



# BIOLOGY

## BOOKS - PREMIERS PUBLISHERS

### CELL: THE UNIT OF LIFE

#### Textbook Questions Answers M C Q

1. The two subunits of ribosomes remain united at critical ion level of \_\_\_\_

A. Magnesium

B. Calcium

C. Sodium

D. Ferrous

**Answer: A**



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2. Sequences of which of the following is used to know the phylogeny

A. mRNA

B. rRNA

C. tRNA

D. Hn RNA

**Answer: D**



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**3.** Many cells function properly and divide mitotically even though they do not have

A. Plasma membrane

B. Cytoskeleton

C. Mitochondria

D. Plastids

**Answer: A**



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4. Keeping in view the fluid mosaic model for the structure of cell membrane, which one of the following statements is correct with



respect to the movement of lipids and proteins from one lipid monolayer to the other

- A. Neither lipid nor proteins can flip-flop
- B. Both lipid and proteins can flip flop
- C. While lipids can rarely flip-flop proteins cannot
- D. While proteins can flip-flop lipids cannot

**Answer: C**



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5. Match the columns and identify the correct option:

Column-I	Column-II
(i) Thylakoids	(a) Disc-shaped sacs in Golgi apparatus.
(ii) Cristae	(b) Condensed structure of DNA.
(iii) Cisternae	(c) Flat membranous sacs in stroma.
(iv) Chromatin	(d) Infoldings in mitochondria.

- A. (i)-(c), (ii)-(d), (iii)-(b), (iv)-(a)
- B. (i)-(d), (ii)-(c), (iii)-(a), (iv)-(b)
- C. (i)-(c), (ii)-(d), (iii)-(a), (iv)-(b)
- D. (i)-(c), (ii)-(a), (iii)-(d), (iv)-(b)

**Answer: D**





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**Textbook Questions Answers Answer The  
Following Questions**

1. Bring out the significance of phase contrast microscopy



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2. State the protoplasm theory.



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3. distinguish between prokaryotes and eukaryotes.



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4. Difference between plant and animal cell.



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5. Draw the ultra structure of plant cell.



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## Other Important Questions Answers M C Q

1. The word cell was first used by:

- A. Robert brown
- B. Robert Hooke
- C. Zernike
- D. Robert schwann

**Answer: B**



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2. Idea of cell theory, was first proposed by:

A. Matthias Schleiden

B. Theodor schwann

C. Both A and B

D. Rudolf Virchow

**Answer: C**



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3. Phase contrast microscope was invented by:

A. Zernike

B. Robert brown

C. Sigmondy

D. Robert hooke

**Answer: A**



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4. Source of illumination for image formation in dark field microscope is:

A. Electron

B. ultra violet light

C. X-rays

D. Visible light

**Answer: D**



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5. The term protoplasm was coined by.....

A. Corti

B. Van mohl

C. Purkinje

D. Fisher

**Answer: C**



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6. Indicate the wrong statement:

A. All organisms are made up of cells

B. All metabolic reactions take place inside  
the cell

C. The structure and function of the cell is  
controlled by DNA

D. Group of cells with different structures  
are called tissue

**Answer: D**

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7. Approximately the number elements present in protoplasm is:

A. 28

B. 34

C. 38

D. 24

**Answer: B**



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8. These organisms with primitive nucleus are called as:

- A. Mesokaryotes
- B. prokaryotes
- C. Eukaryotes
- D. None of the above

**Answer: B**



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9. Cell wall is not present in:

A. Bacteria

B. Fungi

C. Animal cell

D. Plant cell

**Answer: C**



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10. The carbohydrate molecules of cell membrane are:

- A. Long chain polysaccharides
- B. Short chain polysaccharides
- C. Long chain glyco proteins
- D. Short chain glycolipids.

