

# Rajiv Gandhi University of Health Sciences, Karnataka

Fourth year B.Pharm Degree Examination - August 2010

**Time: Three Hours****Max. Marks: 70 Marks**

## INDUSTRIAL PHARMACOGNOSY (Revised Scheme – 3)

**Q.P. CODE: 2620**

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 terms: Plant breeder's right, farmer's right, bioprospecting and biopiracy. What is the importance of patenting of natural products? Explain with examples.
2. Explain the terms: Evaluation and Standardization. What are the WHO guidelines for the assessment for crude drugs, extracts and formulation?
3. Explain the methods for isolation and estimation of Asiaticoside and gymnemic acid.

**SHORT ESSAYS (Answer any Six)****6 x 5 = 30 Marks**

4. Explain the preparation of Asava and Arista. How do you estimate the alcohol content in them?
5. Explain the different methods of isolation and estimation of Andrographolides.
6. What is protoplast? Explain the process of protoplast isolation and give its applications.
7. Explain the isolation and uses of Urokinase and Streptokinase.
8. Explain the principles of Ayurveda and Siddha.
9. Explain the methods of standardization of Vasaka.
10. Explain the method of electroporation and microprojectile technique for gene transfer.
11. Write a note on importance and status of herbal medicine. Give a brief account of herbal industry in India.

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

12. What are nutraceuticals? Give examples.
13. What are citrus bioflavonoids?
14. What is Shilajit?
15. What is hairy root culture?
16. Give applications of marker compounds.
17. Write the structures of Sennosides.
18. How do you determine the microbial contamination in herbals?
19. What are immobilized enzymes? Give their uses.
20. Define-mutation and polyploidy.
21. Give sources of Gokhru and chirata.

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