4. Write about the biological source, solubility profile, chemical constituents, chemical tests and use of castor oil and tragacanth. (2.5 + 2.5 = 5)

5. Write a short note on morphological and taxonomical method of crude drug classification. (2.5+2.5)

6. What do you mean by primary metabolites and secondary metabolites? What are the different Physical evaluation parameters in crude drug evaluation? (2+3)

7. What are stomatal number, stomatal index, vein islets and vein islet termination number? What are the numbers of divisions in a stage micrometer scale? (4+1)

8. Write a short note on Ayurveda. (5)

9. Write a short note on factors affecting cultivation of crude drugs. (5)

.★★★

UG (CBCS) EVEN SEMESTER EXAM, JULY 2024

PHARMACEUTICAL SCIENCES

(4th Semester)

Course No: BP - 405T

Pharmacognosy and Phytochemistry I (Theory)

Full Marks : 75

Time : 3 hours

The figures in the margin indicate full marks for the questions

I.A. Multiple choice questions -

1x10=10

1. An example of saponin glycoside is
   a. Liquorice b. Nuxvomica
   c. Ashwagandha d. All the options

2. If the sugar is glucose, then the glycoside is called
   a. Glucoside b. Rhamnoside
   c. Digitoxoside d. None

3. Diphenylpropane ring is the basic molecule of
   a. Flavonoids b. Alkaloids
   c. Volatile oils d. All the options

4. Swelling index is related to determine the _____ content
   a. Mucilage b. Gum
   c. Ash d. None

5. The moisture content of crude drug can be determined by heating it at -
   a. 105°C   b. 160°C
   c. 65°C   d. 90°C

6. The synonym for Anomocytic type stomata is
   a. Cruciferous   b. Ranunculaceous
   c. Rubiaceous   d. None of the options

7. The phenolic compounds present in an extract when reacted with lead acetate solution yields______ precipitate.
   a. Blue colour   b. Yellow colour
   c. Purple colour   d. White colour

8. A saturated picric acid solution in cold water used for detection of alkaloids is known as
   a. Wagner's reagent   b. Hager's reagent
   c. Mayer's reagent   d. Dragendorff's reagent

9. Example of a very harmful adulterant is
   a. Presence of vegetative matter
   b. Soil in grains
   c. Stones in drug
   d. Lead particles in opium

10. Organoleptic evaluation includes
   a. Chemical nature
   b. Impressions on organs of senses
   c. Pharmacological parameters
   d. Histological characters

I. B. Answer all the following questions (2×5=10)

1. Define the term Pharmacognosy.
2. What are the crude drugs obtained from plant tissue culture techniques?
3. What are the crude drugs acting on cardiovascular system?
4. How glycosides are classified?
5. What do you mean by panchabhutas in Ayurveda?

II. Long answers (Answer two out of three questions) (2×10=20)

1. Classify different types of adulteration. What do you mean by chemo-taxonomical classification? How to distinguish between direct and indirect adulteration? (2.5+2.5+5)
2. What are the major disciplines of Ayurveda? How many ways crude drugs can be classified? (5+5)
3. Classify alkaloids. What are the physicochemical properties and identification tests of alkaloids? (5+5)

III. Short answers (Answer seven out of nine questions) (5x7=35)

1. How to determine experimentally the stomatal index of a given leaf sample? (5)
2. Classify stomata based on their structural arrangements? Give suitable diagram of each of them. (3+2)
3. Write the basic chemical structure of flavonoids? How phenolic compounds are classified? (2+3)

(Turn Over)