

Q.P. Code : 500403

(3 Hours)

[Total Marks : 70

- N.B. : (1) All questions are **compulsory**.
(2) **Illustrate** answers with **sketches** and **structures** whenever required.
(3) **Answers to subquestions** must be written **together**.

1. (a) Correct the statements if required and justify all the statements with significant reasons or examples. 7
- (i) Volatile oil present in umbelliferae represents chemotaxonomical classification.
 - (ii) Abscisic acid is plant growth inhibitor.
 - (iii) Ruthenium red is a microchemical reagent.
 - (iv) Corm is an example of stem modification.
 - (v) Primary metabolites can be categorized under unorganised drug.
 - (vi) Dien stark assembly follows the principle of hot continuous percolation.
 - (vii) Sterculia gum shows precipitate with barium chloride reagent.
- (b) Answer the following: 8
- (i) Give two examples of phytoconstituent of alkaloid class with structures and its therapeutic application.
 - (ii) Give the source, composition and application of plant lectin-"ricin".
 - (iii) Differentiate between absorbent and nonabsorbent cotton.
 - (iv) Define substitution of crude drugs and give two suitable examples.
2. (i) Discuss the modern concepts and scope of "pharmacognosy and phytochemistry". 3
- (ii) Discuss the histology / microscopical features of a monocot and dicot root with a neat labelled diagrams. 4
- (iii) Write a detailed note on "guargum". 4
3. (i) Write general method of extraction for alkaloids or glycosides. 3
- (ii) Discuss the significance of WHO guidelines and enlist all the evaluation parameters mentioned under these guidelines. 4
- (iii) Write a note on animal fibres. 4

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4. (i) Write a note on morphological classification of DONO. 3
(ii) Give the importance of drying and storage of crude drugs with suitable examples. 4
(iii) Discuss in detail microwave assisted extraction with suitable applications. 4
5. (i) Write the morphological and microscopic differences between plant of allied species of brahmi **or** digitalis. 3
(ii) Write in detail about chemical method of evaluation of DONO. 4
(iii) Give the source, preparation and commercial utility of following: 4
(a) TKP
(b) Malt and malt extract
6. (i) Discuss acetate hypothesis **or** polyketide pathway. 3
(ii) Discuss the various environmental factors affecting quality of crude drug. 4
(iii) Write a note on proteolytic enzymes obtained from microorganisms. 4

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