**Answer: B**



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11. One of the many signalling molecules used by plants and animal cell is:

A. sodium chloride

B. cuprice oxide

C. Nitric oxide

D. None of the above

**Answer: C**



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**12.** Cytoplasm helps movement of cellular materials around the cell through a process called:

A. Cytoplasmic streaming

B. Brownian movement

C. Active movement

D. none of the above

**Answer: A**



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**13.** The name endoplasmic reticulum was given by:

A. Camillo

B. K.R.Porter

C. Nickolson

D. S.B.Roberts

**Answer: B**



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**14.** The functions of golgi body includes:

A. helping cell division

B. initialing protein synthesis

C. Transporting and storing lipids

D. None of the above

**Answer: C**



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**15.** Mitochondria are called power house of the cell as they:

- A. Synthesis lipid
- B. Involve in protein synthesis
- C. initiate oxidation metabolism
- D. Produce energy rich ATP

**Answer: D**



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**16.** Mitochondrial DNA mutates ..... times faster than DNA in the nucleus.

A. 15 to 20

B. 30 to 40

C. 5 to 10

D. 10 to 20

**Answer: C**



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17. Plastids were classified into various types according to their structure pigments and function:

A. Robert Hooke

B. A.F.U. Schimper

C. A. Kolliker

D. Altmann

**Answer: B**



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18.  $\beta$  - oxidation of fatty acids occurs in glyoxysomes of germinating seeds of:

A. Paddy

B. Brinjal

C. Ladies finger

D. Caster

**Answer: D**



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**19.** Centriole consists of nine triplet peripheral fibrils made up of

A. tubulin

B. fibrils

C. annuli

D. none of the above.

**Answer: A**



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## 20. Match the following:

(i) Malic acid	(a) Rubber tree
(ii) Tannin	(b) Dieffenbactia
(iii) Latex	(c) Apple
(iv) Raphide crystals	(d) Mimosa pudica

A. (i)-(d), (ii)-(b), (iii)-(a), (iv)-(c)

B. (i)-(c), (ii)-(d), (iii)-(a), (iv)-(b)

C. (i)-(b), (ii)-(a), (iii)-(d), (iv)-(c)

D. (i)-(b), (ii)-(c), (iii)-(a), (iv)-(d)

**Answer: B**



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21. During cell division chromatin fibres become condensed to form thick structures called .....

- A. nucleolus
- B. Euchromation
- C. Nuclear pores
- D. Chromosomes

**Answer: D**



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22. Chromosome is made up of \_\_\_\_\_

A. DNA, Polysaccharides and RNA

B. DNA, lipids and RNA

C. DNA, protein and RNA

D. RNA, Glucose and lipid

**Answer: C**



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23. ....chromosome has a terminal centromere.

A. Acrocentric

B. Telocentric

C. Meta centric

D. Submetacentric

**Answer: B**



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24. Polytene chromosome in the salivary glands of drosophila was first observed by:

- A. Flemming
- B. C.G. Balbiani
- C. Harry Beevers
- D. A. Kolliker

**Answer: B**



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25. Lampbrush chromosome occur at the diplotene stage of first meiotic prophase in oocytes of:

A. Frog

B. Moth

C. Shark

D. Salamandar

**Answer: D**



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**26.** The main function of Bacterial flagellum is:

A. Locomotion

B. Protection

C. Feeding

D. none of the above

**Answer: A**



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27. The molecules involved in the mechanism for the movement of cilia and flagella are:

- A. Actin and pepsin
- B. Flagellin
- C. Tubulin and dynein
- D. none of the above

**Answer: C**



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28. The technique of staining the cells and tissue is called:

A. microphotography

B. histochemistry

C. anatomy

D. geochemistry

**Answer: B**



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29. The stain used for staining mitochondria of the cell is:

A. sudan black

B. Eosin

C. cotton blue

D. Janus green

**Answer: D**



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**30.** Cilia are short cellular, numerous microtubules bound in:

A. mitochondrial membrane

B. Cell wall

C. Plasma membrane

D. Nuclear membrane

**Answer: C**



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## Other Important Questions Answers Answer The Following Short Answers

1. Define primary magnification.



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2. Name the two kinds of electron microscopes.



