[Time: 3 Hours] [Max. Marks: 100]

## Industrial Pharmacognosy (Revised Scheme 4)

Q.P. CODE: 9385

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

## LONG ESSAY (Answer any TWO)

2 X 20 = 40 Marks

- Explain the methods of preparation and evaluation of Herbal Shampoo and Hair dye. 1.
- 2. Illustrate the structural elucidation of Quercetin with suitable example. Explain the test for flavonoids.
- 3. Explain the methods of isolation and estimation of Guggulsterone and Curcumin.

## SHORT ESSAY (Answer any FIVE)

5 X 10 = 50 Marks

- Shelf life study protocol for herbal products 4.
- 5. Indian and International Patent laws
- 6. Deodorants preparations and evaluation
- 7. Quality control aspects of multi-component classical Ayurvedic formulations by HPTLC/HPLC finger printing
- Central and state regulatory bodies for Indian drug regulatory authorities 8.
- FDA COM COM 9. Types of Nano herbal formulations and its standardization

SHORT NOTES 2 X 5 = 10 Marks

- Regulatory requirements under USFDA 10.
- Perfumes from herbal origin 11.

