

Total No. of Questions : 6]

SEAT No. :

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[5049]-505

T.Y.B.Pharmacy

**ANALYTICAL PHARMACOGNOSY AND EXTRACTION
TECHNOLOGY**

(2013 Pattern) (Semester - V) (Theory)

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:

- a) Explain the principle, instrumentation and applications of Counter - Current extraction system.
- b) Explain the Principle and applications of HPTLC. **[10]**

Q2) Attempt any five of the following:

[15]

- a) Give the chemical tests for eugenol and digoxin.
- b) Explain the isolation procedure of boswellic acid.
- c) Describe fractional crystallization.
- d) Explain merits and demerits of Supercritical fluid extraction.
- e) Explain determination of volatile matter as per WHO guidelines.
- f) Explain Microwave-assisted extraction with an example.
- g) Enlist significance of proximate phytochemical analysis.

P.T.O.

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

- a) Explain the requirements of Infrastructure as per WHO guidelines for Pharmaceutical Laboratory.
- b) Explain procedure & significance in determination of pesticide residues.
- c) Explain Source, properties, isolation & tests of reserpine.
- d) Explain Principle & procedure of sampling.

SECTION - II

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

- a) Describe in detail:
 - i) Methods of determining foaming index.
 - ii) Principle, procedure & significance in determination of extractable matter.
- b) Explain general rules of ensure safety in a pharmaceutical quality control laboratories as per WHO.

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

- a) Give the chemical tests for Diosgenin and citral.
- b) Explain the isolation procedure of andrographolides.
- c) Enlist different types of adsorbents for column chromatography.
- d) Explain merits and demerits of Soxhlet extraction.
- e) Add a note on “Moisture Content” as per WHO guidelines.
- f) Explain centrifugation method for separation.
- g) Explain difficulties encountered in analysis of natural products.

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

- a) Describe adulteration and explain its types with suitable examples.
- b) Explain froth-floatation technique.
- c) Explain Source, properties, isolation & tests of Piperine.
- d) Enlist the Contents of ‘Analytical Test Report’ as per WHO guidelines.

