(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 2289550 Roll No.

B.TECH.

Regular Theory Examination (Odd Sem - VII),2016-17

AGRICULTURE BIOTECHNOLOGY

Time : 3 Hours *Total Marks : 100*

Section - A

Attempt all sections. All sections carries equal marks.

1 Write answer of each section in short. (10×2=20)

a) What are the advancements in Agriculture biotechnology?

b) List down few examples of plants cultivated through micro propagation.

c) Reason behind why meristem cultures are suitable for virus free plants propagation.

d) Show the aid of Genetic engineering in agriculture biotechnology.

e) Pin down few important microbial polysaccharides.

f) Define the term bioremediation. How it is different from phytoremediation?

g) What are molecular markers? Name few marker assisted sequences (MAS) used.

h) Define somatic organogenesis and haploid production of plants.

i) What are secondary metabolites? Name few of them.

j) Define the term QTL Mapping.

Section - B

Attempt any three parts of the following:-(3×10=30)

1. Show the production of numerous essential amino acids and chemicals from micro-algae.

2. What are secondary metabolites? How they differ from primary metabolites? Show their production in plants.

3. What does bioremediation process mean also write about its types and advantages?

4. a) What are the important microbial enzymes and their application in food processing.

b) How far genetic engineering has helped in the production of agricultural plants?

5. Illustrate the various methods and techniques acquired for the improvement of crops.

Section - C

Attempt all questions from this section. (5×10=50)

1. What are transgenic plants? How are they raised? How herbicide, pesticide and salt resistant plants developed?

2. Micro propagation is the best suited method for the production of cloned plants". Justify your answer with its stages and advantages over conventional plant breeding methods.

3. What are microbial biopesticides and biofungicides? List down their applications and advantages.

4. Define Clonal germpalsm conservation. How plant tissues and organs are conserved for longer durations?

5. a) What are microbial polysaccharides? Show their degradation process.

b) What are biodegradables polymers? Give the application, of biodegradable polymers?

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