

#### **BIOLOGY**

# **BOOKS - TRUEMAN'S BIOLOGY (ENGLISH)**

# CELL- THE BASIC UNIT OF LIFE ( CELL AND ITS STRUCTURAL ORGANISATION )

### **Multiple Choice Answer Type**

- 1. An example of enucleated living plant cell is
  - A. RBC
  - B. sieve tube cell
  - C. companion cell
  - D. xylem parenchyma

# **Answer: B Watch Video Solution** 2. Which is not a compartment in the cell? A. Nucleus B. Mitochondria C. Chloroplast D. Centriole Answer: D **Watch Video Solution**

3. Intracellular compartments are not found in cells of

A. lower plants B. prokaryotes C. higher plants D. eukaryotes Answer: B **Watch Video Solution** 4. Small cells are metabolically active as they have A. higher nucleocytoplasmic ratio B. higher surface area per unit volume C. more cytoplasm D. both (1) & (2) are correct.

Answer: D

**5.** Which of the following represents the correct sequence of relative sizes ( in descending order ) of the entities named ?

A. Cell, nucleus, water molecule, oxygen atom, chromosome

B. Nucleus, water molecule, cell, chromo-some, oxygen atom

C. Chromosome, cell, nucleus, water molecule, oxygen atom

D. Cell, nucleus, chromosome, water molecule, oxygen atom.

#### **Answer: D**



6. The size of a cell depends upon

A. its oxygen requirements

B. its minerals and materials requirements C. regulation ability of its nucleus D. all of the above **Answer: D Watch Video Solution** 7. Stem cells are A. permanent cells in plants

B. undifferentiated cells

C. not capatable of division and development

D. all of the above

# Answer: B



8. The prokaryotic cells have
A. one envelope system
B. two envelope system
C. three envelope system
D. no envelope system
Answer: A  Watch Video Solution
9. Which is absent in RBC ?
A. Aerobic respiration
B. Cytoplasm
C. mRNA

Answer: A
Watch Video Solution
10. Largest animal cell is that of
A. Ostrich egg
B. Nerve cell
C. Muscle cell
D. RBC

D. Membrane

**Answer: A** 

11. A multicellular organism is larger due to A. large number of cells B. larger cells C. smaller cells D. surface area - volume ratio Answer: A **Watch Video Solution** 12. Omnis cellula-e cellula' i.e., new cells arise from prexisting cells, this statement was given by A. Purkinje B. Virchow C. Swammerdam

D. Robert Hooke

#### **Answer: B**



**13.** Acetabularia (Umbrella plant ) is 10 cm long, single celled marine green alga and

- A. binucleated
- B. multinucleated
- C. coenocytic
- D. uninucleated

#### **Answer: D**



<b>14.</b> is known as cytoplasm minus all inclusions and organelles.
A. Hyaloplasm
B. Stroma
C. Protoplasm
D. Protoplast
Answer: A
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<b>15.</b> Protoplast lacks
A. neutral
B. nucleus
C. plasma membrane
D. cell wall.

#### Answer: D



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**16.** Cytoplasmic streaming is a characteristic of plant cells, Amoeba &

WBC. It is caused by

- A. sliding microtubules
- B. contracting microfilaments
- C. change in turgor pressure
- D. growth of cell

#### **Answer: B**



**17.** Cytoplasm is crystallo-colloidal polyphasic solution, discovered bny Kolliker. It is actually

A. Protoplasm

B. Protoplasm - Nucleus

C. Hyaloplasm - Organelle

D. Protoplasm - Organelle

### Answer: B



**18.** The term protoplasm was coined by

A. Dujardin

B. Purkinje

C. Hugo von Mohl

D. T.H. Huxley

#### **Answer: B**



**Watch Video Solution** 

**19.** Proteins ( export proteins) that are to be used outside the cell are synthesized

A. in mitochondria

B. on SER

C. on RER

D. on free ribosomes

#### **Answer: C**



**20.** Which organelle helps in the synthesis of lipids, chloesterol, steroids and visual pigments in epithelial cells of retina?

- A. SER
- B. RER
- C. Golgi bodies
- D. Ribosomes



- 21. SER mainly consists of
  - A. cisternae and tubules
  - B. cisternae and vesicles
  - C. vesicles only

D. tubules and vesicles	

#### **Answer: D**



# 22. NissI granules in cyton of nerves are rich in

A. RER

B. Golgi bodies

C. Mitochondria

D. SER



23. SER is concerned with
A. lysosome
B. protein synthesis
C. sphaerosome
D. all of these
Answer: C
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<b>24.</b> The endoskeleton of cell is made up of
A. ER
A. ER B. cytoplasm

D. ribosomes
Answer: A
Watch Video Solution
25. Mechanical support, enzyme circulation, protein synthesis and
detoxification of drugs are the function of
A. ER

B. ribosomes

C. dictyosomes

D. chloroplast

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<b>26.</b> ER is extensively developed and abundant in
A. liver
B. sperms
C. resting cells
D. all correct
Answer: A
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<b>27.</b> ER has a structure similar to
A. cell wall
A. cell wall  B. cell membrane

#### **Answer: B**



**28.** The nucleoplasm is continuous with the cytoplasm of a cell through

- A. ER
- B. Nuclear pores
- C. Golgi apparatus
- D. Vacuoles



29. Membrane system considered to be extension of infolded plasma
membrane is
A. Golgi complex
B. plastids
C. mitochondria
D. ER
Answer: D
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<b>30.</b> Gastric cells secreting zymogen have well developed
A. SER
A. SER B. RER

D. mitochondria

#### **Answer: B**



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- **31.** Choose the correct statement.
  - A. Ribosomal subunits are united during protein synthesis.
  - B. Ribosomal subunits always remain united.
  - C. Ribosomal subunits are united in nucleus during r-RNA synthesis.
  - D. All are correct statements.

#### **Answer: A**



32. Non membranous cell organelles are
A. mitochondria
B. ribosomes
C. ER and nucleolus
D. ribosomes and centrioles
Answer: D
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<b>33.</b> Site of formation of ribosomal precursor/ribosomal subunits in cell is
A. nucleus
B. nucleolus
C. Golgi body

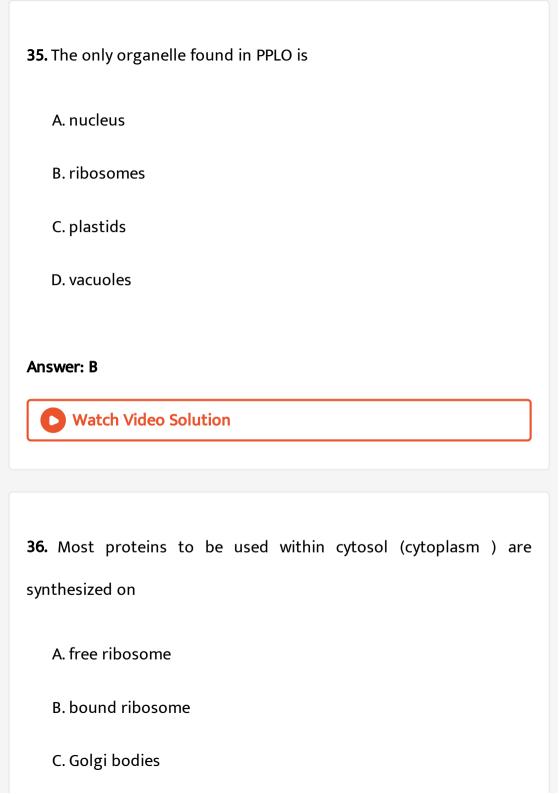
D. stroma	
Answer: B	
Watch Video Solution	
<b>34.</b> Ribosomes are attached to ER through	
A. rRNA	
B. Hydrophobic attraction	

C. Ribophorins

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D. tRNA

**Answer: C** 



D.	nucle	eus

#### **Answer: A**



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- 37. Ribosomes differ from cell to cell/species to species in
  - A. types of membranes
  - B. types of rRNA
  - C.  $Mg^{\,+\,+}$  concentration
  - D. all of these

#### **Answer: B**



- A.  $Mg^{\,+\,+}$
- B.  $Ca^{++}$
- C.  $Fe^{++}$
- D. Mg and Si

#### **Answer: A**



**39.** Ribosomes are composed of

- A. DNA and protein
- B. rRNA and protein
- C. Nucleoproteins +  $Mg^{+\,+}$  + tRNA

D. DNA, rRNA and proteins

**Answer: B** 



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- **40.** Subunits of prokaryotic ribosomes are
  - A. 50 S + 50 S
  - B. 50 S + 30 S
  - C.40 S + 30 S
  - D. 60 S + 40 S

**Answer: B** 



41.70 S type of ribosomes found in:-A. Eukaryotic cells B. Prokaryotic cells C. Mitochondria D. Both B and C **Answer: D Watch Video Solution** 42. In eukaryotic cell, the type of ribosomes is A. 70 S B. 80 S

C. 70 S & 80 S both

D. none
Answer: C
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<b>43.</b> Which organoid (organelle) is located near the nucleus and contains stack of flattened cisternae (tubular) structures?
A. Chloroplast
B. Golgi bodies
C. Centrosome

D. Centriole

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**Answer: B** 

A. DNA and RNA B. Proteins, DNA and lipids C. Proteins, phospholipids and enzymes D. Respiratory enzymes and digestive enzymes **Answer: C Watch Video Solution** 45. In plant cells the number of golgi bodies increases during A. food synthesis B. cell division C. translocation

44. Golgi bodies contain

D. respiration

# Answer: B **Watch Video Solution** 46. One of the organelles showing polarity is A. ribosomes B. vacoule C. Golgi bodies

**Answer: C** 

D. lysosomes



47. Which part of sperm is formed by Golgi bodies?

A. Middle piece
B. Axial filament
C. Neck
D. Acrosome
Answer: D
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<b>48.</b> Secretory vesicles are pinched off as zymogen granules from
side of dictyosomes.
A. convex
B. concave
C. plain
D. all sides

### **Answer: B**



**49.** In plant cell, which organelle secrets pectin, hemicellulose, proteins and microfibrils of cellulose to make cell wall?

