

Roll No.

B-29

Total No. of Questions : 28]

[Total No. of Printed Pages : 4

12thARM(SZ)JKUT2024

1129

BIOCHEMISTRY

Time : 3 Hours]

[Maximum Marks : 70

SECTION-A

(OBJECTIVE TYPE QUESTIONS/DO AS DIRECTED) 1 each

1. Atherosclerosis is complex disease found commonly in higher developed countries like USA, UK than in developing countries like India, China, Africa. (True/False)
2. What is amino acid ?
3. Alkaptonuria has a great historical importance and first discovered by :
(A) Lusitanus
(B) Ganrod
(C) Both (A) and (B)
(D) None of these

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(2)

4. ✓ Which of the following is not secreted from thyroid gland ?
- (A) T_3
 - (B) T_4
 - (C) Calcitonin
 - (D) Insulin
5. TCA cycle is also known as
6. What are immunoglobulins ?

SECTION-B

(VERY SHORT ANSWER TYPE QUESTIONS) 2 each

7. What do you mean by aerobic glycolysis ?
8. What is deamination ?
9. How fatty acids are activated in catabolic process ?
10. What is salvage pathway ?
11. Classify hormones based on nature.
12. Write down the biochemical functions of Insulin
13. What is the denovo pathway of DNA synthesis ?
14. What is the main function of Auxin ?

SECTION-C

(SHORT ANSWER TYPE QUESTIONS)

3 each

15. What do you mean by Transamination ?

Or

Explain decarboxylation.

16. Explain the phenomenon of β -oxidation.

17. What is phenylketonuria caused by ? How do you treat PKU patients ?

18. What role does glucagen play in hunger ? Why does glucagen stimulate insulin ?

19. Why is gibberellins useful ? Write main functions of Gibberellins.

20. What is cyclic phosphorylation ? Which substance is produced in cyclic phosphorylation ? <https://www.jkboseonline.com>

21. Discuss C_3 pathway.

22. Explain the phenomenon of initiation of transcription.

23. What is the humoral immunity ? What are humoral agents ?

24. What are non-communicable diseases ? Discuss any *one* of them.

25. What is genetic engineering ? What are *three* types of genetic engineering ?

SECTION-D

(LONG ANSWER TYPE QUESTIONS)

5 each

26. Explain the steps of energetics of glycolysis.

Or

What are the reactions in the TCA cycle ? What is the citric acid cycle in the mitochondria and what is the reaction sequence of the TCA cycle ?

27. Discuss the nature and properties of hormones.

Or

Discuss the physiological role and biochemical role of aldosterone and progesterone.

28. What is replication ? Write down the characteristics of DNA replication.

Or

What is DNA polymerase ? What are the three main functions of DNA polymerase ? What is the role of DNA polymerase in transcription ?

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