

F.Y.B.SC. SEM – II (2014 COURSE) : WINTER - 2017

SUBJECT : CHEMISTRY : ORGANIC & INORGANIC CHEMISTRY (C – 22)

Day : Wednesday
Date : 25/10/2017

Time : 03.00 PM TO 05.00 PM
Max. Marks : 40

W-2017-0599

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SAME** answer book.

SECTION – I [Organic Chemistry]

Q.1 Attempt ANY TWO of the following: [10]

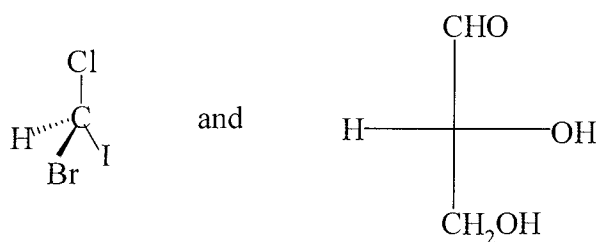
- a) What is conformational isomerism? Draw all possible conformations of n-propane and explain their stability with energy profile diagram.
- b) What are heterocyclic compounds? Discuss any two synthesis of furan.
- c) Write a note on Haworth's synthesis of naphthalene.

Q.2 Attempt ANY TWO of the following: [10]

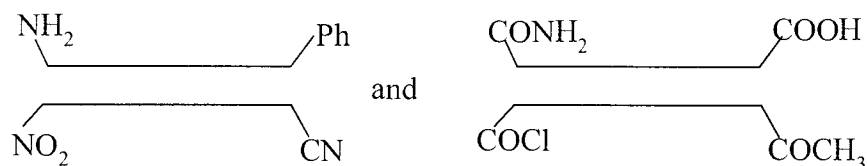
- a) Discuss any two methods of preparation of cycloalkanes.
- b) Discuss the molecular orbital structure of pyrrole.
- c) Write a note on : Geometrical isomerism.

Q.3 A) Attempt ANY ONE of the following: [05]

- a) i) Assign R/S configuration to the following compounds:

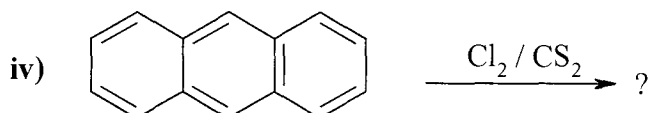
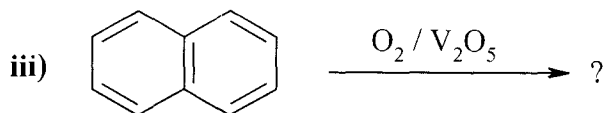
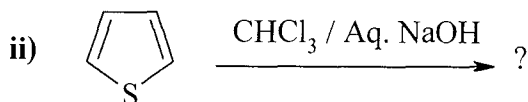
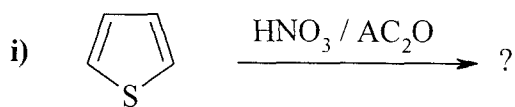


- ii) Assign E/Z configuration to the following compounds:



P.T.O.

b) Predict the product/s:



SECTION – II [Inorganic Chemistry]

Q.3 B) Attempt ANY ONE of the following: [05]

- Show the position of nitrogen family elements in a rough sketch of periodic table, write the names and outer electronic configuration of nitrogen family elements. Discuss the trends in atomic size and ionization potential of these elements.
- The first element of a group in p-block show anomalous behaviour. Explain with a suitable example.

Q.4 Attempt ANY FIVE of the following: [10]

- Define electronegativity. How does it vary down the group of halogen family elements?
- What are oxyacids? Mention oxyacids of sulphur.
- Draw the structures of Al_2Br_6 and IF_5 .
- Discuss the comparison between diamond and graphite.
- What are interhalogen compounds? Give two examples of interhalogen compounds.
- Write the names and outer electronic configuration of group IVA elements.
- Mention nonmetals and metals present in carbon family elements.

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