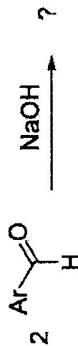


UNIT - IV

6. (a) Discuss the similar properties of aromatic and aliphatic aldehydes.

(b) Complete the following reaction with mechanism :

$3 \times 2 = 6$



7. (a) How will you convert cyclohexanone to cyclohexanol with aluminium isopropoxide in isopropyl alcohol ? Explain with mechanism.

(b) Write a short note on Wittig reaction. $3 \times 2 = 6$

Roll No.

41203

**B. Sc. (Pass Course) 4th Semester
Examination – May, 2019**

CHEMISTRY-III (ORGANIC CHEMISTRY)

Paper : CH-403

Time : Three Hours] [Maximum Marks : 29

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt five questions in all, selecting one question from each Unit. Question number 1 is **Compulsory** and is of **five** marks. All other questions are of **six** marks.

Compulsory Question

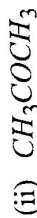
1. (a) Draw a typical IR spectrum and specify functional group, finger print and aromatic regions.
- (b) Draw the structure of ammonia and specify bond angle, bond distance and hybridization.
- (c) Write down the examples of aromatic and aliphatic diazonium chlorides. Out of these two, which one is more stable ?

41203

- (d) Write down the structure of vanillin.
 (e) How will you determine whether the given compound is aldehyde or ketone? $1 \times 5 = 5$

UNIT - I

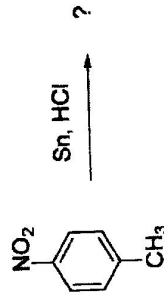
2. (a) An alkyne with $MF C_5H_8$ show IR bands at 3300 and 2110 cm^{-1} . Assign the structure of alkyne.
 (b) Give approximate positions of the characteristic IR bands in the following compounds: $3 \times 2 = 6$



3. (a) What important bands do you expect in IR spectrum of toluene?
 (b) Write down the principle of IR spectroscopy. Also mention the source of IR radiation. $3 \times 2 = 6$

UNIT - II

4. (a) Complete the following reaction sequence:



(2)

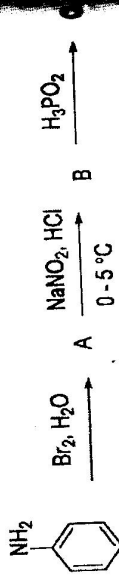
- (b) Write down the mechanism of following reaction $3 \times$



5. (a) How will you separate primary, secondary and tertiary amines by Hofmann's method?
 (b) Why boiling point of aniline is higher than toluene? Explain. $3 \times$

UNIT - III

6. (a) Complete the following reaction sequence:



- (b) Write down a short note on Bantz-Schiemann reaction. $3 \times$

7. (a) How will you prepare nitro methane by phase nitration?
 (b) Reduce nitro benzene in acidic medium. Draw the mechanism. $3 \times$

(3)