



INDIAN SCHOOL AL WADI AL KABIR

Class: XI	Department: SCIENCE 2020 – 2021 SUBJECT : BIOLOGY	Date of submission: 07.05.2020
Worksheet No. 1 WITH ANSWERS	CHAPTER: Cell: The unit of life	Note: A4 FILE FORMAT
NAME OF THE STUDENT	CLASS & SEC:	ROLL NO.

MULTIPLE CHOICE QUESTIONS

1. Name the membrane which surrounds the vacuole in cell.

- (a) Plasma membrane (b) Tonoplast
(c) Mesosome (d) Pili

Ans. (b)

2. Identify a prokaryote without cell wall

- (a) Blue green algae (b) Cyanophyceae
(c) Mycoplasma (d) Bacteria

Ans. (c)

3. Ribosomes are made up of:

- (a) DNA & proteins (b) RNA & proteins
(c) Proteins and lipids (d) RNA & lipids

Ans. (b)

4. One among the following is not a part of endomembrane system:

- (a) Mitochondria (b) Endoplasmic Reticulum
(c) Vacuoles (d) Lysosomes

Ans. (a)

5. Name the proteinaceous frame work in eukaryotes that helps in support

(a) Micro bodies (b) Cytoskeleton

(c) Chromatophores (d) Flagella

Ans. (b)

TWO MARKS QUESTIONS

6. List the functions of Golgi bodies.

(Hints: packaging, modification and secretion of materials produced in ER)

7. Mention two differences between SER & RER.

(Hints: SER – no ribosomes, lipid synthesis, RER – ribosomes are present, protein synthesis)

8. What are the cell inclusions in prokaryotic cell?

(Hints: Storage bodies in prokaryotes, cyanophycean granules, phosphate granules, gas vacuoles)

9. Mention the similarities between mitochondria and chloroplasts.

(Hints: Presence of ribosomes and DNA, double membrane bound)

10. What are the methods of passage of substances across the cell membrane?

(Hints: Active transport, passive transport, osmosis)

THREE MARKS QUESTIONS

11. What are mesosomes? Mention their functions.

(Hints: Infoldings from plasma membrane, present in prokaryotes, functions – secretion, cell wall formation, DNA replication, respiration)

12. Give the differences between prokaryotes and eukaryotes.

(Hints: nucleoid – nucleus, nuclear membrane – absent/present, cell organelles – present/ absent, size of the cells, number of chromosomes, number of cells)

13. Give a brief description about the cell envelope in prokaryotes

(Hints: Structure of glycocalyx, cell wall and plasma membrane)

14. Name the organelles that are coming under endomembrane system. Why they are known so?

(Hints: ER, Golgi bodies, lysosomes, vacuoles – functions are coordinated)

15. Tabulate the names, specialties and functions of different types of plastids

(Hints: Table with Amyloplast, elaioplast and aleuroplast – pigments present in them, colour, functions)

FIVE MARKS QUESTIONS

16. Describe the ultra-structure of a cilium or flagellum.

(Hints: Structure – presence of plasma membrane, Axoneme, radial spokes, linkers, hub, microtubules, 9+2 arrangement of microtubules, doublets, central tubule and central sheath, diagram of flagella anatomy)

17. Describe the structural organization of a typical eukaryotic chromosome. What are different types of chromosomes on the basis of position of centromere?

(Hints: Structure – arms known as chromatids, centromere, kinetochore, types – metacentric, sub metacentric, telocentric and acrocentric – explanation and diagrams)

18. With the help of a neat labelled diagram explain the structure of chloroplast.

(Hints: Shape, double membrane bound, matrix – stroma, thylakoids and grana, stroma lamellae, presence of ribosomes and DNA, enzymes for photosynthesis, diagram)

19. Answer the following questions

(a) Name the organelle which is known as power houses of cell. Why they are known so?

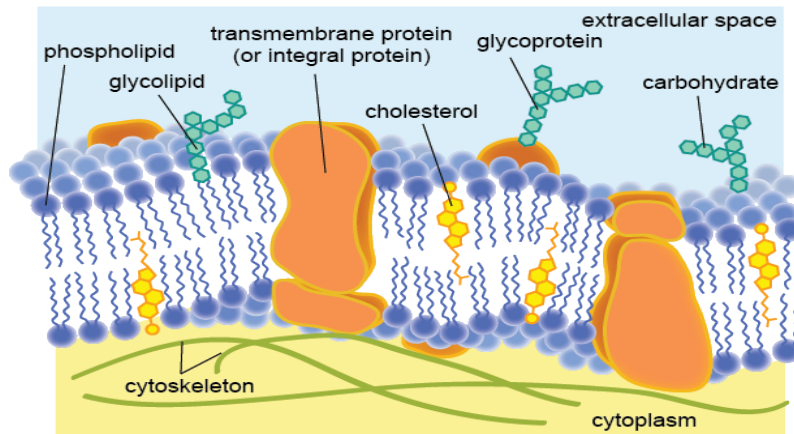
(b) Name the organelle which is known as suicidal bags. Why they are known so?

(c) Distinguish between 70S & 80S ribosomes

(d) What is the speciality of satellite chromosomes?

(Hints: (a) – Mitochondria – energy production, storage and distribution, (b) – Lysosomes – disintegration of cell when heavily infected by releasing hydrolytic enzymes (c) 70S – prokaryotes, 50S + 30 S, 80S – eukaryotes, 60S + 40S (d) Presence of secondary constriction and satellite)

20. Observe the following diagram and answer the questions followed.



(a) Identify the figure

(b) Explain the structure in detail

(c) Who proposed this model?

(Hints: (a) – Structure of plasma membrane, (b) – components – lipids, proteins and carbohydrates, fluid mosaic model – lipid bilayer, integral and peripheral proteins, glyco proteins, arrangement of lipid molecules, fluidity and mosaic pattern, (c) Singer and Nicholson)

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