

# Rajiv Gandhi University of Health Sciences, Karnataka

## IV Year B.Pharm Degree Examination – Aug / Sep 2011

**Time: Three Hours****Max. Marks: 80 Marks**

### INDUSTRIAL PHARMACOGNOSY (Revised Scheme - 2)

**Q.P. CODE: 1970**

Your answers should be specific to the questions asked  
Draw neat labeled diagrams wherever necessary

**LONG ESSAYS (Answer any Two)****2 x 10 = 20 Marks**

1. Explain the general methods for isolation, identification and estimation of Glycyrrhizin and withanolides.
2. Explain the terms: Evaluation and Standardization. What are the WHO guidelines for the assessment for crude drugs, extracts and formulations?
3. Explain the principles involved in Ayurveda, Siddha and Unani.

**SHORT ESSAYS (Answer any Eight)****8 x 5 = 40 Marks**

4. Explain the method for isolation and estimation of quinine.
5. What is the role of Soapnut, Amla and Henna in herbal cosmetics?
6. What is the importance of HPTCL and HPLC in herbal drug analysis?
7. Explain the standardization of Kalmegh extract.
8. What is immobilization of cells and enzymes? Give its applications with examples.
9. Explain the methods of isolation and estimation of guggul lipids.
10. Give source, chemical constituents and uses of: Kantakari, Rasna, Arjuna and Shatavari.
11. What is hybridization? Classify and give its applications in plant biotechnology with examples.
12. Give an account of patenting of natural products.
13. Explain the factors affecting the production of secondary metabolites in tissue culture with examples.

**SHORT ANSWERS****10 x 2 = 20 Marks**

14. Give source, chemical constituents and uses of gymnema.
15. Explain the principle of Homeopathy.
16. Explain the terms: Electroporation and Microinjection.
17. What are the differences between Asava and Arista?
18. Give the source and uses of hyaluronidase.
19. What is biotransformation?
20. Define and give applications of mutation.
21. What are papain and bromelain?
22. Write the structure of sennosides.
23. What is Shilajit? Give its uses.

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