

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.

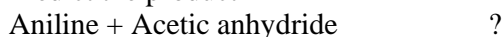
Answer all the questions.

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

- In an aromatic electrophilic substitution reaction on nitrobenzene electrophile attack benzene ring at \_\_\_\_\_ position.  
a) ortho                      b) para                      c) meta                      d) both ortho and para
- One mole of aniline react with \_\_\_\_\_ number of moles of bromine.  
a) one                      b) two                      c) three                      d) four
- Carbene can be generated from \_\_\_\_\_.  
a) diazomethane              b) methylenebromide              c) methanol              d) methyl cyanide
- Benzene diazonium chloride react with \_\_\_\_\_ yield an azo dye.  
a) phenol                      b) alpha-naphthol              c) beta-naphthol              d) allthe three
- Which of the following is aromatic compound?  
a)                      b)                      c)                      d)  
O                      O                      O                      O
- The central metal atom present in heamoglobin is \_\_\_\_\_.  
a) *Fe*                      b) *Mg*                      c) *Cu*                      d) *Zn*
- Vitamin \_\_\_\_\_ is required for normal eye vision.  
a) A                      b) B                      c) C                      d) D
- In basic medium phenolphthalein \_\_\_\_\_ in colour.  
a) pink                      b) yellow                      c) orange                      d) white
- PABA mechanism involved in \_\_\_\_\_ drug.  
a) pencillin                      b) sulpha drug                      c) Antimalarial                      d) Analgesics
- Quinine can be used as \_\_\_\_\_.  
a) Antibiotic                      b) Hypnotics                      c) Analgesics                      d) Antimalarial

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

11. Predict the product



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. Methylorange 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



28. Predict the product



29. Write any one application of aspirin.

30. Write an example for diphenylamine derivative dye.

\*\*\*\*\*

**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**

**COURSE : MAJOR CORE**

**PAPER : ORGANIC CHEMISTRY-II**

**TIME : 2½ Hours**

**MAX.MARKS : 70**

**SECTION – B**  
**ANSWER ANY FIVE QUESTIONS**

**(5x6=30)**

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 therapeutic uses of aspirin and paracetamol.
7. What is meant by hypnotics and sedatives?

**SECTION – C**  
**ANSWER ANY TWO QUESTIONS**

**(2x20=40)**

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

$\text{CH}_3\text{CH}_2\text{NH}_2$	$\text{CH}_3\text{CH}_2\text{CH}_2\text{NH}_2$	
$\text{CH}_3\text{CH}_2\text{CH}_2\text{NH}_2$	$\text{CH}_3\text{CH}_2\text{NH}_2$	(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                      (3x5=15)  
b) Write the structure of penicillin and Tetracycline.                      (2.5x 2 = 5)

\*\*\*\*\*

