

Your Roll No

B.SC.-M.SC. INTEGRATED PROGRAMME
DEPARTMENT OF CHEMISTRY
SEMESTER- III EXAMINATIONS- 2019
PAPER CODE- BCH-CC7
ORGANIC CHEMISTRY-II

Time: Three Hours

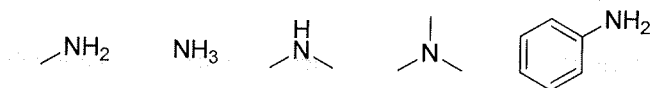
Maximum marks: 75

(Write your Roll No at the top immediately on the receipt of this question paper.)
Attempt all questions. All parts of a question must be attempted in continuation. Start answer of a fresh question on a new page. Cite examples and draw diagrams wherever necessary.

Q1. Answer ALL the questions given below:

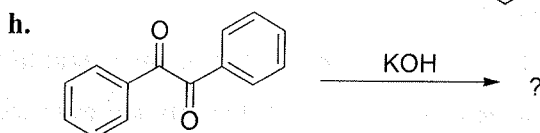
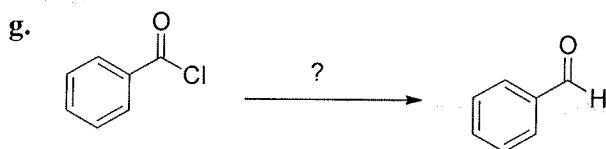
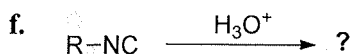
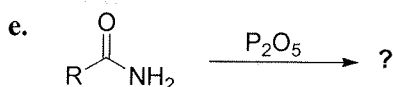
(1.5x10= 15)

- a. How do you differentiate primary, secondary, tertiary alcohols?
b. Arrange the following in the increasing order of basicity:



- c. What is Kolbe-Schmidt reaction?
d. Arrange the following in the increasing order of electrophilicity at carbonyl carbon:

Carboxylic acids, esters, anhydrides, acid chlorides, amides

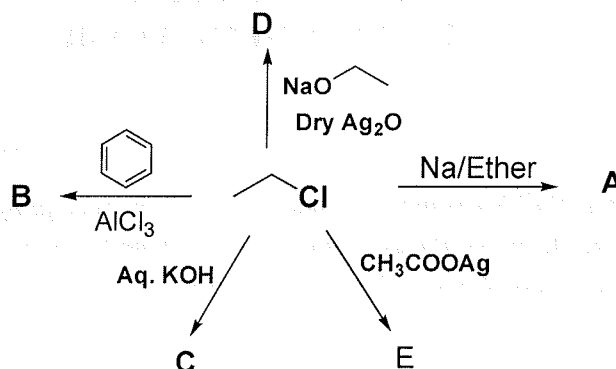


- i. Why do alkyl nitrites are called as esters of nitrous acid?
j. How do you prepare *n*-butyric acid from ethylacetoacetate?

Q.2. Answer ANY TWO of the following:

(7.5x2=15)

- Distinguish between SN1 and SN2 reactions.
- Describe the methods for the preparation of nitro alkanes, alkyl nitrites, Alkyl cyanides and isocyanides from alkyl halides?
- Depict the products formed in the following reactions:



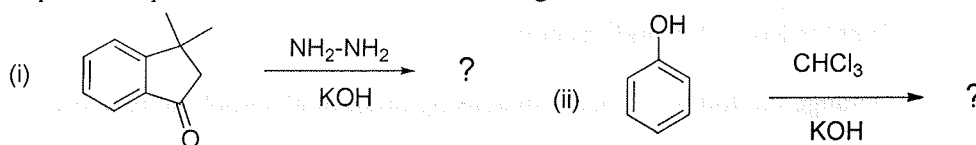
D. Write a short note on the following:

- Schiemann reaction
- Gattermann reaction
- Sandmeyer reaction

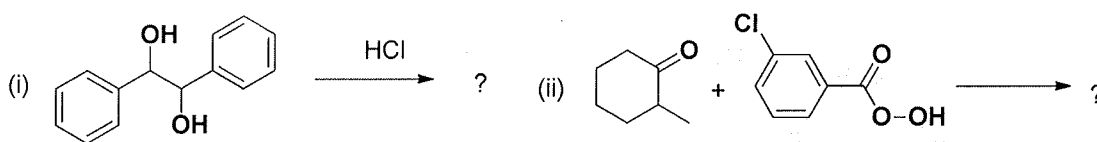
Q.3. Answer ANY THREE of the following:

(5x3=15)

A. Explain the products formed in the following reactions with suitable mechanism:



B. Identify the products formed in the following reactions and explain its reaction mechanism.



C. Write a short note on the following reactions:

- M.P.V. Reduction
- Perkin reaction

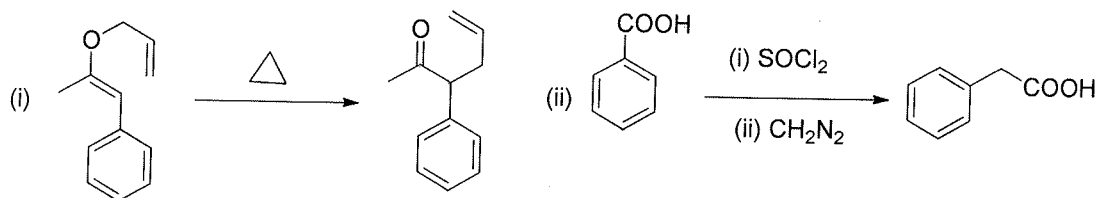
D. An oxime upon reacting with acid has formed an amide. Amide upon acid hydrolysis formed aniline and 4-methylbenzoic acid (p-toluic acid). Identify the exact geometry of the oxime and explain the reaction mechanism.

E. Write short note on (i) Benzoin condensation and (ii) Knoevenagel condensation

Q4. Answer ANY THREE of the following:

(5x3=15)

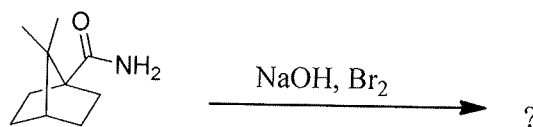
- A. What is single electron transfer reaction? Explain with suitable examples.
 B. Explain different methods for the preparation of acyl azides and predict the products formed upon heating the acyl azides with suitable mechanism.
 C. Suggest the suitable mechanism for the following reactions.



D. Write a short note on the following reactions:

- (i) Dickmann condensation (ii) Reformatsky reaction

E. Write the product of the following reaction and suggest the suitable mechanism for the conversion?



Q5. Answer ANY TWO of the following:

(7.5x2=15)

- A. Write a brief note on the following reactions:
 (i) Schotten-Baumann reaction (ii) Carbylamine reaction (iii) Gabriel Phthalimide synthesis
 B. Distinguish between alkylnitrites and nitroalkanes.
 C. Explain any two methods for the separation of 1°, 2° and 3° amines.
 D. Explain the products formed in the following reactions:

