

**T.Y.B.PHARM. SEMESTER-VI (2011 COURSE) : SUMMER -  
2018**

**SUBJECT: PHARMACOGNOSY-II**

Day : **Saturday**  
Date : **05/05/2018**

**S-2018-3975**

Time : **10.00 AM TO 01.00 PM**  
Max. Marks : 80

**N.B.:**

- 1) **Q.No.1 and Q.No.5 are COMPULSORY.** Out of remaining questions attempt **ANY TWO** questions from each section.
- 2) Answers to both the sections should be written in **SEPARATE** answer books.
- 3) Figures to the right indicate **FULL** marks.

**SECTION – I**

- Q.1** Attempt **ANY FIVE** of the following (10)
- a) Write two main chemical constituents present in Onion and draw structure of the same.
  - b) Write biological source and health benefits of Arnica.
  - c) What are nutraceuticals? Give examples.
  - d) Write preparation of decoction.
  - e) Write principle of TLC.
  - f) Which are different advantages of HPTLC in Herbal drug analysis?
- Q.2** a) Which are different types of extracts? How will you standardize extracts? (08)  
b) Applications of column chromatography in herbal drug analysis. (07)
- Q.3** a) Write note on continuous hot extraction. (08)  
b) Explain Successive Solvent Extraction and supercritical fluid extraction. (07)
- Q.4** Write note on **ANY THREE** of the following (15)
- a) HPLC in herbal drug analysis
  - b) Cucumber
  - c) Health benefits of Fenugreek
  - d) Garlic
  - e) pH gradient technique for alkaloid extraction

**SECTION – II**

- Q.5** Attempt **ANY FIVE** of the following (10)
- a) Explain principle of totipotency.
  - b) Give salient features of protoplast fusion.
  - c) What is callus?
  - d) Which are different quality control parameters for herbal shampoo?
  - e) Write composition of herbal skin moisturizer.
  - f) Explain history of tissue culture techniques.
- Q.6** a) Explain the significance of quality control of herbal cosmetics. Give quality control of any skin care product. (08)  
b) Write different strategies for enhancement of secondary metabolite production from plant cells. (07)
- Q.7** a) Explain WHO guidelines for standardization of herbal drugs. (08)  
b) Give applications of different hair care preparations with examples. (07)
- Q.8** Write note on **ANY THREE** of the following: (15)
- a) Composition of tissue culture media
  - b) Requirements for set up of tissue culture laboratory
  - c) Production of Hair care products
  - d) Role of growth hormones in PTC
  - e) Various hair dyes in herbal cosmetics
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