

2025

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 organoleptic identification of an organized drug and its adulterant.
 - (b) Name an insecticidal alkaloid and write the scientific name of the source plant.
 - (c) What are cardiac glycosides? Cite an example.
 - (d) What are curcuminoids? Name the source plant.
 - (e) Name two ethnic communities of West Bengal.
 - (f) What is 'Panchamahabhuta' in Ayurveda?
 - (g) What are terpenoids? Give example.
 - (h) Name two anticancer drugs found in *Catharanthus roseus*.

2. Answer *any two* questions : 5
 - (a) Write the principles of Siddha System of medicine. 2½+2½
 - (b) Describe the microscopic and chemical methods of drug evaluation. 2½+2½
 - (c) Write some remedies from natural sources for the treatment of jaundice and cardiac disorders. 2½+2½

3. Answer *any three* questions : 6+4
 - (a) Write briefly the principles of Ayurveda. Mention its relevance in the modern society. 6+4
 - (b) How primary metabolites act as the precursor 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
 - (c) How secondary metabolites are important to plants? Write the protective action of phenolics and terpenoids against pathogenic microbes and herbivores. 2+4+4

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(d) Mention the source plant, scientific name, family, parts used, chemical nature and therapeutic application of the following drugs :

(i) Catechin

(ii) Solasodine

(iii) Capsaicin

(iv) Gingerol.

$(\frac{1}{2}+\frac{1}{2}+\frac{1}{2}+\frac{1}{2}+\frac{1}{2})\times 4$

(e) What is folk medicine? Describe the methods of ethnobotanical study and discuss its applications.

2+4+4