- A. ER
- B. plasma membrane
- C. dictyosomes
- D. glyoxysomes

#### **Answer: C**



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50. Golgi apparatus serves as the centre of

- A. proteins production
- B. enzyme production
- C.  $\beta$  oxidation of fatty acids
- D. carbohydrates metabolism

#### **Answer: D**



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- 51. Unicisternal dictyosomes are found in
  - A. plant cells
  - B. fungi
  - C. bacteria
  - D. algal cell

### Answer: B



52. Golgi complex takes part in formation of

A. acrosome of sperm

B. cortical granules and vitelline membrane of oocytes

C. yolk in egg

D. all of the above

# Answer: D



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A. Autophagy

B. Extracellular secretions

53. Which is not under the control of distyosomes?

- C. Cell plate formation
- D. Galactose synthesis

#### **Answer: A**



# **54.** Golgi complex is specialized for

- A. energy transduction
- B. glycosidation of lipids
- C. digestion
- D. sphaerosome formation

#### **Answer: B**



- **55.** Protein synthesis can occur in
  - A. nucleoplasm and cytoplasm
  - B. mitochondria and chloroplast
  - C. ribosome and centrosome
  - D. all of the above

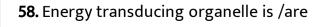
#### **Answer: B**



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- **56.** Pyrenoids are centre of
  - A. fat storage
  - B. starch storage
  - C. protein formation
  - D. enzyme formation

# **Answer: B Watch Video Solution** 57. Cup-shaped chloroplast in present in A. Spirogyra B. Chlamydomonas C. Ulothrix D. All **Answer: B Watch Video Solution**



- A. Chloroplast
- B. mitochondria
- C. both of the above
- D. none, as no cell is an energy transducer

#### **Answer: C**



**59.** A piece of carrot and a flower is put in water separately. The water becomes coloured in case of carrot but remains colourless in case in flower. It is because

- A. in carrot, Anthocyanin pigments are found in cell sap which are
  - water soluble
- B. in flowers, carotenoid pigments are fat soluble and found in chromoplast and do not come out in water.

C. In flowers pigments are found in cytoplasm while in carrot, pigments are localized in vacuoles.

D. (1) and (2)

Answer: D

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# **60.** The cell with in cell, organelle is

A. RER

B. mitochondria

C. both (1) & (2)

D. bacteria

## Answer: B



61. Cell organelles with own genome system and considered to be semiautonomous are

A. chloroplasts and nucleus

B. chloroplast and mitochondria

C. chloroplast

D. chloroplast, centrioles & mitochondria

#### **Answer: B**



**62.** Biogenesis of chloroplast and mitochondria is

A. de novo

B. from ER/nuclear membrane

D. GERL system **Answer: C Watch Video Solution** 63. The chlorophyll pigments are located in the chloroplast in its A. membrane part B. grana region C. stroma region D. loculus **Answer: B Watch Video Solution** 

C. from preexisting organelle

<b>64.</b> Which one is common in nucleus, chloroplast adn mitochondria ?
A. 80 S Ribosomes and DNA
B. Circular and nakes DNA
C. Double limiting membrane
D. All of the above
Answer: C
Watch Video Solution
65. Plastids present in unilluminated cells are
A. Chloroplast
B. chromoplast
C. leucoplast
D. proplastid

# **Answer: C Watch Video Solution** 66. Chlorophyll pigments are readily soluble in A. water B. acids/alkalies C. acetone/alcohol D. all of these





67. Pigment absent in chromoplast

A. anthocyanin B. carotene C. xanthophyll D. all of the above **Answer: A Watch Video Solution** 68. Thylakoid are found in the plastids of A. bacteria B. blue green algae C. higher plants D. all of these **Answer: C** 



69. Thylakoids are found in

A. bacteria

B. blue green algae

C. higher plants

D. all of these

### **Answer: D**



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70. Protein synthesis occurs in cell in

A. cytoplasm only

B. cytoplasm, mitochondria and chloroplast

- C. ribosome attached on nuclear envelope
- D. nucleolus and cytoplasm both

#### **Answer: B**



#### 71. In Mitochondria, Cristae act as sites for

- A. protein systhess / translation
- B. oxidation reduction reactions
- C. breakdown of molecules
- D. phosphorylation of molecules

#### **Answer: B**



72. Animal cells have more mitochondria than plant cells because
A. plant cells need less energy
B. animal cells do not have chloroplast
C. both correct
D. both wrong
Answer: B
Answer: B  Watch Video Solution
Watch Video Solution

D. All correct

C. Phosphates

#### Answer: A



**74.** Oxysomes/Elementary particles/ $F_0-F_1$ particles are centre of oxidative phosphorylation and found in

- A. matrix of mitochondria
- B. thylakoids
- C. inner menbrane of mitochondria
- D. all wrong

#### **Answer: C**



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75. Enzyme ATPase is found in ...... of oxysome.

- A.  $F_1$
- B.  $F_0$
- C.  $F_1 F_0$  particle
- D. none of the above but in cytoplasm

#### **Answer: A**



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- 76. Enzymes for ETS in mitochondria are located in
  - A. inner membrane
  - B. oxysomes
  - C. outer membrane
  - D. matrix

#### Answer: A



77. Which one is absent in human RBC?

A. Biomembrane

B. Enzymes

C. Hyaloplasm

D. Kreb's cycle

#### **Answer: D**



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78. Point out the wrong matching.

A. Mitochondria - Respiration

B. Plastid - Photosynthesis

- C. Ribosome Carbohydrates
- D. Cytoplasm RNA

#### **Answer: C**



**79.** Which of the following observations most strongly support the view that mitochondria contain transport enzymes aggregated into compact association ?

- A. Mithochondria have a property to concentrate in cells which form locomotory structres.
- B. Disruption of mitochondria yields membrane fragments which are able to syntesize ATP.
- C. Mitochondria have a folded inner membrane.

D. A contractile protein capable of utilizing ATP is obtained from mitochondria

#### **Answer: B**



80. If a living cell is placed anaerobic condition its

A. mitochondria will multiply

B. mitochondria will disappear

C. ER will disappear

D. mitochondria and ribosomes multiply speedly

#### **Answer: B**



- **81.** Outer and inner membranes of mitochondria are
  - A. structrually and functionally similar
  - B. structurally different but functionally similar
  - C. structurally similar but functionally different.
  - D. Structurally and functionally different.

#### **Answer: D**



- **82.** Antibiodies are produced and secreted by plasma cells. Which of the following organelles must be well developed for effective antibody synthesis?
  - A. smooth ER
  - B. mitochondria

D. rough ER		
Answer: D		
Watch Video Solution		
83. Which organelle can store large amount of calcium?		
A. Lysosomes		
B. glyoxysomes		
C. Mitochondria		
D. Golgi bodies		
Answer: C		
Watch Video Solution		

C. storage vacuole

<b>84.</b> Which organelle can reduce the number of other organelles ?		
A. Oxysome		
B. Mitochondrion		
C. Lysosome		
D. None of these		
Answer: C		
Watch Video Solution		
85. In granular leucoytes (WBC) like neutrophils the granules are		
A. ribosomes		
P. polysomes		
B. polysomes		
C. lysozymes		

# Answer: D



86. Secondary lysosomes should have

- A. only enzymes
- B. enzymes and food particles
- C. food particles only
- D. undigested food only

#### **Answer: B**



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**87.** When lysosomes burst, they release their enzymes and digest entire cell. It is called

- A. autolysis

  B. autophagy

  C. endocytosis

  D. exocytosis

  Answer: A

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- 88. Which one is incorrect with reference to lysosome?
  - A. They are filled with acid hydrolase and other enzymes.
  - B. They are monomorphic and uniform in structure and function.
  - C. They may be autophagic.
  - D. They can digest proteins, nucleic acids, lipids and polysaccharides

# Answer: B



89. In plant cells, peroxisomes are associated with

- A. Phototropism
- B. Photosynthesis
- C. Photorespiration
- D. Photoperiodism

#### **Answer: C**



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90. Gloxysomes and peroxisomes are

A. microbodies B. cell inclusions C. ergastic bodies D. all of these **Answer: A Watch Video Solution** 91. Plants can convert fatty acids into sugar by A. glycolysis B. glyoxylate cycle C. Photorespiration D. krebs'cycle Answer: B



- 92. Malfunctioning of lysosomes results in
  - A. accumulation of waste materials
  - B. malignant transformation of cells
  - C. inborn diseases
  - D. all of the above.

#### Answer: D



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- 93. Which organelle converts cellular polymers into monomers?
  - A. Lysosomes
  - B. Golgi bodies

D. Plastids
Answer: A
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<b>94.</b> Lysosomes arise through the
A. Golgi complex
B. SER
C. RER
D. GERL System
Answer: D
Watch Video Solution

C. SER

<b>95.</b> Lysosomes are called		
A. power house		
B. energy transducer		
C. disposal units of cell		
D. all correct		
Answer: C		
Watch Video Solution		
<b>96.</b> The organelle present in germinating seeds and connecting with $\beta$ -oxidation or fat digestion is		
A. glyoxysomes `		
B. cytosol		
C. mitochondria		

D. s	phaerosomes
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#### **Answer: A**



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- 97. Lysosomes are called suicidal bags because they have
  - A. phagocytic activity
  - B. hydrolytic enzymes
  - C.  $\beta$  oxidation enzymes
  - D. all of these

#### **Answer: B**



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- **98.** Polymorphism is shown by

  A. lysosomes
  - B. glyoxysomes
  - C. peroxisomes
  - D. all microbodies

#### Answer: A



- **99.** In which one of the following would you expect to find glyoxysomes
  - A. Endosperm of wheat
  - B. Endosperm of castor
  - C. Palisade cells in leaf

D. Root hairs

#### **Answer: B**



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**100.** Plant lysosomes rich in fats and taking part in synthesis of fats, are

- A. sphaerosomes
- B. glyoxysomes
- C. microsomes
- D. lysosomes

#### Answer: A



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101. Organelles having enzymes involved in photorespiration are

A. mitochondria, chloroplast & peroxisomes

B. mitochondria, nucleus and ribosomes

C. mitochondria, glyoxysomes and peroxisomes

D. mitochondria, chloroplast & glyoxysomes

#### **Answer: A**



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**102.** In the process of metamorphosis of amphibians, the embryonic tissues are digested by

A. golgi apparatus

B. residual bodies

C. lysosomes

D. peroxisomes

#### **Answer: C**



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#### 103. Peroxisomes are found in

A. plant cells

B. animal cells

C. both (1) & (2)

D. bacteria

#### **Answer: C**



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104. Which of the following stores calcium required for muscle contraction?

