

Roll No.

Z-32

Total No. of Questions : 28]

[Total No. of Printed Pages : 4

11th ARF(SZ)JKUT2024-25

232

BIOCHEMISTRY

Time : 3 Hours]

[Maximum Marks : 70

(Very Short Answer Type Questions)

1 each

1. Carbohydrates containing a functional aldehydic group are known as :

(A) Aldoses

(B) Polyhydroxy aldehyde

(C) Ketoses

(D) Glycerose

2. Common name of ethanoic acid is :

(A) Acetic acid

(B) Butyric acid

(C) Lignoceric acid

(D) None of these

11th ARF(SZ)JKUT2024-25

232

Turn Over

Z-32

3. Competitive inhibition and allosteric modulation are best explained by :
- (A) Induced fit or koshland model
 - (B) Tamplet or lock and key model
 - (C) Both (A) and (B)
 - (D) None of these
4. The mineral most essential in clotting of blood is :
- (A) Ca
 - (B) Mg
 - (C) Na
 - (D) Fe
5. Calcium deficiency occurs due to deficiency of :
- (A) Vitamin C
 - (B) Vitamin E
 - (C) Vitamin B
 - (D) Vitamin D
6. The map of the chromosome which shows identifiable sites is called :
- (A) Gene expression
 - (B) Genome sequencing
 - (C) Chromosome walking
 - (D) Genop map

(Short Answer Type Questions—I)

2 each

7. Write down the composition of buffer.
8. Name *two* essential and two non-essential amino acid.
9. What do you mean by symport system ?
10. Define Osmosis.
11. Give role of vitamin A in vision.
12. What is the principle of electrophoresis ?
13. What is the purpose of gene extraction ?
14. What is protoplast fusion ?

(Short Answer Type Questions—II)

3 each

15. Describe the structure of water.
16. Briefly discuss odd and even numbered fatty acids.
17. Discuss briefly various types of RNA.
18. What is diffusion ? Give the factors affecting rate of diffusion.
19. Define E-R. Discuss its morphology.
20. Discuss the effect of pH on enzyme action.
21. What do you mean by isoenzyme and coenzyme ? Discuss.

22. What do you mean by allosteric enzymes and their mechanism of action ?
23. What are proteins ? Give an account of digestion of proteins.
24. Briefly discuss the biological functions of :
(a) Iodine
(b) Zinc
25. Write a note on colorimetry.

(Long Answer Type Questions)

5 each

26. Write down an essay on history of biochemistry.

Or

Define pH and pK. What is pH scale ?

27. What is isomerism ? Discuss the process in relation to different types formed in carbohydrates. <https://www.jkboseonline.com>

Or

What are amino acids ? Give their structure and classification in detail.

28. Describe the structure and functions of nucleus.

Or

What are Lysosomes ? Give their classification.