

C.U.SHAH UNIVERSITY

Summer Examination-2017

Subject Name: Pharmaceutical Analysis-III

Subject Code: 4PS08PHA1

Branch: B.Pharm

Semester: 8

Date: 18/04/2017

Time: 02:30 To 05:30

Marks: 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

- Q-1 Attempt the following (14)
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| a. What is a chemical shift? | h. Enlist the transitions in UV-Vis Spectroscopy. |
| b. Define: Auxochrome | i. What is Rf Value? |
| c. What is chromatography? | j. Define: Calibration. |
| d. What is UV-Vis range in electromagnetic spectrum? | k. Enlist the solvents used in NMR. |
| e. Define: Fluorescence | l. Define: Validation. |
| f. Define: phosphorescence | m. What is the meaning of mobile phase? |
| g. What are the basic components of a mass spectrometer? | n. Which Internal reference is used for samples scanned in CDCl_3 ? |

Attempt any four questions from Q-2 to Q-8

- Q-2 a. State Beer – Lambert's Law. Derive its mathematical form. (07)
b. Explain the principle and Instrumentation of UV- Visible spectroscopy. (07)
- Q-3 a. Explain Jablonski diagram and instrumentation of Fluorescence spectroscopy. (07)
b. Give the Principle of IR and discuss the vibrations involves in IR Spectroscopy. (07)
- Q-4 a. Give the principle, instrumentation and applications of NMR. (07)
b. Give the instrumentation and applications of mass spectrometry. (07)
- Q-5 a. Discuss the instrumentation of flame Photometry and Atomic Absorption Spectroscopy. (07)
b. Discuss detectors used in gas chromatography. (07)
- Q-6 a. Discuss detectors used in HPLC. (07)
b. Explain in brief technique of GC-MS, LC-MS and LC-MS/MS. (07)
- Q-7 a. What is Good Laboratory Practices? And Write an explanatory note on Analytical Method Validation. (07)
b. Discuss the principle of HPTLC. Give a detailed comparison of HPTLC with HPLC. (07)
- Q-8 a. Write a note on ELISA. How is ELISA better than RIA? (07)
b. Describe advantage, disadvantage and applications of HPTLC. (07)

