

"Section-B"

Marks: 40

Q.2. Write short answers to any ten (10) of the following parts. All parts carry equal marks.

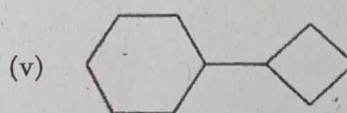
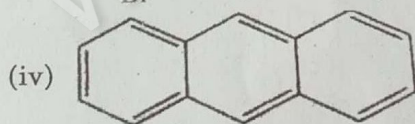
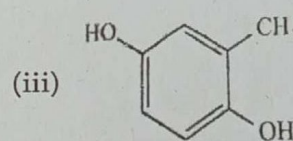
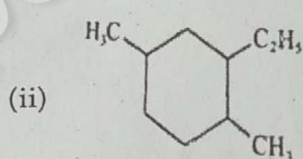
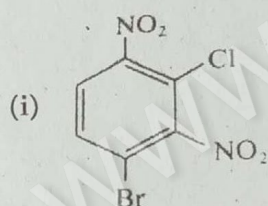
- (i) Justify that beryllium chloride is different from the chlorides of its group.
- (ii) Give the reason(s) that the compounds of Sn^{4+} are covalent in nature while those of Sn^{2+} are ionic?
- (iii) Why the transition elements show the catalytic behaviour?
- (iv) What is meant by organic compounds and organic chemistry?
- (v) Differentiate between partial and total synthesis.
- (vi) What is meant by substituent effects?
- (vii) Write a short note on halogenation.
- (viii) Aldehydes are oxidized easily than ketones. Why?
- (ix) Why anhydrous acetic acid is known as glacial acetic acid?
- (x) Explain the use of ionization chamber in mass spectrometer.
- (xi) Explain the nuclear spin flipping briefly.
- (xii) Differentiate between non-competitive and uncompetitive inhibitions.
- (xiii) Why tertiary alcohol cannot be oxidized?

"Section-C"

Marks: 27

Note: - Answer any three (3) questions. All questions carry equal marks.

- Q.3. (a) Why the atomic radius of argon is larger than all the member of third period? (5)
 (b) Write any four general features of transition elements. (4)
- Q.4. (a) What is the main goal of petroleum refining? (5)
 (b) Differentiate between atomic emission and absorption spectroscopy. (4)
- Q.5. (a) Write the systematic names of the following organic compounds. (5)



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- (b) What happens when protein is denatured? (4)
- Q.6 (a) Explain structure of Ethane. (5)
 (b) Draw the structural formula of the following organic compounds. (4)
- (i) cyclopropylbenzene (ii) hex-2-yne