



- (d) How will you distinguish between animal and vegetable fibres ?
- (e) How to obtain essential oils from flowers ?
- (f) Under what conditions the tricyclic anthracene possess the laxative action ?
- (g) Honey is not just a delicious product of nature but a complete arsenal of powerful remedies. Comment.
- (h) What is swelling factor ? Give its significance. The swelling factor of given sample of Isopghula is 4.5/11/21/2.8. What are your conclusions ?
- (i) Write a note on exceptional alkaloids.
- (j) What is Gold beater's skin test ? What is its use ?
- (k) Chemically, what is Gelatin ?
- (l) What is the difference between cardenolides and bufadienolides ?

2. Answer the following :

(a) Select the right answer :  $1 \times 6 = 6$

- (i) We have \_\_\_\_\_ classification in IP.  
(pharmacological, chemical, alphabetical, taxonomical).
- (ii) \_\_\_\_\_ are responsible for the enlargement of new cells in the growth of plants. (kinetin, auxins, gibberellins, none of them).
- (iii) The term pharmacognosy was introduced by \_\_\_\_\_. (Hippocrates, Galen, Chopra, Seydler).
- (iv) It has been established that drugs show 100% activity when they are dried \_\_\_\_\_. (under vacuum, at  $50^{\circ}\text{C}$ , at  $70^{\circ}\text{C}$ , in sunshine, an oven  $100^{\circ}\text{C}$ ).
- (v) Gum Acacia is soluble in \_\_\_\_\_. (water, ether, alcohol, chloroform).
- (vi) Agar is dried \_\_\_\_\_. (juice, infusion, extract, exudation).

(b) State whether the following statements are 'true' or 'false'. If 'true' supplement your answers and if 'false' correct and rewrite (any *eight*). 2×8=16

- (i) Time of collection has a great influence on the quality of drugs.
- (ii) Collection of flowers and leaves must always be made in fine dry weather.
- (iii) Fixed oils and fats differ only in melting points.
- (iv) Gelatin is used as a laxative because it contains anthracene glycoside.
- (v) Volatile oils and essential oils are one and the same.
- (vi) Agar is completely soluble in water.
- (vii) Honey is nector located mostly in flowers.
- (viii) Adulteration is possible only when a drug is available in plenty and also very cheap.
- (ix) Tannins are phenolic components which are unstable.

(c) Answer the following (any six) :  $3 \times 6 = 18$

- (i) Why research investigators must be absolutely certain of the origin of their drug samples ?
- (ii) Why is tannic acid used as an antidote in cases of poisoning by alkaloids ?
- (iii) In which part of the molecule lies the therapeutic property of a glycoside ?
- (iv) When tannin is intended for action upon the large intestine, how is it administered ?
- (v) Explain why essential oils should be stored in amber coloured bottles.
- (vi) Why barks are collected in rainy season ?
- (vii) Why ether is used during extraction of glycosides ?
- (viii) Give reason as to why we should get both the oxidised and reduced forms in anthracenes derivatives.

3. Answer any *three* :

10×3=30

- (a) What are crude drugs ? Stating briefly the various criteria on which they may be classified, advance your critical comments on the one, you consider the most appropriate in the light of modern research.
- (b) What are the factors which should be taken into consideration before cultivating a new drug ? Discuss giving suitable examples to illustrate your answer.
- (c) A consignment of crude drugs suspected to be infested with spores of microorganisms and eggs of insects has reached you. Mention the steps you would take before storage so that it does not deteriorate further.
- (d) Write the botanical source, family, active constituents and uses of any drug which contain :
- (i) Ricin
  - (ii) Hydnocarpic acid.