

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI-86
(For candidates admitted during the academic year 2011–12 and thereafter)

SUBJECT CODE: 11CH/AC/GC33

B.Sc. DEGREE EXAMINATION, NOVEMBER 2015
BRANCH III - PHYSICS
THIRD SEMESTER

REG.NO

COURSE : ALLIED CORE

PAPER : GENERAL CHEMISTRY- I

TIME : 30 MINUTES

MAX.MARKS : 30

SECTION – A

(30x1=30)

ANSWER ON THE QUESTION PAPER ITSELF

I. Choose the correct answer:

(10x1=10)

1. The crystal structure of NaCl is
(a) FCC (b) HCP (c) Simple cubic (d) BCC
2. The number of atom in a face centred cubic unit cell is
(a) 4 (b) 3 (c) 2 (d) 1
3. In FCC crystal ,the co –ordination number is
(a) 2 (b) 8 (c) 6 (d) 12
4. Oswald’s dilution Law is applicable in the case of solution
(a) CH₃COOH (b) NaCl (c) NaOH (d) H₂SO₄
5. Ammonium hydroxide is an example of
(a) Strong acid (b) Weak acid (c) Strong base (d) Weak base
6. Glucose has the functional group of
(a) Ketone (b) Alcohol (c) Ether (d) Aldehyde
7. When the proteins are hydrolyzed the product obtained is
(a) Amine (b) Amino acids (c) Acids (d) Nitro compounds
8. An example for polysaccharide is
(a) Glucose (b) Succrose (c) fructose (d) Cellulose
9. Vitamine B₁₂ is
(a) Cobalamine (b) Nicotinamide (c) Riboflovin (d) Thyroxin
10. Which metal ion is present in haemoglobin ?
(a) Mg (b) Fe (c) Ca (d) Co

II. Fill in the blanks:**(10x1=10)**

11. A body centred unit cell has an atom at each vertex and at _____ of the unit cell.
12. Chlorophyll is a co-ordination compounds of _____.
13. The number of –OH groups in glucose is _____.
14. Glycin is an _____.
15. Standard electrode potential of hydrogen is _____.
16. If the pH of a solution is zero, then it is _____.
17. Calomel electrode has _____.
18. NaOAc + AcOH is an example of _____ solution
19. Strach is a _____ saccharide
20. Anaemia is caused by the deficiency of vitamin _____.

III. State whether the following are true or false:**(5x1=5)**

21. Fructose is a aldohexose.
22. Corrosion is a spontaneous process.
23. The hardening of egg while boiling is called as clotting.
24. Glucose is a non reducing sugar.
25. A plane is parallel to X and Z axis and makes unit intercept along Y– axis. The plane is designated 010.

IV. Answer in a line or two**(5x1=5)**

26. In DNA, the sugar is _____.
27. Cellulose is a _____ saccharide.
28. Kohlraush's law is used to determine _____ of a solution.
29. A BCC unit cell contains the equivalent of _____ atom.
30. The element present in Vitamin B₁₂ is _____.

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI-86
(For candidates admitted during the academic year 2011–12 and thereafter)

SUBJECT CODE: 11CH/AC/GC33

B.Sc. DEGREE EXAMINATION, NOVEMBER 2015
BRANCH III - PHYSICS
THIRD SEMESTER

COURSE : ALLIED CORE

PAPER : GENERAL CHEMISTRY- I

TIME : 2 ½ HOURS

MAX.MARKS : 70

SECTION – B

ANSWER ANY FIVE QUESTIONS :

5X6=30

1. Write the classification of Liquid Crystals.
2. Explain the Crystal structure of CsCl.
3. Discuss the titration curves in the conductometric acid –base titrations.
4. Give a short note on (i) Zwitter ion (ii) Nin hydrin test.
5. Explain denaturation and renaturation of proteins.
6. Describe the construction and working of standard hydrogen electrode.
7. Explain electro osmosis.

SECTION – C

2X20=40

ANSWER ANY TWO QUESTIONS:

8. (a) Differentiate between CCP and HCP of spheres.
(b) Explain the Debye –Huckel theory.
9. (a) Compare reversible and irreversible cells.
(b) Explain the Lead storage battery.
10. (a) Discuss the Watson –Crick model for DNA.
(b) Give a note on Haemoglobin.
