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Total No. of Pages : 1

Total No. of Questions : 06

M.Pharmacy (Pharmacognosy) (2017 & Onwards) (Sem.-1)

**PHYTOCHEMISTRY**

Subject Code : MPG-103T

M.Code : 74671

Time : 3 Hrs.

Max. Marks: 75

**INSTRUCTIONS TO CANDIDATES :**

1. Attempt any FIVE questions out of SIX questions.
2. Each question carries FIFTEEN marks.

1. (a) Explain the biosynthetic pathway, isolation and commercial importance of Berberine. (10)  
(b) Discuss the importance of radio tracer techniques in studying the biosynthetic pathways of secondary metabolites. (5)
2. (a) Write a note on the discovery and development of Artemisinin as a useful compound. (7)  
(b) You are given a crude drug for extraction. What will be the various parameters that will govern the selection of solvent and extraction procedure? Also discuss various steps involved in extraction process of a crude drug. (8)
3. (a) Elaborate in detail on microwave assisted extraction highlighting its principle, instrumentation and application in herbal drug industry. (8)  
(b) Explain the isolation and biosynthetic pathway of Taxol. (7)
4. Explain in detail the role of HPTLC in characterization of herbal extracts. Also discuss various hyphenations of HPTLC that are being used recently. (15)
5. Explain the structure elucidation of Citral and Glycyrrhizin using IR, NMR and MS. (15)
6. Write a note on :
  - (a) CCCET (5)
  - (b) Role of LC/MS in finger printing of herbal drug extracts (5)
  - (c) Phases of clinical trials for herbal drugs (5)

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**