ATOMIC ENERGY CENTRAL SCHOOL MYSORE

WORKSHEET: CELL – THE FUNDAMENTAL UNIT OF LIFE

Section A: Very Short Answer (1 mark each)

1. Who discovered the cell?

2. Who discovered the nucleus?

3. What is a cell?

4. Name the smallest unit of life.

5. What is the shape of a red blood cell?

6. Which cell organelle is called the “powerhouse of the cell”?

7. What is the function of the cell membrane?

8. Which organelle contains chlorophyll?

9. What is cytoplasm?

10. Name the organelle responsible for protein synthesis.

11. What is diffusion?

12. Define osmosis.

13. What is plasmolysis?

14. Name the control center of the cell.

15. Which organelle is known as the “suicide bag”?

Section B: Fill in the Blanks

16. The outermost boundary of the cell is called the _____.

17. The nucleus contains _____ material.

18. Plant cells have a rigid _____ layer.

19. Mitochondria produce _____.

20. Ribosomes are involved in _____ synthesis.

21. Movement of water through a semi-permeable membrane is called _____.

22. The jelly-like substance inside the cell is _____.

23. _____ are present only in plant cells.

24. The process of cell shrinking in a hypertonic solution is _____.

25. _____ are the sites of lipid synthesis.

Section C: Match the Following

Column A	Column B
26. Nucleus	a. Photosynthesis
27. Chloroplast	b. Control center
28. Mitochondria	c. Digestion
29. Lysosome	d. Energy production
30. Vacuole	e. Storage

Section D: True or False

31. All cells have a cell wall.

32. Plasma membrane is selectively permeable.

33. Animal cells have chloroplasts.

34. Diffusion requires energy.

35. Lysosomes help in intracellular digestion.

Section E: Short Answer (2–3 marks)

36. Differentiate between plant cell and animal cell (any 2 points).

37. What is the function of the nucleus?

38. Explain diffusion with an example.

39. What is osmosis? Give an example.

40. Write the functions of mitochondria.

41. What is the role of vacuole in plant cells?

42. Explain the structure of the plasma membrane.

43. What are plastids? Name their types.

44. Why are lysosomes called suicide bags?

45. What happens to a cell in a hypotonic solution?

Section F: Long Answer (3–5 marks)

46. Describe the structure and function of a cell.

47. Explain the process of osmosis with diagram.

48. Compare prokaryotic and eukaryotic cells.

49. Explain the structure and functions of mitochondria.

50. Describe the endoplasmic reticulum and its types.