A. Smooth ER

**B.** Microfilaments

C. GB

D. RER

#### **Answer: A**



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105. The glycolate metabolisam occur in

A. lysosomes

B. ribosomes

C. glyoxysomes

D. peroxisome
nswer: D
Watch Video Solution
<b>06.</b> The enzyme called Marker enzyme in lysosome is
A. acid phosphatase
B. peroxidase
C hyaluronidasa

D. catalase

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Answer: A

**107.** Electron microscopy has revealed that the Golgi complex is involved in the

- A. formation of primary lysosomes
- B. development of ribosomes
- C. accumulation of lipoproteins
- D. accumulation of proteins

#### **Answer: A**



**108.** An individual was on a fast for a long period of time. Which cell organelle would be the most likely one to respond to the distress signal?

A. (a) Nucleolus

- B. (b) ER
- C. (c) Golgi complex
- D. (d) Lysosome

#### Answer: D



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### **109.** Microtubules help in

- A. cilia, flagella, centrioles, spindle aparatus formation/cell division
- B. chromosomal fibres, nerve processes, endocytosis
- C. cell motility and cell shape, muscle contraction
- D. all the above are correct

#### Answer: A



110. Filaments present in flagella/Cilia are

A. microtubules

B. microfilaments

C. microfibrils

D. microvilli

#### Answer: A



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111. Sweeping type of rhythmic movements are shown by

A. flagella

B. cilia

C. both (1) & (2)	
D. centrosome	
Answer: B	
Watch Video Solution	
<b>112.</b> Which is not a compartment in th	16
A Nuclous	

e plant cell ?

A. Nucleus

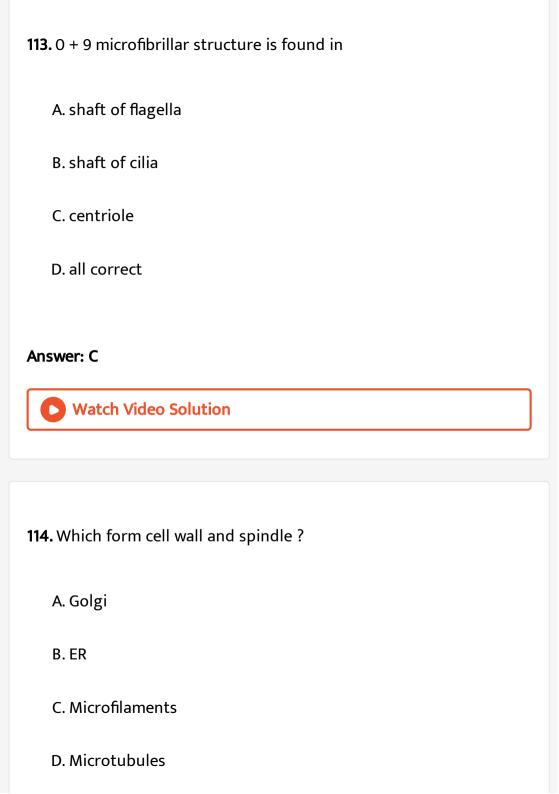
B. Centriole

C. Mitochondria

D. Chloroplast

#### **Answer: B**





# Answer: D Watch Video Solution

115. Cytoplasmic streaming and function of microvilli depend on

- A. microtubules
- B. microfilaments
- C. centriole
- D. all of these

**Answer: B** 



116. Tubulin protein occurs in

A. enzymes B. RER C. microtubules and cilia D. microfilaments and microvilli **Answer: C Watch Video Solution** 117. Centrosome is A. a nuclear structure of animal cell B. cytoplasmic structure of only animal cells C. cytoplasmic structure of both plant and animal cells D. cytoplasmic structure of plant cells Answer: b



**118.** Microfilaments were discovered by Paleviz et al, 1974. These are formed of

A. actin

B. tubulin

C. myoglobin

D. myosin

#### **Answer: A**



**119.** Microtubules are found in

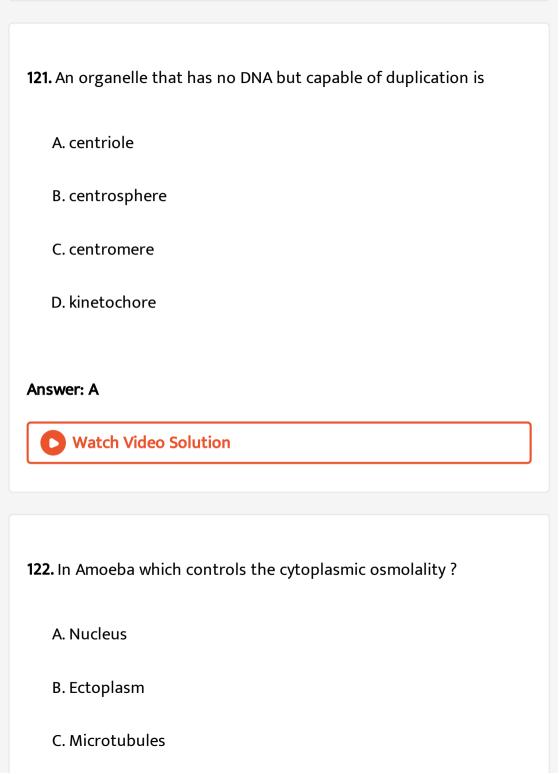
A. bacteria

C. prokaryotic cells D. microvilli **Answer: B Watch Video Solution** 120. Arrangement of microtubules in basal bodies is A. 9 pairs in circle B. 9 triplets in circle C. 9 pairs in circle + 2 axial D. 2 in circle and 9 in periphery

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Answer: B

B. eukaryotic cells



D.	Con	tract	ile v	vacu	ıole
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#### **Answer: D**



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#### 123. A large and mature plant cell has

A. many vacuole

B. no vacuole

C. a large vacuole

D. many small vacuoles & a large vacuole

#### Answer: C



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## **124.** Cells of aleurone layer contain

A. fats

B. starch

C. proteins

D. sugars

#### Answer: C



#### **125.** The layer of vacuole is

A. plasmalemma

B. tonoplast

C. sarcolemma

D. cytoplasmic membrane	
Answer: B	
Watch Video Solution	
<b>126.</b> Contractile vacuoles help in	
A. excretion	
B. osmoregulation	

C. osmoregulation and respiration

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D. digestion

**Answer: B** 

127. The anthocyanin	pigments	responsible fo	r colour	of petals are
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- A. water soluble and located in cell sap
- B. water soluble and located in chloroplast
- C. water soluble and located in chromoplast
- D. water insoluble and located in cell sap

#### **Answer: A**



- 128. At maturity which of the following is enucleate?
  - A. Sieve cell
  - B. Companion cell
  - C. Palisade cell

D. Cortical cell	
Answer: A	
Watch Video Solution	
<b>129.</b> Nucleus was discovered in root cells of orchids by	
A. Robert Brown	

B. Robert Hooke

C. Straburger

D. Bowman

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**Answer: A** 

**130.** Nucleus is the site of

A. m-RNA systhesis

B. assemblage of ribosomal units

C. both (1) & (2)

D. DNA and protein synthesis

#### **Answer: B**

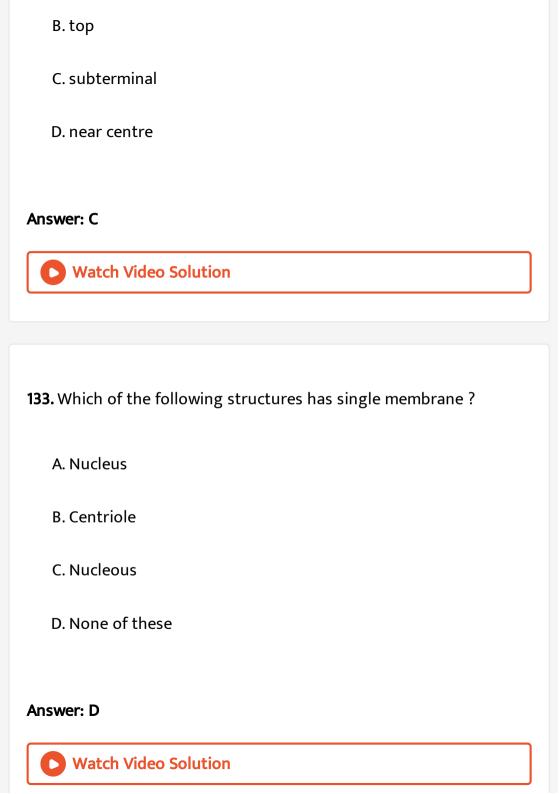


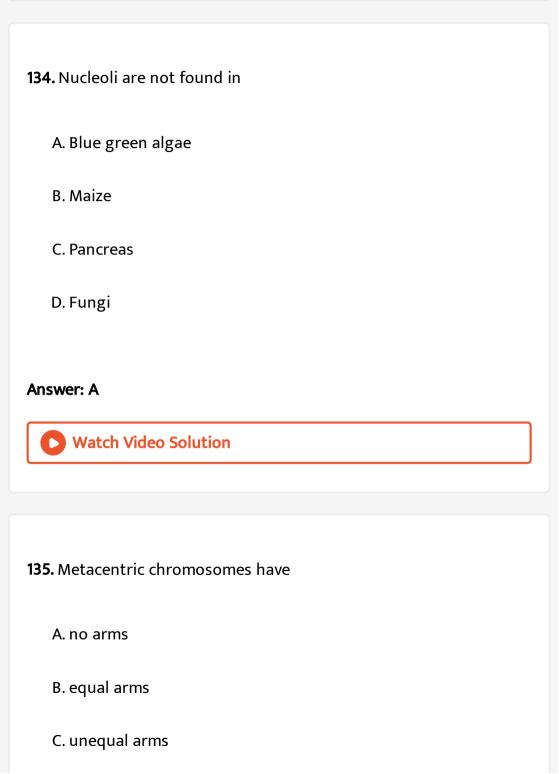
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131. Below are given a few cell organelles:

