

2022

**BOTANY — HONOURS**

**Paper : DSE-A-3**

**(Medicinal and Ethnobotany)**

**Full Marks : 50**

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words  
as far as practicable.*

1. Answer **any five** questions : 2×5
- (a) Cite an example of a plant drug which is carbohydrate in nature.
  - (b) Name one volatile plant secondary metabolite.
  - (c) Expand and define 'AYUSH'.
  - (d) What are four 'humors' of human body according to Unani System of medicine?
  - (e) How lignin is important for protection of plants against pathogenic attack?
  - (f) Name two anticancerous drugs obtained from the family Apocynaceae.
  - (g) Write the chemical nature and use of gossypol.
  - (h) Define pharmacokinetics.
2. Answer **any two** questions :
- (a) Mention the pharmacologically important chemical groups in plant used as drug with proper examples. 5
  - (b) Discuss the role of paleoethnobotany in food and Agriculture. 5
  - (c) Cite differences between 'crude drug' and 'unorganised drug'. Give an example of one unorganised drug and also mention one of its uses. 3+2
3. Answer **any three** questions :
- (a) Mention the source plants (Scientific name) with family, parts used and therapeutic applications of the following plant drugs : (1+½+1)×4
    - (i) Curcumin
    - (ii) Sennoside
    - (iii) Diosgenin
    - (iv) Pilocarpine.

**Please Turn Over**

- (b) Name an endemic tribe of West Bengal. In which part of state do they reside? Write a brief account on the ethnomedicinal remedies of the following ailments :
- (i) Type 2 Diabetes
  - (ii) Skin disorders
  - (iii) Hypertension
- 1+1½+(2½×3)
- (c) Define 'Ethnoecology'. Explain the role of ethnic communities of India in ethnobotanical application. Differentiate between Ethnobotany and Economic Botany. 2+6+2
- (d) How primary metabolites are acting as the precursors for the biosynthesis of secondary metabolites in plants — Explain with an outline of pathway analysis. Mention the names of the secondary metabolic pathways in plants. 7+3
- (e) How secondary metabolites are important to plants defensive mechanism? Write the protective action of flavonoids and alkaloids against pathogenic microbes and herbivores. 2+4+4
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