



Code No: G-13154/PCI

FACULTY OF PHARMACY

M. Pharmacy (PCI) II - Semester (Pharm. Analysis) (Backlog) Examination, June 2025
Subject: Advanced Instrumental Analysis

Time: 3 Hours

Max. Marks: 75

Note: Answer any five questions. All questions carry equal marks.

(5 x 15 = 75 Marks)

1. (a) Explain about various parameters in HPLC.
 - (i) Peak shape
 - (ii) Capacity factor
 - (iii) Plate number and plate height
 - (iv) Resolution.(b) Write about Chiral analysis?
2. (a) Discuss about Size-Exclusion Chromatography and Affinity chromatography?
(b) Explain about head space sampling in Gas chromatography.
3. (a) Write the instrumentation and applications of SFC.
(b) Explain about Crown ethers and buffer additives in capillary electrophoresis.
4. Explain about Electron impact, CI, FAB, ESI Ionization techniques in mass spectrometry.
5. (a) What is chemical shift? Explain the various factors influencing it?
(b) Write about 2DNMR.
6. (a) Write about Preparative chromatography.
(b) Discuss the derivatization methods of Gas chromatography.
7. (a) Explain about columns and column problems in HPLC.
(b) Discuss about NOESY.
8. (a) Explain about LC-MS analysis?
(b) Write about
 - (i) Coupling constant
 - (ii) Shielding and deshielding in NMR spectroscopy



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M. Pharmacy (Pharma Analysis) II - Semester (PCI) (Backlog) Examination, June 2025
Subject: Herbal and Cosmetic Analysis

Time: 3 Hours

Max. Marks: 75

Note: Answer any five questions. All questions carry equal marks.

1. (a) Discuss the standardization of herbal drugs according to AYUSH guidelines. [10]
(b) Explain the pharmacokinetic issues of herbal drugs. [5]
2. Discuss the protocol of Indian patent law as applicable to herbal drugs and natural products. [15]
3. (a) Write a note on Stability testing of natural products. [10]
(b) Explain the effect of herbal medicine on clinical laboratory testing. [5]
4. (a) Describe the spontaneous reporting schemes for bio drug adverse reactions? [8]
(b) Write a note on bio drug-food interactions with suitable examples? [7]
5. (a) Explain the procedure involved in determination of acid value and Iodine value of cosmetic products. [8]
(b) Write the analysis of Skin creams preparations as per BIS. [7]
6. Discuss the sampling and testing of baby care products and lipsticks as per BIS. [15]
7. (a) Explain AYUSH guidelines for safety monitoring of natural medicine. [10]
(b) Explain the challenges in safety monitoring of herbal drugs. [5]
8. Explain Siddha and Unani pharmacopoeias. [15]
