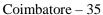


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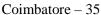


DEPARTMENT OF BIOMEDICAL ENGINEERING Unit I – Introduction to Biochemistry MCQ

| 1. Which one of the following is a membrane less organelle? | | |
|--|--|--|
| a. nucleus b. nucleolus c. endoplasmic reticulum d. mitochondria. | | |
| 2. The nature of the lipid bilayer is | | |
| a. hydrophilic b. hydrophobic c. amphipathic d. lipophilic | | |
| 3. The cell wall is made up of | | |
| a. glucose b. cellulose c. sucrose d. fructose | | |
| 4. The suicidal bag of the cell is | | |
| a. mitochondria b. nucleus c. lysosome d. endoplasmic reticulum | | |
| 5. Peroxisomes are involved in the biosynthesis of which of the following? | | |
| a. protein b. lipid c. carbohydrate d. nucleic acid | | |
| 6. The site of the light-dependent photosynthesis reactions in chloroplasts is | | |
| a. inner membrane b. outer membrane c. matrix d. thylakoid membrane | | |
| 7. Which of the following is synthesised and processed by Endoplasmic reticulum? | | |
| a. protein b. vitamin c. nucleic acid d. lipid | | |
| 8. The organelle which exchange energy with environment is | | |
| a. mitochondria b. endoplasmic reticulum c. nucleus d. peroxisomes | | |
| 9. Cell homeostasis is maintained by | | |
| a. nucleus b. cell membrane c. mitochondria d. lysosome | | |
| 10. The physical nature of cytoplasm is | | |
| a. colloidal b. solid c. liquid d. vacuum | | |

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| 11. Which is the most common ac | cid produced in the human body? |
|---------------------------------|---------------------------------|
|---------------------------------|---------------------------------|

- a. HCl
- b. H_2SO_4
- c. H₂CO₃
- d. HNO₃
- 12. The range of pH scale is
- a. 1 to 14
- b. 0 to 14
- c. 0 to 7
- d. 1 to 7
- 13. A buffer pair (HA/A–) has a pKa of 7.4. At a blood pH of 7.4, the concentration of HA is
- a. 1/100 that of [A–] b. 1/10 that of [A–] c. equal to that of [A–] d. 10 times that of [A–]
- 14. What will be the ratio of ([HPO42–]/[H2PO4–]) of phosphate buffer at pH 7.4 and pKa
- 6.8 in blood.
- a. 2 b. 3 c. 4 d. 5

a. intracellular fluid

- 15. Most of the water in the human body is present in
- - d. interstitial fluid c. plasma
- 16. Which type of formed elements are high in number in blood?

b. total extracellular fluid

- a. leucocytes b. erythrocytes
- c. thrombocytes
- d. lymphocytes

- 17. What is the nature of normal urine?
- a. strongly acidic
- b. strongly basic
- c. slightly alkaline
- d. slightly acidic
- 18. Identify the most important buffer system in blood plasma from the following:
- a. bicarbonate buffer b. phosphate buffer c. protein buffer
- d. hemoglobin buffer
- 19. Which forms of hemoglobin have more affinity towards hydrogen ions?
- a. oxyhaemoglobin
- b. deoxyhaemoglobin c. cyanohaemoglobin d.methyhaemoglobin
- 20. Excretion of acidic urine _____ pH in extracellular fluid.
- a. decreases
- b. increases c. does not alter
- d. both a and b