



MBZ-003-047303

Seat No. _____

**B. Voc. (Pharm. Analysis & QA) (Sem. III) (CBCS)
Examination**

December – 2016

BVPAQA-303 : Pharma. Organic Chemistry - I

Faculty Code : 003

Subject Code : 047303

Time : Hours]

[Total Marks : 70

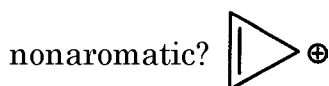
- Instructions :** (i) All questions are compulsory and carry equal marks.
(ii) Draw diagram and/or scheme wherever necessary.

1 (a) Answer the following questions : 10

- (1) Define Carbocation with one example.
- (2) Enlist types of bond fission with example.
- (3) Give IUPAC name and common name of HCOOC_2H_5 .
- (4) Complete the following reaction :



- (5) Give IUPAC name and common name of $(\text{CH}_3)_2\text{CHCHO}$.
- (6) Explain halogenation reaction of ketones.
- (7) Is the following compound aromatic/antiaromatic/
nonaromatic?



- (8) Give the correct chemical name of

- (9) Draw correct chemical structure of 2,4-Dimethyl-4-isopropyl octane.

- (10) Give IUPAC name of CH_3 -

(b) Answer the following questions : 20

- (1) Explain types of reagents with examples.
- (2) Discuss stability of tropylium cation with illustration.
- (3) Which monocarboxylic acids are obtained from Goats? (Give its structures, common name and IUPAC name.)
- (4) Define and classify carboxylic acids with examples.
- (5) Explain physical properties of aldehydes and ketones.
- (6) Complete the following reaction :



- (7) Give any two industrial scale preparation method for benzene.
- (8) What are the criteria of aromaticity?
- (9) What is S_{N}^2 reaction? Draw Energy diagram of S_{N}^2 reactions.
- (10) Explain Banana Bond with example.

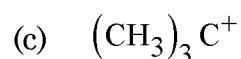
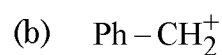
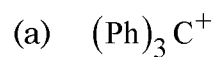
2 Answer any 4 out of the following 6 questions : 20

- (1) Explain in detail: Unimolecular Nucleophilic Substitution reaction.
- (2) Why electrophilic substitution reaction of aromatic carboxylic acid goes on meta position? Explain in detail with examples.
- (3) Explain reduction reaction of carbonyl compounds.
- (4) Explain Fridel craft acylation of benzene with mechanism.
- (5) Discuss preparation of n-alkanes.
- (6) Give any five method for the preparation of carboxylic acids.

3 Answer any 4 out of the following 6 questions.

20

(1) Arrange following into increasing order of their stability.
Justify your answer with reason :



(2) Discuss physical and chemical properties of esters.

(3) Give similarities and dissimilarities between carbonyl compound and alkenes.

(4) Explain Kekule structure of benzene and discuss its drawback.

(5) Write structural formula and IUPAC names of all possible compounds with molecular formula C_6H_{14} .

(6) Give methods for formation of Free Radicals with examples. Describe any three reactions of Free Radicals.
