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B. PHARM
(SEM-VII) THEORY EXAMINATION 2018-19
PHARMACOGNOSY-IV

Time: 3 Hours

Total Marks: 100

Note: 1. Attempt all Sections.

SECTION A

- 1. Attempt all questions in brief. 2 x 10 = 20**
- a. Define Totipotency. What are explants?
 - b. What do you mean by Hairy Root Culture?
 - c. Write the composition of Dragendorff's and Mayer's Reagent.
 - d. Write the biological source and use of any two alkaloidal amines.
 - e. What do you mean by fingerprinting?
 - f. Draw the chemical structure of any two constituents of Ephedra.
 - g. Write the Biological source and chemical constituents of any two pyridine-piperidine alkaloids.
 - h. Mention the physiological effects of Tobacco.
 - i. Define Suspension Culture.
 - j. Which properties of Colchicine do not allow it to be categorized under True alkaloids?

SECTION B

- 2. Attempt any three of the following: 10 x 3 = 30**
- a Discuss the production and utilization of Tropane alkaloids.
 - b Explain the historical development of Plant Tissue Culture.
 - c Write the biological source, morphology, microscopy, chemical constituents and identification tests of *Nux vomica*.
 - d Describe role of HPTLC in standardization of Herbal drugs.
 - e Explain the microscopy of Belladonna and Lobelia.

SECTION C

- 3. Attempt any one part of the following: 10 x 1 = 10**
- (a) Explain the herbal drug interactions.
 - (b) Describe the Pharmacognosy of Coca and Ipecac.

4. Attempt any *one* part of the following: 10 x 1 = 10

- (a) What are the types of plant tissue culture and their applications in pharmacy?
- (b) Give the biological source, chemical structures and uses of:
 - i. Pilocarpine
 - ii. Lobeline
 - iii. Ephedrine
 - iv. Morphine

5. Attempt any *one* part of the following: 10 x 1 = 10

- (a) Explain the Pharmacognosy of Indole alkaloids.
- (b) Discuss the Bioactive compounds enhancing the bioavailability.

6. Attempt any *one* part of the following: 10 x 1 = 10

- (a) What is the role of growth hormones in Plant Tissue Culture?
- (b) Discuss the production and utilization of Solasodine.

7. Attempt any *one* part of the following: 10 x 1 = 10

- (a) Explain the detailed monograph on Lobelia and Withania.
- (b) Discuss the production and utilization of Podophyllotoxins