Seat No.:---------- Enrolment No.:----------

UKA TARSADIA UNIVERSITY

Maliba Pharmacy College

M. Pharm. (Pharm. Analysis) 2nd Semester Internal Examination 2012

Pharmaceutical Analysis II

Time: 1:30 to 4:30 p.m. Max. Marks: **70**

Date: 21/04/2012

Instructions:

- Question no. **1 is compulsory.**
- From Q.2 to Q.7 attempt any **four** questions.
- Make suitable assumption whenever necessary.
- Figures to the right indicate full marks.

Q.1 (a) Answer the following: (any six) **06**

1 What is Super critical fluid?
2 Enlist the methods used for quantitative analysis of dosage forms containing antidiabetic drugs.
3 What is isoelectric focusing?
4 Define crude drug.
5 What is tryptic mapping?
6 Define automated systems.
7 What is ultrafiltration?
8 What is MAS?

(b) Describe in brief: (any four) **08**

1 How will you calculate acid insoluble ash value?
2 Describe method for determining extractive value of crude drugs.
3 What is the significance of system biocompatibility in peptide mapping?
4 What is counter current chromatography?
5 Explain column switching as a sample preparation technique.
6 Classify analytical techniques used for solid state analysis.

Q.2 (a) Discuss the role of phenyl isothiocyanate in sequence determination of proteins and peptides. **04**

(b) Explain the principle of size exclusion chromatography and state its applications. **05**

(c) Discuss pre column and post column derivatization methods for amino acid analysis. **05**

Q.3 (a) Differentiate between types of automatic analytical systems. **04**

(b) Explain how ion exchange chromatography aid in analysis of proteins and peptides. Also discuss factors influencing retention in IEC. **05**

(c) Discuss the role of titrimetric methods in analysis of antihypertensive and antihistaminic drugs. **05**

Q.4 (a) Explain the principle of flow injection analysis. **04**

(b) Discuss the role of NMR spectroscopy in solid state analysis with suitable examples. **05**

(c) Discuss the uses and limitations of peptide mapping. **05**

Q.5 (a) Discuss the role of chromatography in identification of plant constituents with suitable examples. **04**

(b) Describe WHO guidelines for quality control of crude drugs. **05**

(c) Define extraction. Describe different techniques of extraction. **05**

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Q. 6

(a) Discuss the role of spectroscopic techniques in quality control of crude drugs. **04**

(b) Discuss the role of isolation techniques in degradation and impurity analysis. **05**

(c) Discuss the significance of solid phase extraction as a sample preparation technique. **05**

Q.7 (a) What are the advantages of SFC over HPLC and GC? Enlist the components of an instrument used for SFC. **04**

(b) Discuss the fundamental theories controlling sample preparation techniques **05**

(c) Explain synthetic carrier ampholytes and immobilized pH gradients in IEF. **05**