

## Very Short Answer Type Questions

**Q. 1. Who introduced the term cell?**

**Ans.** Robert Hooke (in 1665) introduced the term cell.

**Q. 2. Define totipotency.**

**Ans.** Totipotency is the ability of living cells to form the whole organism unless and until they have become extremely specialized.

**Q. 3. Who proposed the cell theory? [NCT-2008, 09]**

**Ans.** Matthias Schleiden (1838) and Theodore Schwann (1839).

**Q. 4. What are plasmodesmata?**

**Ans.** Protoplasmic or cytoplasmic bridges between adjacent plant cells in the areas of pits are called as plasmodesmata.

**Q. 5. Name two semi-autonomous bodies.**

**Ans.** (i) Chloroplast, (ii) Mitochondria.

**Q. 6. What are pili?**

**Ans.** Pili are elongated, tubular structure made up of special protein in bacteria.

**Q. 7. What is meant by cell differentiation?**

**Ans.** Cell differentiation is the phase of growth in which a cell acquires a permanent shape and function along with increase in size.

**Q. 8. Who gave the statement *Omnis cellula-e cellula*?**

**Ans.** Rudolf Virchow.

**Q. 9. Give the significance of glycocalyx.**

**Ans.** It provides protection to the bacterial cells and also help in adhesion.

**Q. 10. What are fimbriae?**

**Ans.** Fimbriae are small, bristle like fibres sprouting out of the cell in bacteria.

**Q. 11. What is a cell sap?**

**Ans.** The liquid contents in the vacuoles of plant cells are termed as cell sap

**Q. 12. Define fertility factor.**

**Ans.** It is a factor present on a plasmid which converts the bacterium into a donor and capable of developing sex pili for conjugation.

**Q. 13. What is glycocalyx.**

**Ans.** Glycocalyx is the outermost mucilage layer of the cell envelope which consists of non-cellulosic polysaccharides with or without proteins in prokaryotic cells.

**Q. 14. What is the nature of the cell wall ?**

**Ans.** The plant cell wall is a complex matrix of linked polysaccharides such as cellulose and pectin, forming a thick semi permeable rigid barrier outside the plasma membrane.

**Q. 15. Name the site of synthesis of glycolipids in a cell.**

**Ans.** Golgi apparatus.

**Q. 16. Name the organelle of the cell, called as 'suicidal bags'**

**Ans.** Lysosome is called as 'suicidal bags' of the cell.

**Q. 17. What is plasmalemma ?**

**Ans.** Plasmalemma or plasma membrane or cell membrane is a biomembrane that occurs on the outside of the cytoplasm in both prokaryotic and eukaryotic cells

**Q. 18. Name the two subunits of ribosomes.**

**Ans.** The two subunits of ribosomes are larger and smaller subunits.

**Q. 19. Name the enzymes present in peroxisomes.**

**Ans.** Oxidases and catalases.

**Q. 20. Write the other name of nuclear envelop.**

**Ans.** Karyotheca.

**Q. 21. What are cytoskeletal structures?**

**Ans.** The cytoskeletal structure are microfilaments, intermediate filaments and microtubules.

**Q. 22. Who gave the term 'chromosome' ?**

**Ans.** Waldeyer (1881),

**Q. 23. What is diplosome ?**

**Ans.** A pair of centrioles are called diplosomes.

**Q. 24. Name four different forms of lysosomes.**

**Ans.** (i) Primary lysosome, (ii) Secondary lysosome, (iii) Autophagosomes, (iv) Residual bodies.

**Q. 25. Who proposed fluid mosaic model ?**

**Ans.** Singer and G. Nicolson.

**Q. 26. Define osmosis.**

**Ans.** Osmosis is a special type of diffusion in which only solvent molecules migrate across a semipermeable membrane from a region of low solute concentration to a region of high solute concentration.

**Q. 27. what is active transport ?**

**Ans.** Active transport is the movement of material across the membrane against their concentration or electrochemical gradient. It requires energy in the form of ATP for this process.

**Q. 28. What is the function of contractile vacuole ?**

**Ans.** Osmoregulation (water balance).

**Q. 29. What is desmotubule ?**

**Ans.** A fine cytoplasmic canal lined by plasma membrane and has ER.

**Q. 30. Name the ions which help in association of two ribosomal sub-units.**

**Ans.**  $Mg^{2+}$  ions.