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3. What is the main use of TEM?



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4. List out the name of microscopes in which the source of illumination is visible light.



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5. What are the components of protoplasm?



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6. Define cohesiveness of protoplasm.



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7. Name the germ layers.



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8. Define mesokaryotes.



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9. Explain primary cell wall.



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10. 'glycocalyx'



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11. Define Endocytosis and exocytosis.



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**12.** What do you understand by the term 'phagocytosis'?



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**13.** Define crista of mitochondria.



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**14.** Name any three plastids.



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**15.** What is the main function of polysome?



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**16.** What are Glyoxysomes?



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**17.** What is the main function of plant vacuoles?



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**18.** What are the reserve materials present in prokaryotes?



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**19.** Explain briefly the Holocentric chromosomes.



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**20.** What do you know about microphotograph?



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**Other Important Questions Answers Answer In Brief**

1. Write short notes on dark field microscope.



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2. Explain the principle involved in scanning electron microscope (SEM).



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3. List out the function of cell wall.



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4. What do you know about signal transduction in cells? Explain briefly.



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5. Write down the functions of Golgi bodies.



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6. How do the grana in chloroplast form?

Mention their structure and function.



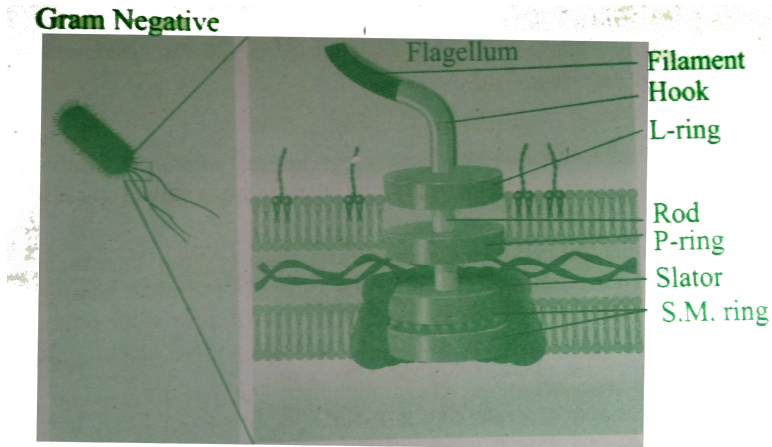
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7. Explain the types of chromosome, based on position of centromere.



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8. Describe the structure of flagellum in bacteria.

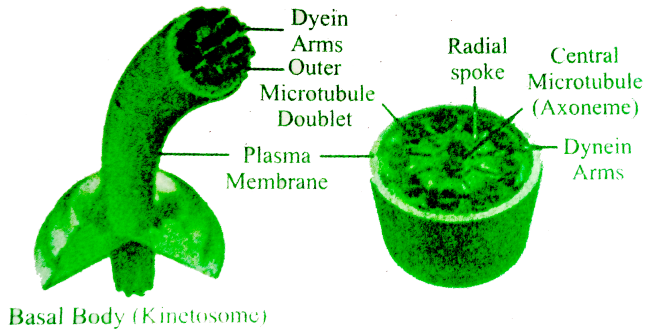


*Structure of Bacterial Flagellum*



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## 9. Explain the structure and function of Cilia.



*Structure of Cilia and Flagella*



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**Other Important Questions Answers Answer In Detail**

1. Discuss in detail about the physical properties of protoplasm.



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2. With a labelled diagram, explain the structure and function of mitochondria.



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3. Explain the structure of Ribosomes.

Mention about the types of ribosomes.



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4. Describe the Special types of Chromosomes.



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5. Explain the structure and movement of  
Eukaryotic flagella.



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**6.** Describe the structure and functions of Lysosomes.



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