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

SUBJECT CODE: 11CH/MC/OC54

B.Sc. DEGREE EXAMINATION, NOVEMBER 2014
BRANCH IV- CHEMISTRY
FIFTH SEMESTER

REG.NO ……..

COURSE : MAJOR CORE
PAPER : ORGANIC CHEMISTRY-II
TIME : 30 MINUTES **MAX.MARKS : 30**

SECTION – A **(30x1=30)**
ANSWER ON THE QUESTION PAPER ITSELF.

Answer all the questions.

I Choose the correct Answer: **(10x1=10)**

1. In an aromatic electrophilic substitution reaction on nitrobenzene electrophile attack benzene ring at _____ postion.
   a) ortho b) para c) meta d) both ortho and para

2. One mole of aniline react with _____ number of moles of bromine.
   a) one b) two c) three d) four

3. Carbene can be generated from _____.
   a) diazomethane b) methylenebromide c) methanol d) methyl cyanide

4. Benzene diazonium chloride react with _____ yield an azo dye.
   a) phenol b) alpha-napthol c) beta-napthol d) allthe three

5. Which of the following is aromatic compound?

   a) b) c) d)

   O O O O

6. The central metal atom present in heamogloblin is _____.
   a) Fe b) Mg c) Cu d) Zn

7. Vitamin _____ is required for normal eye vision.
   a) A b) B c) C d) D

8. In basic medium phenolpthalein _____ in colour.
   a) pink b) yellow c) orange d) white

9. PABA mechanism involved in _____ drug.
   a) pencillin b) sulpha drug c) Antimalarial d) Analgesics

10. Quinine can be used as _____
    a) Antibiotic b) Hypnotics c) Analgesics d) Antimalarial

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

11. Predict the product
    Aniline + Acetic anhydride ?
12. _____ reagent can be used to reduce nitrobenzene to aniline.
13. Predict the reagent

    Aniline Benzenedizonium chloride

14. Benzenedizonium chloride + $CuCl$ _____ + N_2
15. Pyrrole is _____ basic than pyridine.
16. 2,3-diketohydroindole can be called as _____.
17. Melylorange can be used as _____ indicator.
18. Alizarin and indigo are classified under _____ dye.
19. LSD can be used as _____ drug.
20. Beta lactam ring present in _____ antibiotic.

III Match the following: (5x1=5)

21. Electrophile	Basic and aromatic compound
22. Azo dye	Antibiotic
23. Pyridine	NO_2^+
24. Tetracyclin	Quinoline
25. Skrap synthesis	Methylorange

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

26. Is p-nitroaniline less basic than aniline?

27. Predict the product

    N N H_3O^+ ?

28. Predict the product

    NO_2 ?

    O

29. Write any one application of asprin.

30. Write an example for diphenylamine derivative dye.

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TIME : 2½ Hours **MAX.MARKS : 70**

SECTION – B **(5x6=30)**
ANSWER ANY FIVE QUESTIONS

1. a) Explain the tautomerism exhibited by nitro alkanes.
   b) How will you distinguish nitroalkanes from alkyl nitrite.

2. Write down the synthesis of the following compound from benzene.
   a) Aniline b) Acetanilide

3. Elucidate the structure of quinoline.

4. How do you prove that furan, pyrrole, thiophene and pyridine are aromatic in nature? Specify the prefer electrophilic attack positions on each compound.

5. Write a note on the mode of action of sulpha drug.

6. Write down the preparation and theraptic uses of asprin and paracetamol.

7. What is meant by hypnotics and sedatives?

SECTION – C **(2x20=40)**
ANSWER ANY TWO QUESTIONS

8. a) How will you distinguish primary, secondary and tertiary amines? (10)
   b) How will you carry out the following conversions?
   $CH_3CH_2NH_2$ $CH_3CH_2CH_2NH_2$
   $CH_3CH_2CH_2NH_2$ $CH_3CH_2NH_2$ (5+5)

9. a) Write a note on Hoffman and Beckman rearrangement. (10)
   b) Write a note on the structure of Haemoglobin. (10)

10. a) Write down the preparation of the following dyes
    (i) Malachite green (ii) Methylorange (iii) Phenolphthalein (3×5=15)
    b) Write the structure of penicillin and Tetracycline. $(2.5\times 2 = 5)$

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