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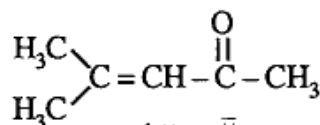
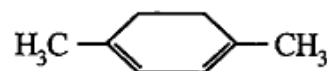
PY-701 (CBGS)**B.Pharmacy VII Semester (Non-PCI Scheme)**

Examination, November 2018

Choice Based Grading System (CBGS)**Instrumental Methods of Analysis***Time : Three Hours**Maximum Marks : 75***Note:** i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Describe the electronic transitions and spectral shifts in molecule. <https://www.rgpvonline.com>
b) Elaborate Woodward-Fieser rule with suitable examples.
2. Give the instrumentation, advantages and applications of adsorption and Partition Column Chromatography.
3. Draw a neat labeled diagram of HPLC system and explain its working. Explain the merits of HPLC over GC.
4. a) Calculate the λ_{\max} of following structures using Woodward-Feiser rule:

<https://www.rgpvonline.com>

- b) Enumerate the various vibrations occur in given IR graphs and find out the functional groups present in the molecules.
5. a) Describe various modes of vibrations of polyatomic molecule in IR spectroscopy. Explain Fermi resonance and its effect on vibrational frequency.
b) Briefly explain the FTIR and its advantages over dispersive IR instrument. <https://www.rgpvonline.com>
 6. Write short notes on (any three)
 - i) Nephelo Turbidimetry
 - ii) AAS
 - iii) Gel Chromatography
 - iv) Electrophoresis
 7. What are types of atomic spectroscopy? Elaborate the interferences occurs in Atomic Spectroscopy. Also elaborate the events occurs in the atomic spectroscopy.
<https://www.rgpvonline.com>
 8. a) Explain the principles and techniques of paper, gel and capillary electrophoresis.
b) Explain the advantages, disadvantages and applications of thin layer chromatography.
