

**M. SC. (BIOTECHNOLOGY) SEM-IV (2012
COURSE)(CHOICE BASED CREDIT SYSTEM) : SUMMER -
2018**

SUBJECT: HERBAL BIOTECHNOLOGY

Day : **Tuesday**

Date : **10/04/2018**

S-2018-1093

Time : **02.00 PM TO 05.00 PM**

Max. Marks : 60

N. B. :

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Answer **ANY TWO** from questions 2, 3, 4 and 6, 7, 8.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer books.
- 4) Draw neat and labelled diagram **WHEREVER** necessary.

SECTION - I

- Q. 1** Answer **ANY FIVE** of the following questions in brief: **(10)**
- a) Indigenous medical systems
 - b) Bio-prospecting of herbs.
 - c) Collection of plants and plant parts.
 - d) Natural products.
 - e) Ethno botany.
 - f) Stages of validation
- Q. 2** Answer the following questions: **(10)**
- a) Enlist major groups of plants with their medicinal uses.
 - b) Explain different methods for identification of herbs.
- Q. 3** Explain the following: **(10)**
- a) Herbal medicines and human health.
 - b) Characterization of secondary metabolites.
- Q. 4** Write short notes on **ANY TWO** of the following: **(10)**
- a) Storage of herbal formulations
 - b) Authentication of medicinal plants
 - c) Dosage forms in herbal drugs

SECTION - II

- Q. 5** Answer the following questions: **(10)**
- a) WHO guidelines for standardization of herbal products.
 - b) Biotechnological approaches for the production of phytopharmaceuticals.
- Q. 6** Answer **ANY TWO** the following questions: **(10)**
- a) Enlist few important medicinal plants with their active compounds and action.
 - b) Advantages of plant cell culture system over conventional cultivation of herbs.
 - c) Write a note on Pharmacology and Pharmacognosy
- Q. 7** Write short notes on the following: **(10)**
- a) Quality assurance and stability testing of herbal drugs.
 - b) Contaminants and residues in herbal medicines.
- Q. 8** Design and experiment for: **(10)**
- a) Extraction and purification of water soluble compounds.
 - b) Scientific validation of herb known by folklore for antidiabetic properties.

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