STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI-86
(For candidates admitted during the academic year 2008 – 09 & thereafter)

SUBJECT CODE: CH/MC/OC54

B.Sc. DEGREE EXAMINATION, NOVEMBER 2011
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:

1. Nitration of nitrobenzene with HNO_3/H_2SO_4 gives.
   (a) m-dinitrobenzene (b) o-dinitrobenzene (c) p-dinitrobenzene (d) Aniline

2. Aniline reacts with Bromine in acetic acid to yield.
   (a) 2,4,6-tribromo aniline (b) p-bromo aniline
   (c) m-bromo aniline (d) o-bromo aniline

3. Which of the following heterocyclic compound is basic?
   (a) Furan (b) thiophene (c) pyrrole (d) Pyridine

4. An example for azo dye is
   (a) Phenolphthalein (b) methyl orange (c) Crystal violet (d) Malachite green.

5. Which of the following is not an antibiotic
   (a) Penicillin (b) streptomycin (c) Chloromycetin (d) Aspirin

6. Quinine can be used as
   (a) Analgesic (b) Antimalarials (c) Hypnotics (d) Sedatives

II State whether the following statements are true or false.

7. Aniline reacts with $NaNO_2/HCl$ at 0^oC to yield Benzene diazonium chloride.
8. The Magnesium is the central metal atom in hemoglobin.
9. Malachite green is a triphenylmethane dye.
10. In acidic medium phenolphthalein is pink in colour.
11. Para Amino benzoic Acid is structurally similar to sulpha drugs..
12. Tetracycline is an antibiotic drug.

..2

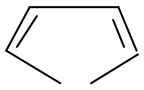
III Match the following:

13. Hinsberg method	-	Natural Dye
14. Skraup's synthesis	-	Aniline
15. Alizarin	-	Separation of amines
16. Reduction of nitrobenzene	-	Quinoline
17. Acetyl salicylic acid	-	Azo dye
18. Methyl orange	-	Aspirin

IV Fill in the blanks:

19. The isomeric form of CH_3NO_2 is _____?_____.

20. $RNH_2 + RCH_2COCl \xrightarrow[base]{} $ _____?_____.

21.  $\xrightarrow{acetylnitrate}$ _____?_____.

22. The structure of indole is _____.

23. An example for a dye which are used as an acid-base indicator is _____.

24. Lysergic acid diethyl amide (LSD) can be used as _____ drugs.

V Answer in a line or two:

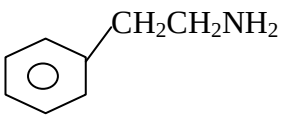
25. Why is triethylamine less basic than diethylamine?

26. Predict the products formed for the following reaction.
$CH_3CH_2NH_2 + HONO \longrightarrow$?

27. What is Indigo?

28. Write down the structure of Alizarin.

29. What do you understand by the term antipyretics?

30. How will you synthesise isoquinoline from 

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI-86
(For candidates admitted during the academic year 2008 – 09 & thereafter)

SUBJECT CODE: CH/MC/OC54

B.Sc. DEGREE EXAMINATION, NOVEMBER 2011
BRANCH IV- CHEMISTRY
FIFTH SEMESTER

COURSE : MAJOR CORE
PAPER : ORGANIC CHEMISTRY-II
TIME : 2 ½ Hours **MAX.MARKS : 70**

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

1. How will you synthesise m-nitro aniline from benzene?

2. How does aniline react with the following reagents?
   (a) Acetic anhydride (b) Nitrous acid at O-5^{o}C (c) Benzene diazonium chloride

3. Why furan, thiophene and pyrrole are aromatic in nature? Explain.

4. Among pyridine and pyrrole, which is more basic? Explain.

5. How will you classify dyes based on chemical structure?

6. Write down the synthesis of sulphapyridine and sulphadiazine

7. Write down the therapeutic applications for the following pharmaceutical drugs.
   (a) aspirin (b) sulphaguanidine (c) penicillin

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

8. (a) How will you distinguish primary, secondary and tertiary amines?
   (b) How will you separate a mixture of amines? (10+10)

9. (a) Elucidate the structure of quinoline and write down its synthesis.
   (b) Write a note on the structure of Chlorophyll. (10+10)

10. (a) Write a preparation of the following dyes.
    (i) Malachite green. (ii) Methyl orange.
    (b) Write a note on the application of dyes in leather, cosmetics, textile and food industries. (12+8)

11. (a) Explain the mode of action of sulphadrugs.
    (b) Write a note on Hypnotics, Sedatives and Psychedelic drugs.
    (c) How will you convert Aniline to s-Tribromobenzene. (6+9+5)