- (a) Nucleus
- (b) Lysosomes
- (c) Peroxisomes
- (d) ER
- (e) Mitochondria

(f) Centrioles (g) Plastids Select the correct choice of organelles not bounded by two lipoprotein membranes. A. b, c, d, f B. a, e, f C. d, a, e, g D. b, c, f Answer: A **Watch Video Solution** 132. Chromosomes at anaphase are of various shapes depending upon position of centromere. It is J shaped when centromere is A. middle





D. one arm
Answer: B
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<b>136.</b> L- shaped chromosomes are termed :
A. telecentric
B. submetacentric

C. sex chromosome

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D. acrocentric

**Answer: B** 

**137.** Centromere is required for

A. DNA duplication

B. cytoplasmic cleavage

C. chromosome segregation

D. poleward movement of chromatids

#### Answer: C



**138.** Coiled dense, deep stain portions of chromosomes are designated as

A. pellicle

B. heterochromatin

C. euchromatin

D. heterochromosomes

#### **Answer: B**



**Watch Video Solution** 

**139.** Chromosomes are best observed at metphase. For studying the shape, best stage is

- A. early prophase
- B. anaphase
- C. telophase
- D. late prophase

#### **Answer: B**



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<b>140.</b> Nuclear membrane is derived from
A. ER
B. plasma membrane
C. membrane of mitochondria
D. nucleoplasm
Answer: A
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141. Nucleoproteins are synthesized by
<b>141.</b> Nucleoproteins are synthesized by
141. Nucleoproteins are synthesized by  A. SER

#### Answer: C



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**142.** The eukaryotic cells are essentially two envelope system because they contain

- A. cell wall and plasmamembrane
- B. plasmamembrance and nuclear membrane
- C. plasmamembran and thylakoid
- D. double membrance bound cell organelles

#### **Answer: B**



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**143.** Which of the following statements justifies that " the cell is a self-contained unit"?

A. It independently carries out all fundamental biological processes.

B. It oxidises food molecules to produce energy and utilises this energy to synthesise complex molecules.

C. Reproduces with similar herediatary properties.

D. All of the above

#### **Answer: D**



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**144.** Functionally like prokaryotes but otherwise found in eukaryotes

in

- A. muscle cell
- B. erythrocyte
- C. PPLO
- D. thrombocyte

#### **Answer: B**



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**145.** The ER acts as a circulatory or transporting system. Choose the correct path of transport of substances.

- A. Lysosome  $\;
  ightarrow\;$  Golgi-membrane  $\;
  ightarrow\;$  Agranular ER  $\;
  ightarrow\;$ 
  - Granular ER
  - B. Granular ER  $\;
    ightarrow\;$  Golgi membrance  $\;
    ightarrow\;$  Lysosomes

#### **Answer: B**



membrance

**146.** Which of the following is related to glycosidation of lipids and glycosylation of protein ?

A. Golgi body

B. Mitochondria

C. Lysosome

D. Peroxisome

#### Answer: A



**147.** The membrane of endoplasmic reticulum remains continuous with membrane of

- A. plasma membrance and lysosome
- B. Golgi-complex and plastids
- C. plasma -membrane and ER
- D. plasma membrane and nuclear membrane

#### Answer: D



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- A. Lysosome & vacoules & ribiosomes
  - B. microtubules
  - C. microfilaments and microtubules
  - D. all of the above

#### **Answer: C**



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- 149. The larger and smaller subunits in 80 S ribosome are
  - A. 50 S, 30 S
  - B. 60 S, 40 S
  - C. 40 S, 60 S
  - D. 30 S, 50 S

#### Answer: B



150. The functional unit in the synthesis of protein is

A. peroxisome

B. dictyosome

C. microsome

D. polysome

#### Answer: D



151. A cell organelle common in Protista and Monera is

A. Vacuole

B. Chloroplast

C. Lysosome
D. Ribosome
answer: D
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<b>52.</b> Which of the following is not a function Golgi complex ?
A. Biosynthesis of polysaccharides
B. Packaging of proteins
C. Differentiation of cellular membrances

D. Synthesis of fatty acids

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**Answer: D** 

<b>153.</b> Enzymes of citric acid or Krebs cycle occur in
A. on inner mitochondrial membrane
B. in the matrix

C. on outer mitochondrial membrane

D. none of these

#### **Answer: B**



#### 154. Mitochondria are non-existent in

A. red algae

B. bacteria

C. green algae

D. all of these

#### **Answer: B**



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155. The endosymbiotic theory is concerned with

- A. orgin of lichens
- B. origin of eukaryotes
- C. origin of chloroplast and mitochondria
- D. origin of viruses

#### **Answer: C**



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156. Chloroplasts are engaged in

- A. photosynthesis
- B. proteins synthesis
- C. photosynthesis and coding of structural proteins for thylakoid membrane
- D. photosynthesis and detoxification

#### **Answer: C**



#### 157. The thylakoid membrane contains

- A. oxysomes
- B. structurally distinct photosystems
- C. both (1) & (2)
- D. enzymes of dark reaction

#### Answer: B



**158.** Which of the following has/have lysosomes activities in plant cells?

- A. Spherosomes
- **B.** Glyxysomes
- C. Ribosomes
- D. All of these

#### **Answer: A**



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A. amino acid metabolismB. photorespirationC. beta-oxidation/digestion of fatsD. all of the above

#### **Answer: C**



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**160.** When a lysosome fuses with a phagosomes/food, it result in the formation of

- A. primary lysosomes
- B. residual body
- C. autophagic vacuole
- D. secondary lysosome

# **Watch Video Solution** 161. Demolition squad of the cell is A. dictysosome B. RER C. glyoxysomes D. lysosome Answer: D **Watch Video Solution** 162. A close relationship between ER, lysosome and dictyosomes is

Answer: D

denoted as

A. vacuolar sytem B. GERL C. annulate lamellae D. internal mileu Answer: B **Watch Video Solution** 163. Some of the enzymes, which are associated in converting fats into carbohydrates, are present in " " Or Site of gluconeogenesis is A. liposomes B. Golgi bodies C. microsomes

Answer: D
Watch Video Solution
<b>164.</b> During starvation, energy is supplied by
A. lysosomes
B. centrosomes
C. vacuoles
D. chromoplast
Answer: A
Watch Video Solution

D. glyoxysomes

<b>165.</b> Myofibrils are
A. microfilaments
B. microtubules
C. myoglobin
D. ER
Answer: A
Watch Video Solution
<b>166.</b> In fruits and flowers, colour pigments are located in
A. cytoplasm
B. vacuole
C. mesophyll

D. cell membrane
nswer: B
Watch Video Solution
<b>67.</b> Water balance of cell is maintained by
A. ER
B. vacuoles

C. lysosomes

D. all of these

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**Answer: B** 

**168.** The cell structures that are mainly nucleoproteinaceous in nature, usually have

A. single membrane

B. double membrane

C. no membrane

D. any of these

# Answer: C



169. The polynucleate cells of animals and plants are known as

A. syncitial cells and coenocytes respectively

B. coenocytes are syncitial cells respectively

C. coenocytes

D. poly cells

### **Answer: A**



**Watch Video Solution** 

# **170.** Cell wall is

A. living and impermeable

B. permeable, dead with pits

C. dead permeable without pits

D. living semipermeable with pits

# **Answer: B**



**171.** The cemanting layer of pectin between adjacent plant cell is called.

- A. middle lamella
- B. secondary wall
- C. ectoplast
- D. primary wall

## **Answer: A**



**172.** The protoplasmic strands connecting the two adjacent plants cells through which exchange of material occur are called.

- A. plasmalemma
- B. plasmodesmata

- C. tonofibrils

  D. spindle fibres
- **Answer: B**



**173.** During the formation of cell wall the first formed layer of cellulose secreted by Golgi bodies is

- A. middle lamella
- B. Primary wall
- C. Tertiary wall
- D.  $S_1$  layer of secondary wall

# **Answer: B**



<b>174.</b> A cell la	acking cel	wall	would	also la	ack

A. Chloroplast

B. ER

C. mitochondria

D. biomembrane

# Answer: A



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175. Which of one provides hardness to cell wall?

