

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.

 $(5 \times 15 = 75 \text{ Marks})$

- 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.
- (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



FACULTY OF PHARMACY

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.

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



FACULTY OF PHARMAC (Common to All) III - Semester (PCI) (Main & Backlog) Examination, June 2025

Subject: Research Methodology and Biostatics

Time: 3 Hours Max N			
Note: Answer any five Questions. All Questions carry equal marks.			
 (a) Write a note on types of research. (b) What are the strategies to eliminate en 	rors/bias? (7) (8)		
 (a) Write a note on paired and unpaired st (b) Explain in brief about importance of sa 	udent t test. (7) mple size in research. (8)		
(a) Describe in brief about values in medic(b) Write a note on euthanasia and informed			
4. (a) Describe about the necessary SOPs re (b) Write a note on treatment and control of	quired to maintain laboratory animals. (7) f diseases in laboratory animals. (8)		
5. (a) Write a note on history of declaration o (b) Write the basic principles of medical re	f Helsinki. (7) search. (8)		
6. (a) Explain in brief about objectives of rese(b) Write a note on placebo and blinding te			
7. (a) Write about t-test(b) Write a note on correlation co-efficient.	(7) (8)		
8. (a) Explain about the double effect and me(b) Write a note on transport of laboratory	dical research ethics committee. (7) animals. (8)		