

Total No. of Questions : 6]

SEAT No. :

P1993

[5145]-505

[Total No. of Pages : 2

T.Y. B.Pharmacy

**355 : ANALYTICAL PHARMACOGNOSY AND EXTRACTION
TECHNOLOGY**

(2013 Pattern) (Semester - V)

Time : 3 Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 2) *Answers to the two sections should be written in separate answer-books.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Figures to the right indicate full marks.*

SECTION - I

Q1) Attempt any one of the following: **[10]**

- a) Explain the principle, instrumentation and applications of Microwave-assisted extraction.
- b) Explain the Principle and applications of HPLC.

Q2) Attempt any five of the following: **[15]**

- a) Give the chemical tests for Curcumin and atropine.
- b) Explain the isolation procedure of Piperine.
- c) Enlist different types of adsorbents for column chromatography.
- d) Explain merits and demerits of Soxhlet extraction.
- e) Describe the procedure for "Foreign matter" as per WHO guidelines.
- f) Explain Ultrasound-assisted extraction with an example.
- g) Enlist the types of difficulties in analysis of natural products.

Q3) Attempt any two: **[10]**

- a) Explain the maceration and percolation process.
- b) Explain the applications of HPTLC in herbal drug analysis.
- c) Explain the procedure & significance of 'Tannin Content' as per WHO guidelines.
- d) Define Adulteration and explain its types with suitable examples.

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SECTION - II

Q4) Attempt any one of the following: **[10]**

- a) Describe in detail:
 - i) Method of determining bitterness value in crude drugs.
 - ii) Different types of Ash value with their significance.
- b) Explain role of 'Storage Area and Central Store' in maintaining quality in pharmaceutical products as per WHO guideline.

Q5) Attempt any five of the following: **[15]**

- a) Enlist the contents of labels for all reagents of a pharmaceutical QC laboratory.
- b) Explain the extraction of peppermint oil by steam distillation method.
- c) Explain merits & demerits of Supercritical fluid extraction.
- d) Describe method for isolation of rose oil.
- e) Describe the procedure of sampling.
- f) Explain determination of aflatoxins as per WHO.
- g) Explain source, properties and test of digoxin.

Q6) Attempt any two: **[10]**

- a) Explain Source, properties, isolation & tests of Sennosoids.
- b) Explain the procedure for determination of haemolytic activity as per WHO guidelines.
- c) Explain Froth-floatation technique.
- d) Explain advantages of TLC over paper chromatography.

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