



## **BIOLOGY**

### **BOOKS - SUPER COMPANION 5 IN 1**

#### **CELL: THE UNIT OF LIFE**

#### **One Mark Questions And Answers**

**1. Who proposed the cell theory?**



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2. Who discovered Nucleus?



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3. What is Pinocytosis?



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4. What is Phagocytosis?



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5. What are the chemical components of the middle lamella?

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6. Who first used the term plastids?

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7. Who proposed fluid mosaic model of plasma membrane.

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8. What are plasmodesmata?



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9. What is rough and smooth endoplasmic reticulum?



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10. Name the membrane around Vacuole.



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**11.** Write two sub units of 70s ribosomes / 80s ribosome.



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**12.** What are Thylakoids?



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**13.** Who discovered Lysosomes?



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**14.** Which cell organelle is also called 'Suicide bag' of cell?



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**15.** What are Ergastic substances?



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**16.** What are Raphides?



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**17.** What is a cystolith?



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**18.** Name the power house of the cell.



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**19.** Who discovered Mitochondria?



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20. Why is meiosis called a reduction division?



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21. Name the site of protein synthesis.



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22. Which is the protein factory of the cell?



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**23.** Mention any two function of nucleus.



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**24.** Which of the following is not correct

(a) Robert brown discovered the cell.

(b) Schleiden and schwann formulated the cell theory.

(c ) Virehow explained that cells are formed from pre-existing cells.

(d) A unicellular organism carries out its life activities within a single cell.



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**25.** New cells generate from

- (a) bacterial formatation (b) regeneration of old cells
- (c ) pre-existing cells (d) abiotic materials



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**26.** Which of the following is correct:

- (a) Cells of all living organisims have a nucleus.
- (b) Both animal and plant cells have a well denified cell wall.
- (c ) In prokaryotes, there are no membrane bound organelles.
- (d) Cells are formed de novo from abiotic materials.



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27. What is mesosome in a prokaryotic cell? Mention the functions that it performs.



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28. Who gave the term cell?



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29. Who first observed the live cell?



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**30.** Who proposed the cell theory?



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**31.** Expand PPLO.



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**32.** List out any four differences between cell and animals cell.



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**33.** What are plastids? Mention their types?



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**34.** Differentiate between gram positive and gram negative bacteria.



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## Two Marks Questions And Answers

**1.** List any four functions of the cells membrane.



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2. Multicellular organisms have division of labour.

Explain.



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3. Both lysosomes and vacuoles are endomembrane structures, yet they differ in terms of their functions.

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4. List the functions of endoplasmic reticulum.



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5. Classify lysosomes based on their functions?



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6. List two functions of Golgi bodies.



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7. What are ergastic substances? Give two examples.



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## Three Marks Question And Answers

1. Match the following

Column I

Column II

a. Cristae

i. Flat membranous sacs in stroma

b. Cisternae

ii. Infolding in mitochondria

c. Thylakoids

iii. Disc-shaped sacs in golgi apparatus



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## Five Marks Questions And Answers



1. Draw a neat labelled diagram of the ultrastructure of a typical animal cell.



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2. How do neutral solutes move across the plasma membrane? Can the polar molecules also move across it, in the same way? Why? If not, then how are these transported across the membrane?



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3. Name two cell organelles that are double membrane bound. What are the characteristics of these two organelles? State their functions and draw labelled diagrams of both.



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4. What are the characteristics of prokaryotic cells.



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5. Describe the structure of the following with the help of labelled diagrams.

(i) Nucleus (ii) Centrosome



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6. What is a centromere? How does the position of centromere form the basis of classification of chromosomes. Support your answer with a diagram showing the position of centromere on different types of chromosomes.



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7. With a neat labelled diagram explain the structure of mitochondria.



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8. Explain the structure of chloroplast with a neat labelled diagram.



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