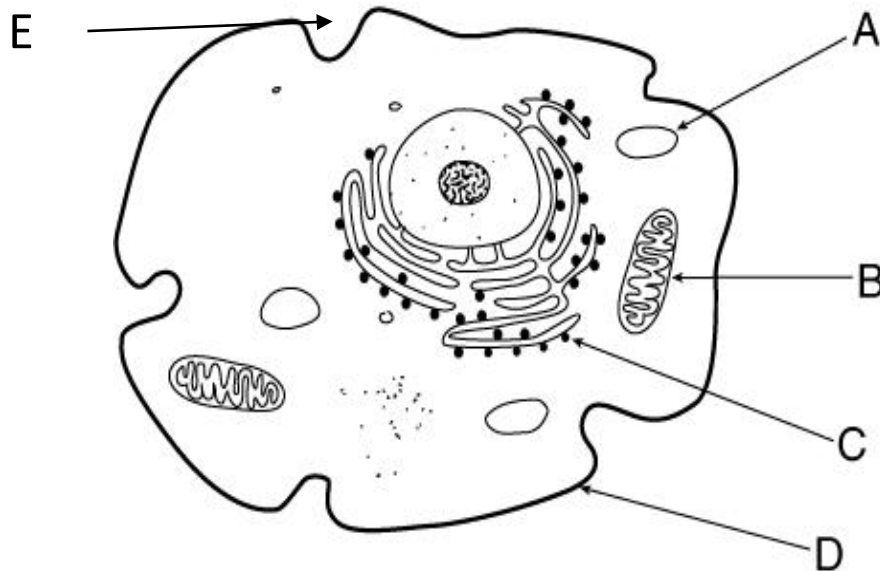


Questions 1-8 refer to the diagram, which represents a single cell of an organism:



Choose one of the choices on the diagram, you can use the letter more than once:

1. All of the labelled parts above are organelles EXCEPT (___)
2. Location of cellular respiration in eukaryotic cell (___)
3. Which of the following functions as the site of protein synthesis (___)
4. Which organelle can be found in prokaryotic cells as well as this cell (___)
5. Which of the following organelles would be present and larger in size in plant cells (___)
6. The movement of ions into and out of the cell is controlled by structure(___)
7. Which of the following is believed to function in intracellular transport(___)
8. If this cell is placed in dilute solute solution which organelle would be affected (___)



Questions 9-12: Match the correct letter with each statement of the following.

- A- Oxygen
- B- Carbon dioxide
- C- Water
- D- Chlorophyll
- E- Glucose

- 9. Which compound captures light energy in plants? (___)
- 10. Which molecule activates enzymes? (___)
- 11. Which compounds ARE NOT needed for photosynthesis? (___)
- 12. Cellular respiration needs (___)

Questions 13-17: Match by writing the letter beside the correct number:

- | | |
|--|----------------|
| ___13. Stage of meiosis during which recombination of genetic material occurs | A- Anaphase 2 |
| ___14. Stage of meiosis during which pairs of homologous chromosomes align at the centre of the cell | B-Telophase 2 |
| ___15. Stage of meiosis during which sister chromatids are separated | C- Cytokinesis |
| ___16. Stage of meiosis during which nuclear envelope is formed | D- Metaphase |
| ___17. Stage of cell division where cytoplasm and organelles are divided | E- Prophase 1 |



Questions 18-26: Complete using one of these terms:

(Enzyme – Allosteric site – Peptide- Activation energy –Temperature – PH – Sucrose – Starch – Amino acids – Lactose – Lipids – Fatty acids)

18. Catalyst is a term to describe
19. is the monomer of proteins.
20. bond is formed to join monomers in protein.
21. Enzymes are used to decrease
22. is a disaccharide carbohydrate found in the milk.
23. is factor affecting the enzyme activity by changing the acidity.
24. The increase in increase the enzyme activity.
25. is made from glucose and fructose.
26. are made from fatty acids and glycerol.

Questions 27– 29: Match the correct letter with each statement of the following.

- A- 28
- B- 56
- C- 112
- D- 54

27. A somatic cell of octopus (*Octopus vulgaris*) has 56 chromosomes. What number of chromosomes will the octopus gamete contain (___)?
28. What will be their autosomal chromosomes (___)
29. The number of their chromatids will be (___)



Questions 30–33: Match the correct letter with each statement of the following.

- A- Diffusion
- B- Osmosis
- C- Facilitated diffusion
- D- Active transport

- 30. Where water will pass down concentration gradient (___)
- 31. Needs channel or carrier protein with no need of mitochondria to take place (___)
- 32. Substances move against gradient using it with the help of energy (___)
- 33. Macromolecules pass by this process from a region of its high concentration to region of its low concentration across a cell membrane. (___)

Questions 34–37: Circle the letter of the correct choice

- 34. Which stage DNA replication takes place at
 - a. G1 phase
 - b. S phase
 - c. G2 phase
 - d. M phase
- 35. What happens during mitosis
 - a. The nucleus of the cell divides.
 - b. The cytoplasm of the cell divides.
 - c. The cell divides.
 - d. The DNA replicates.
- 36. Chromosomes consists from
 - a. Two sister chromatids.
 - b. Two sister chromatins.
 - c. Two sister DNA.
 - d. Four sister chromatids.



37. Longest Stage of the cell cycle

- a. Mitosis.
- b. Meiosis.
- c. Interphase.
- d. Cytokinesis

Questions 38–40: Write T if the statement is true and F if the statement is false:

- ____ 38. Interphase consists of mitosis and cytokinesis.
- ____ 39. DNA replication results in identical Chromosomes.
- ____ 40. Organelles are made during growth phase 2.