BACHELOR OF PHARMACY EXAMINATION, 2018

(2nd Year, 2nd Semester)

Pharmaceutical Chemistry – VI

Time: Three hours. Full Marks:100

Answer any ***five*** questions taking at least two from each group

GROUP – A

1. a) Differentiate between primary and secondary metabolites.
   Classify different secondary metabolites based on their chemical nature with example in each case

   b) Discuss the biosynthetic pathways for production of Nicotine alkaloid.

   10+10 = 20

2. a) Classify different alkaloids having therapeutic benefits based on their chemical profiles with example of therapeutically important drug from each group.

   b) Explain the following chemical test with composition of the test reagents:
   i) Vitali-Morin test
   ii) Mayer's Test
   iii) Amonia reineckate Test
   iv) Thalleoquin Test 10+10 = 20

3. a) What are flavonoids?
   Explain the structural features of flavonoids with example and their uses.

   b) Describe the following test procedures for flavonoid containing herbal drugs:
   i) Gelatin test
   ii) Goldbeater's skin test
   iii) Phenazone test
   iv) Ferric chloride Test 8+12 = 20

4. Write short notes on the followings: 5x4=20
   i). Totipotency
   ii) Acetate Mevalonate pathway
   iii) Dietary supplements
   iv) Radulescu's Test
   v) Callus culture

Ref. No.:EX/PHARM/T/222/2018

B. PHARM. 2nd YEAR 2ND SEM. EXAM-2018 F.M. 100.

PHARMACEUTICAL CHEMISTRY-VI

5. a. Define and classify glycosides with examples.
   b. Write short notes on the following:
   Aloes, Rhubarb, Senna, Arbutin, Gaultherin, Salicin and Squill.
   c. How can you identify glycoside by chemical test?

4+14+2= 20

6. a. What are natural products?
   b. Discuss the factors and methodology for drug discovery and development from natural origin.
   c. Outline the source, structure and therapeutic uses of the following:
   Digitoxin, Morphine, Physostigmine, Artemisinin, Camptothecin.
   d. How can you distinguish modern medicine from traditional medicine?

2+6+10+2= 20

7. a. Define and classify Carotenoids with examples. What are the provitamin A functions and other physiological function of carotenoids?
   b. Discuss the source, structure and uses of the following:
   α-carotene, β-carotene, γ-carotene, Lutein, Neoxanthin.
   c. How can you isolate Capsanthin from Paprika and Lycopene from Tomato? Mention their structure and identification test.

2+4+10+4=20

8. a. Define and classify terpenoids with examples.
   b. What is Isoprene rule? Where from Isoprene comes in plant?
   c. Write short notes on Geraniol, Limonene, Camphor, Vitamin A, Linalol.
   d. Discuss with structure, how can C-C bond formation take place in terpene biosynthesis?

2+2+10+6=20