

B.Sc. DEGREE EXAMINATION, APRIL 2008
BRANCH V.A. – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
BRANCH VI.A. – ADVANCED ZOOLOGY AND BIOTECHNOLOGY
FOURTH SEMESTER

Reg. No

COURSE : ALLIED – CORE
PAPER : BIOCHEMISTRY - II
TIME : 30 MINUTES

MAX. MARKS : 30

SECTION - A

TO BE ANSWERED ON THE QUESTION PAPER ITSELF

ANSWER ALL QUESTIONS

(30 X 1 = 30)

I Choose the correct answer:

- Fats on hydrolysis gives fatty acids and
a) glycol b) glycerol c) glyoxal d) glycine
- The chain length of the fatty acid is determined by
a) sap value b) iodine value c) acetyl value d) RM value
- Which amino acids are responsible for xanthoproteic test.
a) acidic b) basic c) amide d) aromatic
- Which of the following is called the Sanger's reagent.
a) phenyl isocyanate b) HCN c) FDNB d) phosgene
- Of the following hormone, which is an amino acid derivative.
a) epinephrine b) nor epinephrine c) thyroxine d) all of them
- Name the hormone predominately produced in response to fight.
a) thyroxine b) aldosterone c) epinephrine d) ADH
- The number of amino acids in a tripeptide is
a) 2 b) 3 c) 4 d) 5
- The following one of them is an essential amino acid
a) alanine b) glycine c) serine d) valine
- Which carbon of the ribose in DNA is deoxygenated?
a) 1 b) 2 c) 3 d) 4
- The backbone of nucleic acid structure is constructed by
a) peptide bonds b) glycosidic bonds
c) phosphodiester bonds d) all of them

II State whether true or false:

11. β oxidation takes place in mitochondria
12. Palmitic acid is a saturated fatty acid.
13. Glycine is optically active.
14. Insulin is zinc dependent.
15. DNA contains uracil.

III Match the following:

- | | |
|----------------------|-----------------|
| 16. Insulin | a) DNA |
| 17. Iodine | b) tRNA |
| 18. Codon | c) unsaturation |
| 19. Anticodon | d) protein |
| 20. Self replication | e) mRNA |

IV. Fill in the blanks:

21. Methionine is _____ containing amino acid
22. A hormone which maintains the blood sugar is _____.
23. A C-16 fatty acid undergoes _____ number of BETA oxidation.
24. Volatile fatty acid of a fat is determined by _____ value.
25. The Normal postprandial blood sugar level is _____ mg/dl.

V. Answer the following in one or two lines:

26. Iodine value.
27. Zwitter ion.
28. Essential amino acids.
29. Essential fatty acids.
30. Non protein amino acid.



STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted during the academic year 2004-05 & thereafter)

SUBJECT CODE: CH/AC/BC42
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COURSE : ALLIED – CORE
PAPER : BIO CHEMISTRY - II
TIME : 2 HOURS **MAX. MARKS : 70**

SECTION – B

ANSWER ANY FIVE QUESTIONS: (5x10 = 50)

1. Give a brief account of digestion and absorption of lipids.
2. Write an account of protein classification.
3. Give the complete sequence of urea cycle.
4. How are proteins digested and absorbed?
5. Discuss the source and functions insulin and adrenaline.
6. Write a note on the following
 - a) Denaturation of proteins
 - b) Formal titration
7. Give a brief account of
 - a) DNA is a genetic material.
 - b) Difference between DNA and RNA.

SECTION – C

ANSWER ANY ONE QUESTION: (1x20 = 20)

8.
 - a) What do you understand by primary and secondary structure of a protein?
 - b) Explain the BETA-oxidation of fatty acids. How many ATPs are formed when C-18 fatty acid undergoes such oxidation.

(10+10)
9.
 - a) Give an account of the structure of DNA proposed by Watson and Crick.
 - b) Write a note on the protein biosynthesis.

(12+8)

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