

M. Sc. (Biotechnology) Sem-IV (2012 Course)(Choice Based Credit System) : SUMMER - 2019

SUBJECT : HERBAL BIOTECHNOLOGY

Day : Tuesday
Date : 09/04/2019

S-2019-1419

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 **SAME** answer books.
- 4) Draw neat and labeled diagram **WHEREVER** necessary.

SECTION – I

- Q.1** Answer **ANY FIVE** of the following questions in brief : **(10)**
- a) Herbal medicine and human health.
 - b) Stages of validation of plant drugs.
 - c) Ethno-botany and its importance.
 - d) Plants in folk religion
 - e) Toxic effects of herbs.
 - f) Indigenous knowledge system in medicine.
- Q.2** Answer the following questions : **(10)**
- a) Authentication of medicinal plant in very much essential. Justify.
 - b) Explain various methods for identification of medicinal plant.
- Q.3** Explain the following : **(10)**
- a) Major groups of plants and their medicinal properties.
 - b) Traditional uses of plants in India.
- Q.4** Write short notes on **ANY TWO** of the following : **(10)**
- a) Natural products and their utility as phytomedicine.
 - b) Drug adulteration and methods for their evaluation.
 - c) Collection and storage products for herbal products.

SECTION – II

- Q.5** Answer the following questions : **(10)**
- a) What is pharmacology? Enlist plants for hepatoprotective activity.
 - b) WHO guidelines for safety of herbal medicine.
- Q.6** Answer **ANY TWO** of the following questions : **(10)**
- a) Commonly used herbal drug dosage forms.
 - b) Methods for standardization of phytomedicine.
 - c) Importance of herbal formulation as home remedies.
- Q.7** Write short notes on the following : **(10)**
- a) Pharmacognosy.
 - b) Advantages of herbal Biotechnology.
- Q.8** Design an experiment for : **(10)**
- a) Scientific validation of herb having anti-inflammatory activity.
 - b) Extraction, purification and isolation of secondary metabolites.

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