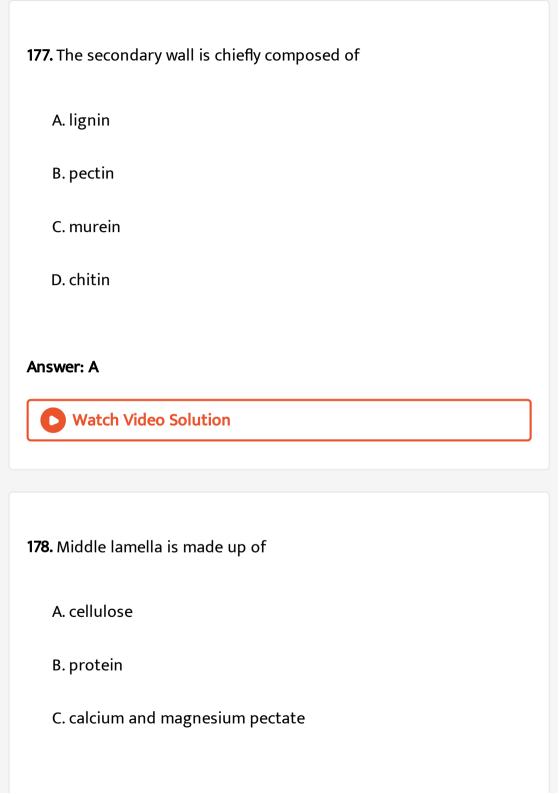
A. Chloroplast

B.  $S_1$  layer of secondary wall

C. Tertiary wall

D. Primary wall
Answer: D
Watch Video Solution
176. Which one provides hardness to cell wall?
A. Callada a
A. Cellulose
B. Suberin
C. Lignin
D. Cutin

**Answer: C** 



D. lipids and lignin	
Answer: C	
Watch Video Solution	
<b>179.</b> Middle lamella is found betweenof adjacent cells.	
A. secondary walls	

B. Primary wall

C. plasmalemma

D. anywhere in cell

**Watch Video Solution** 

**Answer: B** 

<b>180.</b> Which layer of cell wall is found outside cell membrance?
A. Primary wall
B. secondary wall
C. Tonoplast
D. Tertiary wall
Answer: D
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<b>181.</b> Cell wall consists of
A. water, hemicellulose and cellulose+ pectin
B. cellulose , liqids and proteins
C. cellulose + proteins + pectin + water + lipids and hemicellulose

Answer: C
Watch Video Solution
<b>182.</b> The fatty chemical substance in cork cell wall is
A. lignin
B. chitin
C. cutin
D. suberin
Answer: D

D. microfibrils and pectin

<b>183.</b> Which layer has more cellulose ?
A. Primary wall
B. Secondary wall
C. Cell membrance
D. Middle lamella
Answer: B
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<b>184.</b> Membrane proteins are
A. cellulase
B. lyases
C. permeases

D. All of these
Answer: C
Watch Video Solution
<b>185.</b> Unthickened area in secondary wall is called

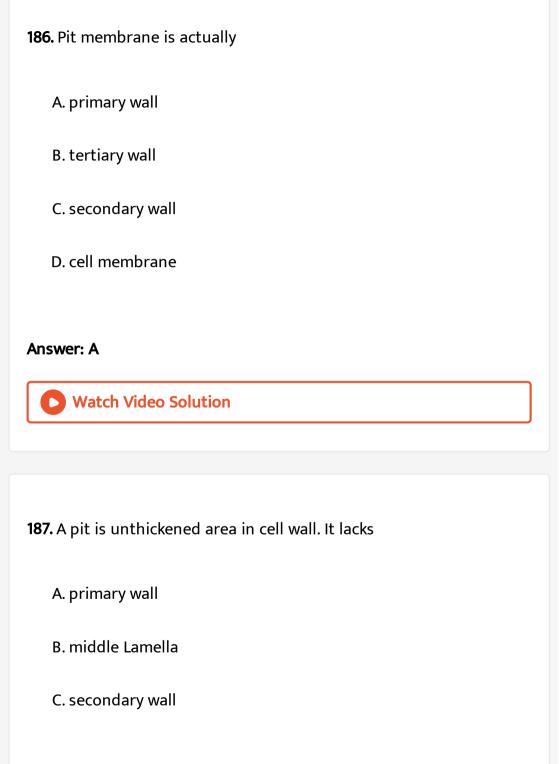
A. stome

B. torus

C. pit

**Answer: C** 

D. plasmodesma



D. cell wall and cell membrane

#### Answer: C



**Watch Video Solution** 

**188.** A phospholipid molecule is amphipathic and produce two layers coming in contact with  $H_2O$ . The head of phospholipid molecule is

- A. at the periphery
- B. towards the centre
- C. at the angle of  $40^{\circ}$
- D. embendded in protein molecules

### Answer: A



**189.** Carbohydrate molecules attached to lipid and protein molecules from Glycocalyx (ex-traneous coat). These carbohydrates are usually

- A. monosaccharides
- B. polysaccharides
- C. oligosaccharides
- D. starch

#### **Answer: C**



**190.** Fluid mosaic model for the structures of plasma membrane explains

A. a single lipid layer in between 2 protein layers

B. a layer of proteins on one sides and a bilayer lipid on other side

C. 2 lipid layers and 1 protein Layer

D. a middle phospholipid bilayer with proteins both inside and on outer side of lipids bilayer

# **Answer: D**



**191.** Cell recognition and adhesion are facilitated by components of plasma membrane. These components are generally

A. lipids

B. proteins

C. both (1) & (2)

D. glycolipids and glycoproteins

#### **Answer: C**



**Watch Video Solution** 

# 192. Biomembrance are

A. asymmetric and solid sheet like

B. symmetric and globular

C. asymmetric and fludiy

D. symmetric and fluidy

### Answer: c



**193.** Lipid molecules (Phospholipids) are amphiatic. Each moleucle has

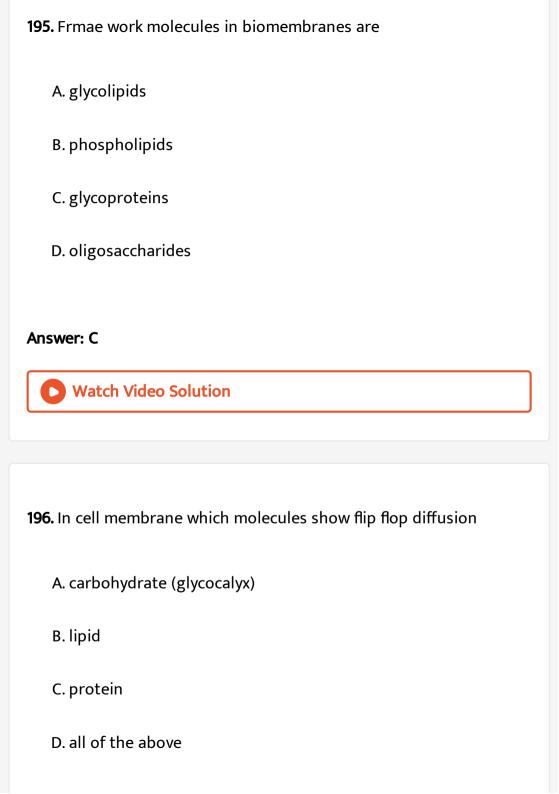


**194.** Beet root if kept in cold water anthocyanin does not come out due to plasma membrane

- A. dead
- B. impermeable to anthocyanin
- C. permeable to anthocyanin
- D. differential permeable

# **Answer: C**





## **Answer: B**



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**197.** An Amoeba survives in a hypotonic solution that destroys a human RBC. It is due to

A. membrane permeability of Amoeba is much more than the membrane of a RBC.

- B. Amoeba has water expelling contractile vacuoles
- C. both (1) and (2) are correct
- D. amoeba has a rigid wall

### **Answer: C**



**198.** The plasmalemma allows the passage of liquids engulfed in vesicles and passed on to the cytoplasmic vacuoles. This process of bulk drinking is called

A. phagocytosis

B. reverse pinocytosis

C. exocytosis

D. pinocytosis

# **Answer: D**



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199. Lipid bilayers in biomembranes are barrier to

A. polar molecules

B. non polar molecules

- C. both polar and non polar molecules
- D. none

## **Answer: A**



# 200. The fluid mosaic model explains

- A. structural aspects of cell membrane
- B. functional aspects of cell membrane
- C. structural and functional aspects both
- D. none of the above

# **Answer: C**



201. Fluidity/flexibiliy of a cell membrane is due to are
A. lipids
B. proteins
C. water
D. oligosaccharides
Answer: A
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202. Transmembrane proteins in cell membrane are
A. intrinsic proteins
B. extrinsic proteins
C. glycocalyx
D. tunnel proteins

### **Answer: D**



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**203.** The functional characteristics of a Plasma membrane in fluid mosaic model are determined by

- A. extrinsic proteins
- B. intrinsic proteins
- C. both (1) & (2)
- D. lipid molecules

# **Answer: C**



**204.** The channels and pumps that control molecular traffic in and out of a cells are collectively known as

A. intrinsic proteins

B. permeases

C. receptors

D. cytochromes

# **Answer: B**



205. A membrane is held together primarily by

A. hydrophobic attractions

B. hydrophilic attractions

C. covalent bonds

D. ionic bonds	
nswer: A	
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<b>06.</b> Absorptive cells on free surface bear	
A. flagella	
B. microvilli	

C. desmosomes

D. pseudopodia

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**Answer: B** 

207. Carbohydrates in cell membrane participate in

A. transportation of materials

B. cell to cell recognition

C. catalysing reactions

D. all of the above

## **Answer: B**



**208.** Cell membrane has proteins, lipids and carbohydrates. With respect to their mutual proportions, which statement is correct?

