

F.Y.B.Sc. SEM – II (CBCS 2018 COURSE) : SUMMER - 2019
SUBJECT : CHEMISTRY : ORGANIC & INORGANIC CHEMISTRY – II

Day : Friday
Date : 12/04/2019

Time 11.00 A.M TO 02.00 PM
Max. Marks : 60

S-2019-0783

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 books.
- 4) Draw neat and labelled diagrams **WHEREVER** necessary.

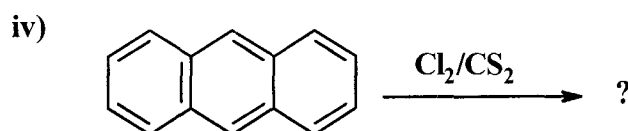
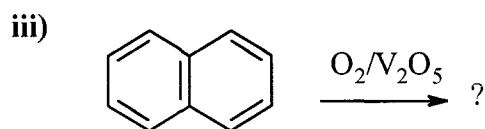
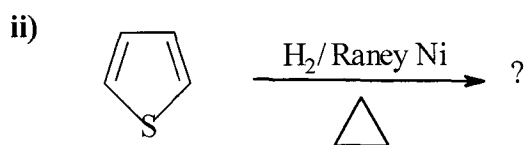
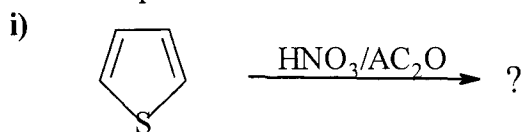
SECTION – I
(Organic Chemistry)

Q.1 Attempt any **TWO** of the following: (12)

- a) What is conformational isomerism? Draw all possible conformations of ethane and explain their stability with energy profile diagram.
- b) What are Polynuclear aromatic compounds? How do you bring about the following conversions?
 - i) Naphthalene to 1-Aceto naphthalene
 - ii) Anthracene to Perhydro anthracene
- c) What are heterocyclic compounds? Discuss any two methods of synthesis of furan.

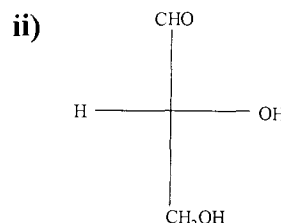
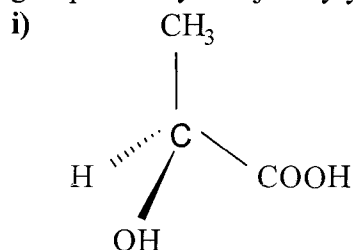
Q.2 Attempt any **TWO** of the following: (12)

- a) What are enantiomers and diastereomers? Explain with suitable example.
- b) Discuss any two methods of preparation of cycloalkanes.
- c) Predict the product/s:

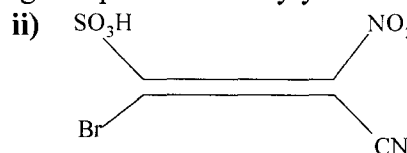
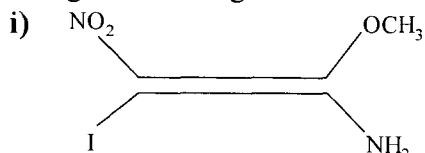


P.T.O.

- Q.3** Attempt any **THREE** of the following: **(12)**
- Discuss the molecular orbital structure of Pyrrole.
 - Discuss the Haworth's synthesis of naphthalene.
 - Assign R/S configuration to the following compounds. Indicate sequence of groups clearly and justify your answer.



- d) Assign E/Z configuration to the following compounds. Justify your answer.



SECTION – II (Inorganic Chemistry)

- Q.4** Attempt any **TWO** of the following: **(12)**
- What is meant by anomalous behavior? Explain it with a suitable example with reference to p-block elements.

- Draw a rough sketch of periodic table and show the position of halogen family elements. Write their names and outer electronic configuration. Comment upon the trends in atomic size, electronegativity for these elements.
- What are allotropes? Explain the properties of allotropes of carbon.

- Q.5** Attempt any **FOUR** of the following: **(12)**

- Write electronic configuration of N (At. No. 7), F (At. No. 9) and Si (at. No. 14).
- Give two examples each of oxides of nitrogen, interhalogen compounds and oxyacids of sulphur.
- Define electronegativity and electron affinity. Comment upon electronegativity of fluorine.
- Draw the structures of Al_2Br_6 , PCl_5 and SO_4^{2-} .
- p-block of periodic table contains metals, nonmetals and metalloids. Explain.
- What are oxyacids? Mention oxyacids of chlorine. What is the order of acid strength of these oxyacids?

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