

Please check whether you have got the right question paper.

- N.B:**
1. **All** questions are **compulsory**.
  2. **Illustrate** answers with **sketches** and **structures** wherever **required**.
  3. **Answers** to **sub-questions** must be **written together**.

1. (a) State whether true or false and justify all the statements with significant reasons or examples: **8**
  - i) Agar is an example of plant origin crude drug.
  - ii) Chlor-zinc Iodine solution is used for identification of lignified tissues.
  - iii) Calcium carbonate is an ergastic cell content.
  - iv) Fehling's reagent is used to differentiate between carbohydrates and lipids.
  - v) Coppicing method is used for collection of leaf-based crude drugs.
  - vi) Silk is a protein fiber.
  - vii) Agar is pathological product.
  - viii) Lectins are used for protein digestion.
- (b) Answer the following : **12**
  - i) Give merits and demerits of morphological classification of crude drug.
  - ii) Enlist four examples each of chemomicroscopic reagents.
  - iii) Differentiate between gums and mucilages.
  - iv) Write a brief note on lignans.
  - v) What is mutation and hybridization? Give suitable examples.
  - vi) Write a note on chalk.
2. (i) Explain the status & significance of pharmacognosy in Homeopathy & arona therapy. **4**
- (ii) With the help of suitable labelled diagrams, explain the salient histological features of stem & root-based drugs.
- (iii) What are Fats? Explain the source, preparation, constituents and use of Shea butter.
3. (i) Give detailed classification of different types of inflorescence. **4**
- (ii) What is resin? Classify resin and resin combinations with suitable examples and their applications. **4**
- (iii) Give complete pharmacognostic account of gum which is an organized drug. **4**

4. (i) Write one example, important biological activity and structure of basic chemical nucleus for : **4**
- a) Pyridine-piperidine / Indole Alkaloid
  - b) Flavonoid / Isothiocyanate Glycoside
- (ii) Write a note on drying and storage of DONO. **4**
- (iii) Write a note on proteolytic enzymes obtained from plant source. **4**
5. (i) Write a note on tannins and polyphenolic compounds. **4**
- (ii) Write source, preparation chemistry and commercial utility of "Cottons". **4**
- (iii) Write biological source, chemical constituents and uses of Karela and Tinospora. **4**
6. (i) Write in detail about subterranean stem modification. **4**
- (ii) a) Write names of marketed formulations containing serratiopeptidase and their applications. **2**
- b) Give source, constituents and uses of neem. **2**
- (iii) Give a brief account of rice bran oil and wheat germ oil. **4**