A. All the three are in equal proportion

B. Lipids are in least proportions

C. Carbohydrates are in least proportions.

D. Proteins are in least amount

#### Answer: C



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**209.** Purple cabbage leaves do not loose their colour in cold water but do so in boiling water because

- A. boiling water enters the cell easily
- B. plasmalemma is killed in boiling water
- C. pigment is not soluble in cold water
- D. cell wall is coagulated in boiling water

### **Answer: B**



210. Plasmalemma of two adjacent cells are fussed in case of				
A. terminal bars				
B. tight junctions				
C. microvilli				
D. desmosomes				
Answer: B				
Watch Video Solution				
211. Intercellular junction in animal cell is				
211. Intercellular junction in animal cell is  A. middle lamella				
A. middle lamella				

## **Answer: B**



**Watch Video Solution** 

**212.** Poisons like cyanide inhibit  $Na^+$  influx during cellular transport.

This inhibitory effect is reversed by an injection of ATP. This demonstrates that

- A.  $Na^{\,+}\,-K^{\,+}$  pump operates fully in cells
- B. ATP is hydrolysed by ATPase to release energy
- C. Energy for  $Na^+-K^+$  pump comes from ATP hydrolysis
- D. ATP is a carrier protein

### **Answer: C**



<b>213.</b> Protein iceber	gs in	a sea	of lipids	means

A. units membrane model

B. fluid mosaic model

C. lamellar / sandwich model

D. micellar model

# **Answer: B**



**Watch Video Solution** 

# 214. Microfibrils are related to

A. Cellulose

B. chloroplast

C. SER

D. Phospholipids

#### Answer: A



**Watch Video Solution** 

**215.** The overarching secondary wall which encloses a part of the pit cavity is called

A. pit border

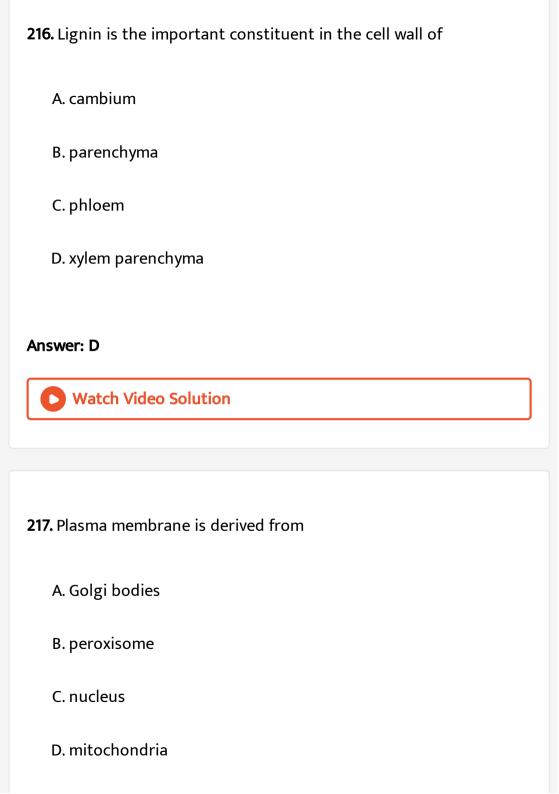
B. pit membrane

C. pit aperture

D. pit canal

### Answer: A





# Answer: A Watch Video Solution

# **218.** Desmosomes possess

- A. desmotubules
- B. intercellular cementing material
- C. myofibrils
- D. all of the above

#### **Answer: B**



219. Which is wrong?

- A. Cell junctions are found in animal cells only
- B. Cell junctions are absent in plant cells
- C. Plasmodesmata are cytoplasmic connections in plant cells
- D. Cell junctions and plasmodesmata are found in plant and animal cells respectively

#### **Answer: D**



# 220. Membranes fluidity

- A. decreases with rise in temperature
- B. decreases with lowering of temperature
- C. increases with lowering of temperature
- D. no effect observed w.r.t. temperature

#### **Answer: B**



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**221.** One of the following methods of transporation does not involve a change in extrinsic and intrinsic proteins ?

- A. Active transport
- B. Simple diffusion
- C. Facilitated diffusion
- D. Both (2) & (3)

#### **Answer: B**



A. cytolysis B. cellular excretion C. cell division D. cell adherence **Answer: D Watch Video Solution** 223. Trans proteins of the plasma membrane are often also called A. tunnel proteins B. surface proteins C. globular proteins D. extrinsic proteins Answer: A

**224.** Plasmodesmata are junctions between plant cells. These involve modification of

A. plasma membrane

B. cell wall

C. plasma membrane as well as cell wall

D. intercellular material

Answer: C



**Watch Video Solution** 

225. Flagella of prokaryotic and eukaryotic cells differ in

A. location in cell and mode of functioning

- B. type of movement and placement in cell.
- C. microtubular organization and functioning
- D. microtubular organization and type of movement

#### **Answer: D**



- **226.** Read the statements given below with regard to the function performed by Golgi apparatus
- I. Transport and chemically modify the material contained within it.
- II. Stores and synthesizes fats.
- III. Secrets slime in the insectivorous plants
- Which of the following is the correct answer?
  - A. I is wrong but II and III are correct
  - B. II wrong but I and III are correct

- C. II and III are wrong but I is corrrect

  D. All are correct
- **Answer: B**



# 227. Which one is not properly paired

- A. Golgi apparatus  $\ -\$  Breaking of complex macromolecules
- B. Endoplasmic reticulum Protein synthesis
- C. Chloroplast Photosynthesis
- D. Mitochondria Oxidative phosphorylation

#### **Answer: A**



**228.** Which group of organelles is involved in synthesis of substances needed by cell ?

A. Lysosome, vacuole, golgi body

B. Ribosome, rough ER, smooth ER

C. Rough ER, microtubule, ribosome

D. Smooth ER, lysosome, vacuole

#### Answer: B



**Watch Video Solution** 

229. Lysosomes are never involved in

A. Autophagy

B. Extracellular digestion

C. Intracellular digestion

D. Synthesis of lysosomal enzymes

#### **Answer: D**



**Watch Video Solution** 

**230.** Match List -I with List - II and select the correct answer using the codes given below the lists

Histocompatibility

codes given below the lists						
	List- I		List-II			
A.	Dictyosomes	1.	Storage			
B.	Glycocalyx	2.	Symplast			
C.	Vacuoles	3.	Transport			
D.	Plasmodesmata	4.	secretion			

5.

$^{\wedge}A$	B	C	D
A. $\frac{A}{4}$	5	1	<b>2</b>
B. $rac{A}{3}$	B	C	D
3	4	2	1
c. ${A\over 4}$	B	C	D
4	5	3	<b>2</b>
D. $rac{A}{4}$	B	C	D
ט. 4	3	1	<b>2</b>

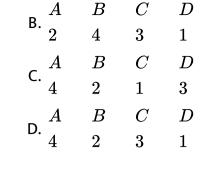
#### **Answer: A**



**231.** Match list -I (Function of proteins of cytoskeleton) with list - II (Proteins involved in the given functions) and select the correct answer using the codes given below the lists.

List-I (Function of Proteins of cytoskeleton)		List-II (Proteins involved in the Given Functions)		
A.	Contraction of micro filaments.	1.	Peroxisomes	
B.	Inhibition of polymerization of	2.	Actin	
	microtubules. Breakdown of xenobiotics	3.	Dynein	
D.	Movement of cilia and flagella.	4.	Colchicine	

A. 
$$egin{array}{cccc} A & B & C & D \ 2 & 4 & 1 & 3 \end{array}$$



# Answer: A



A. They function at alkaline pH

characteristics of lysosomes?

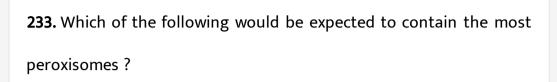
B. They function only within the intracellular compartment

C. They contain enzymes that lack macro molecular specificity

232. Which of the following statements best describes the functional

D. Provide nourishment during starvation

# Answer: D



- A. Heart
- B. Stomach
- C. Liver
- D. Pancreas

#### **Answer: C**



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**234.** Which is correctly matched?

A. Ribosome — Photosynthesis

- B. Centrosome Enzymes of digestion
- C. Lysosomes Synthesis of amino acids
- D. ER Formation of new nuclear membrane

#### **Answer: D**



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# **235.** Go through the following statements :

- (i) Lysosomes contain hydrolytic enzymes which are optimally active at the alka line pH.
- (ii) A number of proteins synthesised by ribosomes on the endoplasmic reticulum are modified in the cisternae of the Golgi apparatus before they are released from its cis face.
- (iii) Typically a mitochondrion has a diameter of 0.2-1.0  $\mu$ m and length of 1.0 4.1  $\mu$ m

(iv) Elaioplasts store oils and fats.

Find out the correct statements

- A. (ii) & (iv)
- B. (iii) & (iv)
- C. (ii), (iii) & (iv)
- D. All are correct

#### **Answer: B**



- **236.** Go through the following statements
- (i) In human beings, the membrane of the erythrocyte has
- approximately 52 percent lipids and 40 percent proteins
- (ii) Lipids are arranged within the membrane with the hydrophobic tails towards the outer side and the polar head towards the inner side.

(iii) As the polar molecules cannot pass through the non-polar lipid bilayer, they require a carrier protein of the membrane to facilitate their transport across the membrane (iv) The endomembrane system includes endoplasmic reticulum,

Golgi complex, lysosomes and peroxisomes

Find out the wrong peroxisomes:

- A. (i), (ii) & (iii)
- B. (ii) & (iii)

C. (ii), (iii) & (iv)

D. (i), (ii) & (iv)

#### Answer: D



**Watch Video Solution** 

237. Match the structures in List - I with the functions in List - II selet the correct answer using the codes given below the lists

D. 
$$A B C D \\ 1 3 2 4$$

238. Which of the following sets of characters represent that of

A. 80 S (30S, 60 S), (16S r -RNA, 23S, r-RNA and 5S r-RNA

B. 70 S (30S, 50 S), (16S r - RNA, 23S, r-RNA and 5S r -RNA

List-II

1.

2.

3.

4.

D

2

D

3

D

3

Lipid storage

RNA-synthesis

 $\beta$  – oxidation of fatty acids

Transport of macromolecules

List - I

 $\boldsymbol{A}$ 

B.

C.

D.

 $\boldsymbol{A}$ 

A.

В.

Nucleolus

Spherosomes

Glyoxysome

Plasmodesmata

B

1

B

2

B

1

C

3

C

4

C

2

eukaryotic cytosolic ribosomes?

