AP ZOO- 2020)**
(a) Mitochondria (b) Tobacco Mosaic Virus
(c) Bacteriophage virus (d) Chloroplast
124. Which one of these phase longest in interphase? **(AP ZOO- 2020)**
(a) Synthetic Phase
(b) G_1 (first gap period)
(c) G_2 (second gap period)
(d) All of these are of same duration.
125. The G_1 phase of the cell cycle is describing that **(AP ZOO- 2020)**
(a) m-RNA synthesis. (b) Cytoplasm division
(c) Maximum growth of cell (d) Cytoplasmic splitting
126. Which one of them substance normally fail to cross cell membrane under circumstances? **(AP ZOO- 2020)**
(a) DNA (b) Water
(c) Fatty acid (d) Ethanol
127. Collagen is rich in **(AP ZOO- 2020)**
(a) Glycine and proline (b) Glycine and glutamate
(c) Glutamine and arginine (d) Glutamine and leucine
128. Which of the following lipid can be used as a marker of inner mitochondrial membrane?
(a) Succinate dehydrogenase (b) ATP synthase
(c) Succinyl Co-A synthase (d) Cardiolipin
129. Function of Golgi complex is/are: **(AP ZOO- 2020)**
(a) Sorting and Packaging (b) Secretion
(c) Biogenesis of lysosome (d) All of these
130. Which of the following is part of mitosis in the cells of seed plants? **(SET 2013)**
(a) Centrioles (b) Asters
(c) Spindles (d) Cleavage furrows
131. Consider the following statements: **(SET 2013)**
(A) In meiosis, the chromosomes are replicated during interphase
(B) The meiotic process by which homologues are paired during Prophase-I is called Chiasma
(C) In Metaphase-I of Meiosis-I, homologous chromosomes line up as pairs on metaphase plate and kinetochore microtubules extend from each centromere in both directions towards the poles
(D) In Metaphase-II of Meiosis-II the chromosomes line up one by one on the metaphase plate and kinetochore microtubules extend from each centromere in both directions towards the poles
Which of the above statements are true?
(a) (C) and (D) (b) (A) and (D)
(c) (A) and (C) (d) (A) and (B)
132. The enzymes involved in viral replication are synthesized: **(SET 2013)**
(a) On the viral ribosomes
(b) On the interior surface of the viral membrane
(c) On the interior surface of the viral coat
(d) By the host cell
133. The function of lysozyme of T_4 , bacteriophage, is to digest the bacterial : **(SET 2013)**
(a) Cell Wall (b) Cell membrane
(c) Enzymes (d) Glycogen
134. Proteins that are to be used outside the cell, are synthesized: **(SET 2013)**
(a) In the mitochondria
(b) On the rough endoplasmic reticulum
(c) On the smooth endoplasmic reticulum
(d) On free ribosomes
135. Which of the following is an oxidative organelle and is not a part of the endomembrane system? **(SET 2013)**
(a) Lysosome (b) Peroxisome
(c) Chloroplast (d) Mitochondria