

Total No. of Printed Pages—7

4 SEM TDC CHMH (CBCS) C 9

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(May/June)

CHEMISTRY

(Core)

Paper : C-9

(Organic Chemistry)

Full Marks : 53

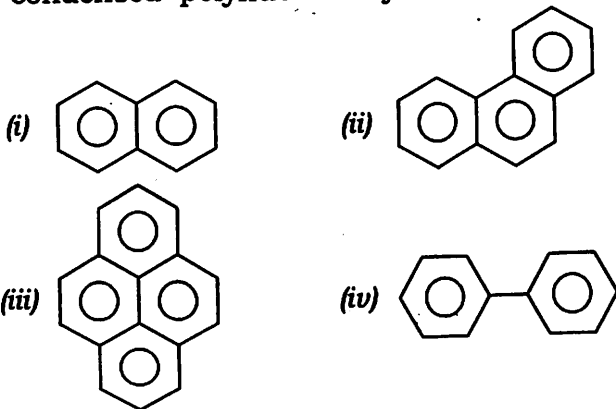
Pass Marks : 21

Time : 3 hours

*The figures in the margin indicate full marks
for the questions.*

1. Choose the correct answer from the following : 1×4=4

(a) Which one of the following is not a condensed polynuclear hydrocarbon?



(2)

- (b) Which of the following is not a five-membered ring?
- (i) Pyridine
 - (ii) Pyrrole
 - (iii) Furan
 - (iv) Thiophene
- (c) Which one is used in malaria treatment?
- (i) Nicotine
 - (ii) Hygrine
 - (iii) Quinine
 - (iv) Morphine
- (d) Isoprene is
- (i) 1-methyl-butadiene
 - (ii) 2-methyl-butadiene
 - (iii) 1-ethyl-butadiene
 - (iv) 2-ethyl-butadiene

(3)

2. Answer any *four* questions from the following : 2×4=8
- (a) Methylamine is a stronger base than aniline. Explain.
 - (b) Write one method for preparation of benzene diazonium bromide.
 - (c) What are the natural sources of morphine and hygrine? 1+1=2
 - (d) Pyrrole exhibits aromatic character. Explain.
 - (e) What happens when anthracene is treated with H_2SO_4 and X_2/CS_2 ? 1+1=2
(X = Cl)

UNIT—I

3. Answer any *three* questions from the following : 3×3=9
- (a) How would you distinguish among 1° , 2° and 3° amines with the help of Hinsberg reagent? 3
 - (b) Write short notes on the following : 1½×2=3
 - (i) Carbylamine reaction
 - (ii) Gabriel phthalimide synthesis

(4)

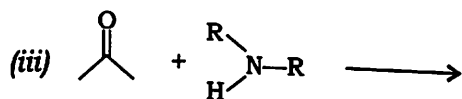
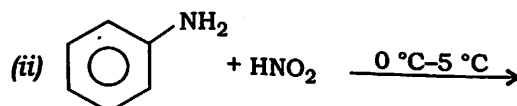
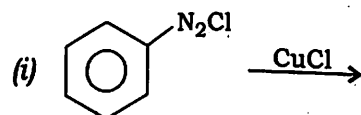
(c) Discuss the synthesis of the following :

$1\frac{1}{2} \times 2 = 3$

(i) Aniline from benzene

(ii) Aniline from nitrobenzene

(d) Complete the following reactions : $1 \times 3 = 3$

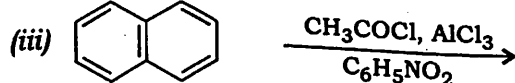
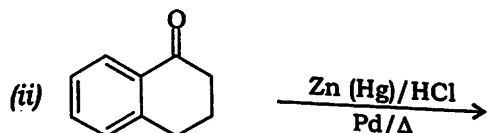
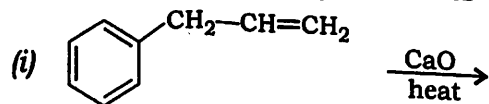


UNIT—II

4. Answer any three questions from the following :

$3 \times 3 = 9$

(a) Complete the following reactions : $1 \times 3 = 3$



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(Continued)

(5)

(b) How will you convert the following?

$1\frac{1}{2} \times 2 = 3$

(i) Naphthalene to α -chloro-naphthalene

(ii) Phthalic anhydride to anthracene

(c) Explain electrophilic substitution of naphthalene occurs at C-1.

3

(d) Write the methods of preparation of the following :

$1+1+1=3$

(i) α -naphthol

(ii) 1,4-naphthoquinone

(iii) Phenanthrene

UNIT—III

5. (a) Write short notes on any two of the following :

$2 \times 2 = 4$

(i) Hantzsch synthesis

(ii) Paal-Knorr synthesis

(iii) Fischer indole synthesis

(b) Convert furan to furoic acid.

2

(c) Out of pyrrole and thiophene, which one is more aromatic? Explain.

2

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(Turn Over)

(6)

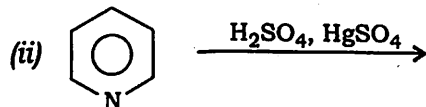
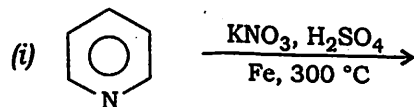
(d) Answer the following questions : $2 \times 2 = 4$

(i) Give Skraup synthesis of quinoline.

(ii) Write one method for the preparation of pyridine.

(e) Complete any one of the following reactions :

1



UNIT—IV

6. (a) What are alkaloids? Give the medicinal uses of cocaine and reserpine. $1 + \frac{1}{2} + \frac{1}{2} = 2$

(b) Write one method of synthesis of nicotine or quinine.

3

Or

Write a short note on Hofmann exhaustive methylation method with example.

(7)

UNIT—V

7. What are terpenes? Classify terpenes with example. State special isoprene rule. Draw the structure of neral. $1 + 2 + 1 + 1 = 5$

Or

Outline the synthesis of citral. What are the geometrical isomers of citral? $3 + 2 = 5$
