Instructions – (1) All Questions are Compulsory.

(2) Illustrate your answers with neat sketches wherever necessary.

(3) Figures to the right indicate full marks.

(4) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

1. Attempt any TEN of the following: 20

a) Define pharmacognosy. Give the contribution of Hippocrates.

b) Name a drug having following microscopical characters.
   (i) Lignified trichomes
   (ii) Paracytic stomata

c) Differentiate between organised crude drug and unorganised crude drug.

d) Mention the synonym of following drugs.
   (i) Asafoetida
   (ii) Gymnema
   (iii) Chaulmoogra oil
   (iv) Dioscorea

e) Write down the biological source of following drugs.
   (i) Cinchona
   (ii) Vinca
f) Draw a well labelled diagram showing morphological characters of ‘Coriander fruit’.

g) Give the example of a drug used as antihypertensive and write its biological source.

h) Identify a drug containing following chemical constituents.
   (i) Bassorin
   (ii) Kinoin
   (iii) Margosine
   (iv) Fibroin

i) Enlist various Indian traditional system of medicine.

j) Give any two examples of drugs from umbelliferae family and mention two characteristic features of umbelliferous fruits.

k) Define oxytocics. Write down chemical constituents of Ergot.

l) Give the examples of drugs from following families.
   (i) Rubiaceae
   (ii) Polygonaceae
   (iii) Acantheaceae
   (iv) Rutaceae

2. Answer any THREE of the following: 12

   a) Explain pharmacological method of classification of crude drug with its merits and demerits.

   b) Mention the adultrants and substituents of
      (i) Clove
      (ii) Senna

   c) Define Natural pesticide. Give the biological source, chemical constituents, and uses of any one drug.

   d) Define Lipids. Write down the properties of fixed oil.

   e) Differentiate between Plant Fibre and Animal Fibre.
3. **Attempt any THREE of the following:**

   a) Give the uses of
      
      (i) Rauwolfia
      
      (ii) Isapghula
      
      (iii) Colchicum
      
      (iv) Garlic

   b) Draw a well labelled diagram of T.S. of Ginger and describe it.

   c) Define Tannins and write down the chemical test for identification of tannins.

   d) Describe any four physical methods of evaluation of crude drug.

   e) Define Suture and Ligature and write down the properties of it.

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4. **Attempt any THREE of the following:**

   a) Write down the classification of Glycosides on the basis of linkage between sugar and non-sugar with one example each.

   b) Name a drug containing papain and citral as active constituents and write their uses.

   c) Define Diuretic. Give the examples of it and write biological source, chemical constituents of any one drug.

   d) How will you differentiate Black catechu and Pale catechu?

   e) Give the method of collection and preparation of opium for market.
5. **Attempt any THREE of the following:**

a) Define Pharmaceutical aids. Give the classification of it with examples.

b) Give the biological source and chemical constituents of
   (i) Amla
   (ii) Sandalwood

c) Define drug evaluation and explain the terms
   (i) Stomatal No.
   (ii) Stomatal index
   (iii) Vein-islet No.

d) Define:
   (i) Antidysentrics
   (ii) Enzymes
   (iii) Vitamines
   (iv) Antileprotics

e) Describe the method of preparation of silk fibres.

6. **Explain the chemical tests for following crude drugs (any four):**

a) Starch
b) Myrrh
c) Tolu balsum
d) Digitalis
e) Asafoetida
f) Gelatin