

(2 Hours)

[Total Marks : 70

- N. B. : (1) All questions are compulsory.
(2) Illustrate answer with sketches & structures wherever required.
(3) Answers to sub questions must be together.

1. (a) Justify the following statement with significant reasons or examples (any seven) :- 7
- (i) Dried latex is an example of unorganized drug.
 - (ii) Glycerin is used as mountant in microscopical studies.
 - (iii) Tannins are examples of secondary metabolites of plants.
 - (iv) Carbon dioxide is an ideal gas for supercritical fluid extraction.
 - (v) Extractive value signifies polarity of phytoconstituents present in the crude drugs.
 - (vi) Chitin is an example of nitrogenous polysaccharides.
 - (vii) Gelatin gives positive millon's reaction.
 - (viii) Dibbling is a method of sowing of seeds.
- (b) Answer the following :- 8
- (i) Draw a neat labelled diagram describing the histology of dicot stem.
 - (ii) Give two examples of alkaloids class of secondary metabolites with structures & their therapeutic significance.
 - (iii) Write a note on cytokinin as plant growth regulators.
 - (iv) Discuss the source, preparation & commercial utility of pectin.
2. (i) Define pharmacognosy & enlist its significance in Homeopathic system of medicine. 3
- (ii) Discuss calcium oxalate crystals & starch grains as ergastic cell contents. 4
 - (iii) Write a detailed note on agar. 4
3. (i) Discuss counter current extraction with any two commercial applications. 3
- (ii) Discuss the microscopical method of evaluation of DONO with respect to pharmacopoeias. 4
 - (iii) Write a note on animal fibres. 4
4. (i) Discuss the alphabetical classification of DONO & give an example of official & unofficial drugs. 3
- (ii) Drying helps to preserve the crude drugs of natural origin for longer period of time. Explain the statement with 4-5 examples. 4

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(iii) Compare & contrast maceration & percolation method of extraction. Discuss the Dien stark assembly for extraction of volatile oil.

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5. (i) Compare and contrast tragacanth & sterculia gum.
(ii) Discuss adulteration & substitution of crude drugs with 4 examples.
(iii) Discuss in detail types of inflorescence.

OR

Explain the classification of fruits.

6. (i) Explain the study of plant lectins with respect to sources, composition & applications of ricin & abrin.
(ii) Explain the endogenous & environmental factors affecting the quality of crude drugs.
(iii) Enumerate the biosynthetic pathway for volatile oils.

6.