C. 80S(40 S, 60 S), (18S r-RNA, 28 S, r - RNA, 5.8S r - RNA and 5S r -

RNA

D. 70 S (40S, 50 S), (18S r-RNA, 28S, r-RNA, 58S r - RNA and 5S r-

RNA)

#### Answer: C



# 239. Consider the following processes

- (i) Breakdown of extra-cellular materials by releasing enzymes into the surrounding medium.
- (ii) Providing nourishment during starvation.
- (iii) Help during remodelling of the bone.
- (iv) Massive production of membrane glycoproteins, ribophorins -I and II for the stabilization of lysosomal investment.

Which of the above is/are function (s) of lysosomes?

A. (i) only B. (i), (ii) and (iv) C. (i), (ii) and (iii)` D. (ii), (iii) and (iv) **Answer: C Watch Video Solution** 240. The correct order of increase in the size of the structures listed below is (i) Proteins (ii) Plant cell (iii) Mitochondria (iv) Ribosomes A. (i), (iv), (iii), (ii)

- B. (ii), (i), (iii) or (iv)
- C. (ii), (iii), (i), (iv)
- D. (iii), (ii), (i), (iv)

#### Answer: A



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**241.** Chloramphenicol, an inhibitor of protein synthesis, would inhibit protein synthesis in mitochondria but would not do so with regard to protein synthesis in the cytoplasm. This suggests that

- A. The mitochondria protein synthesis and the cytoplasmic protein synthesis are of different types
- B. The enzymes machinery of protein synthesis in mitochondria function independently

C. The mitochondria are dependent upon nucleus for its protein synthesis

D. Both 'b' and 'c'

#### **Answer: B**



# **242.** Chloroplasts

- A. Are found in all plant cells
- B. Have chlorophyll as their only pigment
- C. Do not contain any DNA and rely totally on the genes in the
- nucleus for the coding of their required proteins
- D. Are involved in the synthesis of sugar

## Answer: D

**243.** Three of the following statements regarding cell organelles are correct while one is wrong. Which one is wrong.

A. Endoplasmic reticulum consists of a network of membranous tubules and helps in transport, synthesis and secretion.

B. Leucoplasts are bound by two membranes, lack pigment but contain their own DNA and protein synthesizing machinery.

C. Spherosomes are single membrane bound and are associated with synthesis and storage of lipids.

D. Lysosomes are single membrane vessicles budded off from ER and contain oxidative enzymes

#### Answer: D



**244.** The true statement about ribosomes is `

A. Attached ribosomes synthesise proteins mainly for use inside the cell.

- B. Attached ribosomes are 70 S
- C. 16S rRNA is absent in 80 S ribosomes
- D. All of the above

#### **Answer: C**



**Watch Video Solution** 

**245.** Among the following, the molecule that would experience least resistance for entering a cell would be

A. NaCl

- B. Glucose C. Fatty acid D. Amino acid **Answer: C Watch Video Solution**
- **246.** Which group of organelles is involved in anabolic processes in a cell ?
  - A. Lysosome, vacuole, ribosome
  - B. Ribosome, rough ER, smooth ER
  - C. Vacuole, rough ER, smooth ER
  - D. Smooth ER, ribosome, vacuole

Answer: B

**247.** Extracts from 0.5 gm muscle tissur of two different animals were dispensed in unlabelled tubes A and B for an experiment. During the course of an experiment, the tubes got mixed up. When analysed, it was found that tube B contained a large number of mitochondria as compared to the extract in tube A. This shows that the extract in tube B most probably belongs to

- A. Human
- B. Seal
- C. Humming bird
- D. Snail

**Answer: C** 



**248.** Hydrolases may accidentally leak out of the lysosomes but are unlikely to damage any of the internal cellular structures because

A. the cytoplasm contains several coenzymes that inhibit hydrolases from functioning.

- B. hydrolases are only active at an acidic (pH 5.5) pH.
- C. peroxisomes and other organelles absorb free hydrolases
- D. cells rapidly expel all hydrolases via exocytosis

#### **Answer: B**



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249. Which one of the following pairs is not correctly matched?

- A. ER 1. Microbodies
- B. Peroxisome 2. Photorespiration

- C. Golgi complex 3. Protein synthesis
- D. Microtubular organelles 4. Locomotion

#### **Answer: C**



# 250. You would except a cell with an extensive Golgi apparatus to

- A. move actively
- B. make a lot of ATP
- C. secrete a lot of material
- D. store a large quantity of goods

#### **Answer: C**



**251.** Mitochondria come in a variety of shapes and sizes and are accurately described by all of the following statements EXCEPT

- A. It is an organelle with a double membrane
- B. Mitochondria do not rely on the nuclear mRNA for protein synthesis
- C. Mitochondria possess infoldings known as cristae
- D. Usually mitochondria are shaped like rods

#### **Answer: B**



- 252. All of the following statements apply to microtubules EXCEPT
  - A. They are able to move vesicles and other storage inclusions
  - B. They serve a cytoskeletal area

- C. They are linear polymers of tubulin
- D. They make up the thin myofilament (actin) in skeletal muscle

#### **Answer: D**



- **253.** Which of the following statements regarding mitochondrial membrane is NOT correct ?
  - A. The inner membrane is highly convoluted forming a series of infoldings
  - B. The outer membrane resembles a sieve
  - C. The outer membrane is permeable to all kinds of molecules
  - D. The enzymes of the electron transfer chain are embedded in the outer membrane

#### **Answer: D**



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254. Select the wrong statement from the following

- A. both chloroplasts and mitochondria contain DNA.
- B. the chloroplasts are generally much larger than mitochondria
- C. both chloroplasts and mitochondria contain an inner and an outer membrane
- D. both chloroplasts and mitochondria have an internal compartment, the thylakoid space bounded by the thylakoid membrane

#### **Answer: D**



**255.** Which one of the following is not a constituent of cell membrane

- A. Proline
- B. Phospholipids
- C. Cholesterol
- D. Glycolipids

#### **Answer: A**



## 256. Plasmodesmata are

- A. membrane connecting the nucleus with plasmalemma
- B. connections between adjacent cells

- C. lignified cemented adjacent cells
- D. locomotary structures

#### **Answer: B**



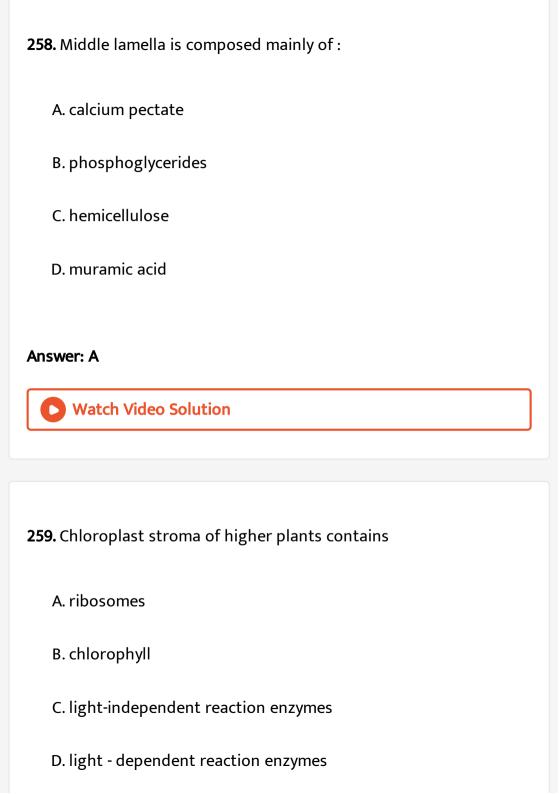
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# **257.** Cytoskeleton is made up of

- A. cellulosic microfibrils
- B. proteinaceous filaments
- C. calcium carbonate granules
- D. callose deposits

#### **Answer: B**





# Answer: C



# 260. There is no DNA in

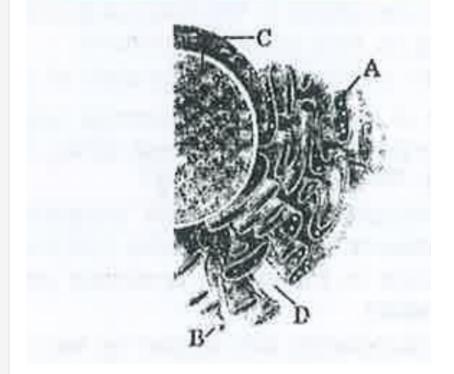
- A. a mature spermatozoan
- B. hair root
- C. an enucleated ovum
- D. mature RBCs

#### **Answer: D**



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**261.** Identify the components labelled A, B, C and D in the diagram below from the list (i) to (viii) given along with



#### Components:

- (i) Cristae of mitochondria
- (ii) Inner membrane of mitochondria
- (iii) Cytoplasm
- (iv) Smooth endoplasmic reticulum
- (v) Rough endoplasmic reticulum
- (vi) Mitochondrial matrix
- (vii) Cell vacuole

(viii) Nucleus

The correct components are

#### Answer: A



**262.** An elaborate network of filamentous proteinaceous structures present in the cytoplasm which helps in the maintenance of cell shape is called

A. Thylakoid

B. Endoplasmic Reticulum

- C. Plamalemma
- D. Cytoskeleton

#### **Answer: D**



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**263.** The plasma membrane consists mainly of

- A. proteins embedded in carbohydrate bilayer
- B. phospholipids embedded in a protein bilayer
- C. proteins embedded in a phospholipids bilayer
- D. proteins embedded in a polymer of glucose molecules

#### Answer: C



**264.** Which one of the following structures between two adjacent cells is an effective transport pathway?

- A. Plasmalemma
- B. Plasmodesmata
- C. Plastoquinones
- D. Endoplasmic reticulum

#### **Answer: B**



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**265.** Which one of the following has its own DNA?

