

D 51280

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Name.....

Reg. No.....

THIRD SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2018

(CUCBCSS—UG)

Core Course

BTY 3B 03—BIOCHEMISTRY

Time : Three Hours

Maximum : 80 Marks

Section A

Answer any two out of four questions in about 1500 words.

Each question carries 10 marks.

1. Discuss about different types of enzyme inhibition.
2. Classify carbohydrates and discuss about their structure and function.
3. Give an idea about the structure and functions of phytohormones.
4. Detail the structure of DNA. Write about the features of A-DNA and Z-DNA..

(2 × 10 = 20 marks)

Section B

Answer any seven out of fourteen questions in about 750 words.

Each question carries 5 marks.

5. Discuss about the principle and advantages of affinity chromatography.
6. Give an idea about Urea cycle.
7. Brief the irreversible reactions in gluconeogenesis.
8. Write a note on fat soluble vitamins.
9. Allosteric enzymes do not follow Michaelis-Menten kinetics. Comment.
10. How do buffers act ? Give an example of physiological buffer.
11. Discuss about secondary structure of proteins.
12. Explain fatty acid biosynthesis.
13. Write a note on the structure and function of thyroid hormones.
14. Derive Michaelis-Menten equation and discuss about the significance of K_m value.

Turn over

15. Discuss about phenylalanine biodegradation.
16. Give an idea about osazone formation. Why glucose and fructose form the same osazone ?
17. How many ATP molecules are generated during glycolysis ?
18. Discuss about the different classes of enzymes.

(7 × 5 = 35 marks)

Section C

Answer all questions in about 300 words.

Each question carries 3 marks.

19. Describe the reaction catalysed by pyruvate dehydrogenase complex.
20. Describe chemiosmotic hypothesis.
21. Discuss about ketone body formation.
22. List out any *two* methods for the measurement of pH.
23. Name the subunits of ATP synthase.

(5 × 3 = 15 marks)

Section D

Answer all questions in about 200 words.

Each question carries 2 marks.

24. What are the salient features of peptide bond ?
25. Explain the functions of histone proteins.
26. What do you know about transamination reaction ?
27. Draw the structure of lecithin.
28. What do you mean by substrate level phosphorylation ?

(5 × 2 = 10 marks)