Instructions –

(1) All Questions are Compulsory.

(2) Answer each next main Question on a new page.

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

(4) Figures to the right indicate full marks.

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

1. Attempt any EIGHT of the following: 16

a) Define the following (any two)
   (i) Laxatives
   (ii) Pharmacognosy
   (iii) Balsam

b) Write the role of ‘Dioscoride’ and ‘Seydler’ in the development of pharmacognosy.

c) State which part of the plant is used in case of
   (i) Belladonna
   (ii) Rauwolfia
   (iii) Ipecac
   (iv) Colchicum

d) Write example of pharmaceutical aid obtained from:
   (i) Animal source
   (ii) Mineral source
e) Mention synonym of the following crude drug:
   (i) Asafoetida
   (ii) Liquorice
   (iii) Aconite
   (iv) Tulsi

f) Explain Galenical pharmacy. Who discovered it?

g) Give the name of the drug which passes the following chemical test.
   (i) Vitali-Morin test
   (ii) Swelling factor test
   (iii) Modified Borntrager’s test
   (iv) Fiehe’s test

h) Describe morphological characters of clove with diagram.

i) What is Garbling?

j) Name the drug having following microscopical characters (any two)
   (i) Lignified trichomes
   (ii) Fibrovascular bundle
   (iii) Paracytic stomata.

k) Write the name of the drug which has following use:
   (i) Galactogogue
   (ii) Dental analgesic
   (iii) Diuretics
   (iv) Brain tonic.

l) Write official requirements of surgical dressings.
2. Attempt any THREE of the following: 12
   a) Explain chemical method of classification of crude drug with its merit and demerit.
   b) Define Glycosides. Classify it on the basis of Glycosidic linkage with example.
   c) Write the synonyms, biological source, chemical constituents of ‘Gokhru’ OR ‘Gymnema’.
   d) Write the method of cultivation and collection of ‘Rauwolfia’.
   e) Explain with example (any two)
      (i) Stomatal Index
      (ii) Optical rotation
      (iii) Organoleptic method of evaluation.

3. Attempt any THREE of the following: 12
   a) Describe the different techniques (any three) for isolation of volatile oils.
   b) Draw a well labelled diagram of T. S of cinnamon bark and describe any four microscopic characters.
   c) Write the chemical constituents and uses of the following drug- (any two)
      (i) Cinchona
      (ii) Sandalwood oil
      (iii) Ephedra
   d) Explain with example of the following: (any two)
      (i) Latex
      (ii) Condensed tannin
      (iii) Characteristics of umbelliferous fruit.
   e) Define bark. Describe the methods of collection of barks.
4. Attempt any **THREE** of the following:  

a) Explain the general chemical test for the identification of alkaloids  

b) Define the following with example.  
   (i) Oxytocics  
   (ii) Cardiotonics  
   (iii) Antitussive  
   (iv) Astringents.  

c) Describe the method of preparation of fibre obtained from plant source.  

d) Write the biological source, chemical constituents and uses of ‘Garlic’.  

e) Differentiate between organised and unorganised crude drug.  

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

a) Define ‘Drug Adulteration’ Describe any three methods of adulteration with suitable example.  

b) Name the adulterants and substitute of-  
   (i) Nuxvomica  
   (ii) Digitalis  

c) Enlist the Indigenous system of medicine. Describe the ‘Siddha system of medicine’.  

d) Write any two examples of drug belonging to following family-  
   (i) Rubiaceae  
   (ii) Apocynaceae  
   (iii) Burseraceae  
   (iv) Liliaceae  

e) Define Enzymes. Write the biological source, chemical constituents and uses of ‘Papaya’.
6. Explain the chemical tests of any **FOUR** crude drugs:  
   a) Silk  
   b) Benzoin  
   c) Nux-Vomica  
   d) Shark liver oil  
   e) Gelatin  
   f) Starch