- A. Peroxisome
- B. Mitochondria
- C. Dictyosome

D. Lysosome
Answer: B
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<b>266.</b> The main arena of various types of activities of a cell is
A. nucleus
B. plasma membrane
C. mitochondrian

D. cytoplasm

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**Answer: D** 

- 267. Who first saw and described a live cell
  - A. Anton von Leeuwenhoek
  - B. Matthias Scheiden
  - C. Theodore Schwan
  - D. Rudolf Virchow

#### **Answer: A**



- 268. In animal cells, lipid-like steroidal hormones are synthesized in
  - A. rough Endoplasmic Reticulum (RER)
  - B. smooth Endoplasmic Reticulum (SER)
  - C. Golgi apparatus

D. lysosomes
Answer: B
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<b>269.</b> Which one of the following is not considered as a part of the
endomembrane system ?
A. Golgi complex

B. proxisome

C. vacuole

D. lysosome

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**Answer: B** 

<b>270.</b> Important site for formation of glycoproteins and glycolipids is
A. vacuole
B. Golgi apparatus
C. plastid
D. lysosome
Answer: B
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271. Peptide synthesis inside a cell takes place in
271. Peptide synthesis inside a cell takes place in
271. Peptide synthesis inside a cell takes place in  A. chloroplast

# Answer: D **Watch Video Solution** 272. Peptide synthesis inside a cell takes place in A. chloroplast B. mitochondria C. chromoplast D. ribosomes





**273.** Ribosomes were first observed under the EM as dense particles

by

- A. Robert Brown
- B. Camillo Golgi
- C. George Palade
- D. T.O. Diener

#### **Answer: C**



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274. Which one of the following cellular parts is correctly described

A. Ribosomes - those on chloroplasts are larger (80s) while those

in the cytoplasm are smaller (70s)

- B. Lysosomes optimally active at a pH of about 8.5
- C. Thylakoids flattened membranous sacs forming the grana of

chloroplasts

D. Centrioles sites for active RNA synthesis

#### Answer: C



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**275.** Which one of the following structures is an organelle within an organelle

" " Or

Which of the following cell organelle lacks DNA and bounding membrane

A. ER

B. Mesosome

C. Ribosome

D. Peroxisome

Answer: C



276. Which one of the following does not differ in E. coli and

A. Chromosomal organization

B. Cell wall

Chlamydomonas

C. Cell membrane

D. Ribosomes

#### **Answer: C**



**277.** What is true about ribosomes?

A. These are composed of ribonucleic acid and proteins

- B. These are found only in eukaryotic cells
- C. These are self-splicing introns of some RNAs
- D. The prokaryotic ribosomes are 80 S, where "S" stands for sedimentation coefficient.

#### **Answer: A**



- **278.** Select the corret statement form the following regrading cell membrance .
  - A. Proteins make up 60 to 70% of the cell membrance
  - B. Lipids are arranged in a bilayer with polar heads towards the inner part

C. Fluid mosaic model of cell membrane was proposed by Singer

and Nicoloson

D.  $Na^{+}$  and  $K^{+}$  ions move across cell membrne by passive transport

#### Answer: B



## **279.** The Golgi complex plays a major role

A. as energy transferring organells

B. in post translational modificates of propteins and glycosidation of liquids

C. in trapping the light and transforming it inot chemical energy

D. in degesting protiens and carbohydrates

#### **Answer: B**



**280.** Which one of the following organelle in the figure corretly matches with is function ?



A. Golgi appartaus, formation of glycolipds

- $\hbox{B. Rough endoplasmic reticulum,} protein \ synthesis$
- C. Rough endoplasmic reticulum, formation of glycorproteins
- D. Golgi apparatus protein synthesis.

#### **Answer: B**



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**281.** Pigment-containing membranous extensions in some cyanobacteria are

- A. Penumatophers
- B. Chromatophores
- C. Heterocysts
- D. Basal bodies

#### Answer: B

#### 282. Match the following and select the correct answer

(1) Centriole	(i) Infolding in mitochondria
(2) Chlorophyll (3) Cristae (4) Ribozymes	(ii) Thylakoids (iii) Nucleic acids (iv) Basal body cilia or flagella

#### Answer: B



<b>283.</b> The motile bacteria are also to move by
A. pili
B. fimbriae
C. flagella
D. cilia
Answer: C
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<b>284.</b> The solid linear cytoskeletal elements having a diameter of 6 nm
and made up of a single type of monomer are known as
A. Lamina
B. Microtubules
C. Microfilaments
C. Micromanicites

D. Intermediate filaments

#### **Answer: C**



## 285. Cytochromes are found in

- A. outer wall of mitochondria
- B. cirstae of mitochondria
- C. lysosomes
- D. matrix of mitochondria

#### **Answer: B**



<b>286.</b> DNA is not present in:
A. ribosomes
B. nucleus
C. mitochondria
D. choroplast
Answer: A
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<b>287.</b> Nuclear envelope is a derivative of
A. membrane of Golgi complex
A. membrane of Golgi complex

D. smooth endoplasmic reticulum

#### **Answer: C**



**288.** The structures that are formed by stacking of organized flattered membrances sacs in the chloroplasts are

- A. grana
- B. stroma lamellae
- C. stroma
- D. cristae

#### Answer: A



## **289.** Select the correct matching in the following pairs:

- A. Smooth ER-Synthesis of lipids
- B. Rough ER Synthesis of glycoge
- C. Rough ER- Oxidation of fatty acids
- D. Smooth ER Oxidation of Phospholipids

#### **Answer: A**



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## **290.** Chromtophores taken part in

- A. photosynthesis
- B. growth
- C. movement
- D. respiration

#### Answer: A



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**291.** Which of the following structures is not found in a prokaryotic cell?

- A. Nuclear envelope
- B. ribosomes
- C. Mesosome
- D. Plasma membrane

#### **Answer: A**



292. Match the columns and identify the correct option

Column-II Column-II

Thylakoids (i) Disc-shaped sacs in golgi appartus

Cristae (ii) Condensed structure of DNA

Cisternae (iii) Flat membranous sacs in stroma

Chromatin (iv) Infoldings in mitochondria

A. (1) (2) (3) (4)

(iv) (iii) (i) (ii)

B. (1) (2) (3) (4) (iii) (iv) (i) (ii)

(1) (2) (3) (4)

 $(iii) \quad (i) \quad (iv) \quad (ii)$ 

D. (1) (2) (3) (4) (iii) (iv) (ii) (i)

**Answer: B** 



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293. Which of the following are not membrance bounds?

A. Vacuoles

**Watch Video Solution** 294. A protoplast is a cell A. without plasma membrane B. without nucleus C. undergiong division D. without cell wall Answer: D **Watch Video Solution** 

B. ribosomes

C. Lysosomes

D. Mesosomes

**Answer: B** 

295. Cellular organelles with membranes are

A. nuclei, ribosomes and mitochondria

B. chromosomes, ribosomes and endoplasmic reticulum

C. endoplasmic reticulum, ribosomes and nuclei

D. lysosmes, Golgi apparatus & mitochondria

#### **Answer: D**



296. Water soluble pigments found in plant cell vacuoles are

A. chlorophylls

B. caroteniods

C. anthocyanins

D. xanthophylls

#### **Answer: C**



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- 297. Microtubules are the constituents of
  - A. Spindle fibres, Centrioles and Cilia
  - B. Centrioles, Spindle fibres and Chromatin
  - C. Centrosome, Nucleosome and Centrioles
  - D. Cilia , Flagella, Peroxisomes

#### Answer: A



298. Mitochondria and chloroplast are

(a) Semi-autonomous organelles

(b) Formed by division of pre-existing organelles and they contain

DNA but lack protein synthesizing machinery

Which one of the following options is correct

A. (ii) is true but (i) is false

B. (i) is true but (ii) is false.

C. Both (i) and (ii) are false.

D. Both (i) and (ii) are correct.

#### **Answer: B**



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**299.** Which one of the following cell organelles is enclosed by a single membrane

A. Chloroplasts **B.** Lysosomes C. Nuclei D. Mitochondria **Answer: B Watch Video Solution** 300. A complex of ribosomes attached to a single strand of RNA is known as A. Polymer B. Polypeptide C. Okazaki fragment D. Polysome

#### **Answer: D**



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#### 301. Select the mismatch

- A. Gas vacuoles Green bacteria
- B. Large central vacuoles Animal cells
- C. Protists Eukaryotes
- D. Methanogens Prokaryotes

#### **Answer: B**



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302. A cell organelle containing hydrolytic enzymes is

A. Lysosome B. Microsome C. Ribosome D. Mesosome Answer: A **Watch Video Solution** 303. Which of the following events does not occur in rough endoplasmic reticulum, A. Phospholipid synthesis B. Cleavage of signal peptide C. Protein glycosylation D. Protein folding

## Answer: A



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#### **304.** Select the incorrect match.

A. Polytene chromosomes — Oocytes of amphibians

В.

Submetacentric chromosomes — L - shaped chromosomes

- C. Allosomes Sex chromosoems
- D. Lampbrush Diplotene bivalents

#### **Answer: A**



**305.** Many ribosomes may associate with a single mRNA to form mutiple copies of a poolypeptide simultaneously. Such strings of ribosomes are termed as

- A. Nucleosome
- B. Platidome
- C. Polyhedral bodies
- D. Polysome

#### **Answer: D**



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**306.** Select the wrong statement

A. Mitochondria are the powerhouse of the cell in all kingdoms

excepts Monera,

B. Pseudopodia are locomotory and feeding structures in

Sporozoans

C. Mushrooms belong to Basidiomycetes.

D. Cell wall is present in membres of Fungi and plantae.

#### **Answer: B**



## **307.** The Golgi complex participates in

A. Activation of amino acids

B. Respiration is bacteria

C. Formation of secretory vesicles

D. Fatty acids breakdown

### Answer: C



**308.** Which of the following is true for nucleolus?

A. It is site for active ribosomol RNA synthesis.

B. It takes part in spindle formation

C. It is a membrance-bound structure.

D. Larger nucleoli are present in dividing cells

Answer: A

