M. SC. (BIOTECHNOLOGY) SEM-III (2012 COURSE)(CHOICE BASED CREDIT SYSTEM) : WINTER - 2017

SUBJECT: PLANT BIOTECHNOLOGY

Day : Thursday
Date : 09/11/2017

W-2017-0972

Time : **10.00 AM TO 01.00 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 the following questions in brief: **(10)**

a) Importance of plant diversity.
b) Principles of marker assisted plant breeding.
c) Definition of threatened plant species with examples.
d) Significance of hybrid plants.
e) Science of plant breeding.

Q. 2 Answer the following questions: **(10)**

a) What are the conservation strategies of plant diversity?
b) Describe methods of breeding in cross pollinated crops.

Q. 3 Explain the following: **(10)**

a) Bioprospecting of plant diversity for product development.
b) Objectives of modern plant breeding.

Q. 4 Write short notes on **ANY TWO** of the following: **(10)**

a) Strategies of plant breeding.
b) Characterization of plant diversity through biochemical methods.
c) Biodiversity hot spots in India.

SECTION - II

Q. 5 Answer the following questions: **(10)**

a) Describe initial thrust and the present status of plant genetic engineering.
b) What are secondary metabolites? Describe methodologies for their production.

Q. 6 Answer the following questions: **(10)**

a) Enlist seed industries and micropropagation industries in India.
b) Describe Ti and Ri plamid based vectors and their applications.

Q. 7 Write short notes on the following: **(10)**

a) Conservation of germplasm
b) Bio-fuels

Q. 8 Give diagrammatic or flow chart representation of the following: **(10)**

a) Production of gametoclonal variants.
b) Micropropagation of Banana via axillary shoot proliferation.

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