

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI-86
(For candidates admitted during the academic year 2004 –05 & thereafter)

SUBJECT CODE: CH/AO/BC33

B.Sc. DEGREE EXAMINATION, NOVEMBER 2007
THIRD SEMESTER

REG.NO

COURSE : ALLIED OPTIONAL
PAPER : BIOCHEMISTRY
TIME : 30 MINUTES

MAX.MARKS : 30

SECTION – A (30x1=30)
TO BE ANSWERED ON THE QUESTION PAPER ITSELF.
Answer all the questions.

I Choose the correct answer:

1. pH is defined as
a) $\log [H^+]$ b) $-\log [H^+]$ c) $-\log 1$ d) $[H^+]$
2. Which one of the following is the weakest acid
a) formic b) acetic c) isobutric d) propionic
3. Rf value is related to which of the following
a) electrophoresis b) TLC c) dialysis d) ultracentrifuge
4. In the following, one of them is a non reducing sugar
a) glucose b) fructose c) sucrose d) maltose
5. The Sap value of an oil high. It indicates
a) more of small chain FA b) more of long chain FA
c) more of unsaturated FA d) more of saturated FA
6. Oxytocin is a nona peptide. It contains
a) nine peptide bonds b) nine amino acids
c) ten amino acids d) ten peptide bonds
7. Denaturation of proteins is mainly due to the destruction of
a) peptide bonds b) ionic bonds
c) disulphide bonds d) hydrogen bonds
8. The hormone insulin is a
a) carbohydrate b) lipid c) protein d) fat
9. Coenzymes are mostly
a) carbohydrates b) fat soluble vitamins
c) water soluble vitamins d) proteins
10. The number of base pairs present in each turn (pitch) of BETA form DNA helix.
a) 9 b) 10 c) 11 d) 12

II State whether true or false:

11. Lewis acid is an electron donor.
12. Methionine is an essential amino acid.
13. Starch contains amylopectin.
14. Tyroxine is also known as fighting hormone.
15. D-fructose is levorotatory.

III Match the following:

- | | |
|-----------------------|-------------|
| 16. Isoelectric point | a) DNA |
| 17. Riboflavin | b) iodine |
| 18. Unsaturated FA | c) coenzyme |
| 19. Self replication | d) enzyme |
| 20. Maltase | e) protein |

IV Fill in the blanks:

21. The charge of amino acids becomes zero at _____ point.
22. Conversion of glucose to glycogen is termed as _____.
23. Beta cells of Langerhans secrete _____.
24. Glycolysis takes in _____.
25. Nucleic acids are the polymers of _____.

V Answer in a line or two:

26. Dialysis

27. Saponificatioin.

28. Central dogma.

29. Denaturation.

30. Coenzyme.

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TIME: 2 ½ HOURS

MAX.MARKS : 70

SECTION – B

Answer any five questions :

(5x6=30)

1. How amino acids can be separated using paper chromatography – explain.
2. Give an account of glycogenesis.
3. How proteins classified?
4. Give a note on the hormone classification.
5. Explain how the blood sugar level is maintained – explain.
6. Define iodine value. How is the iodine value of oil experimentally determined?
7. What are the various differences between DNA and RNA?

SECTION – C

Answer any two questions :

(2x20=40)

8. a) How proteins are digested and absorbed?
b) Explain gluconeogenesis.
9. a) What are the various factors affecting the enzyme action. Explain.
b) How di and poly saccharids are digested and absorbed?
10. Write the complete sequence of the Krebs cycle. How many ATPs are formed in one cycle?
11. a) Give an account on the structure of DNA proposed by Watson and Crick.
b) Write the sequence of the EM pathway.

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