



**ATOMIC ENERGY CENTRAL SCHOOL 4**

**MUMBAI**

**UNIT IX**

**CHAPTER 12**

**BIOTEHNOLOGY AND ITS APPLICATION**

**WORKSHEET**

**MODULE – 1/3**

**PREPARED BY**

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1. Answer the following questions in one word or sentence.

- i) Which transgenic crop was the first to be approved by commercial cultivation in India?
- ii) Name the bacterium that is first used as bio-pesticide.
- iii) Name the nematode that infests the roots of the tobacco plant.
- iv) A protein is produced by *Bacillus thuringiensis* which is toxic to insects but it does not harm the bacterium.
- v) A cellular defense mechanism present in all the eukaryotic organisms, but used in tobacco plants to protect the root infestation by a nematode. Name this cellular defense mechanism.

2. Multiple choice questions:

- i) *Bt* brinjal is an example of transgenic crops. In this *Bt* stands for:

- a) *Bacillus tuberculosis*      (b) Bio technology  
c)  $\beta$  carotene      (d) *Bacillus thuringiensis*

ii) RNA interference which is employed in making tobacco plant resistant to *Meloidogyne incognitia* is essentially involved in:

- a) Preventing the process of replication of DNA  
b) Preventing the process of translation of mRNA  
c) Preventing the process of splicing of hnRNA  
d) Preventing the process of transcription

iii) The gene that encodes for Bt protein specific to cotton bollworm is:

- a) CryIAC      (b) CryIIAbc      (c) CryIIAC      (d) CryIIAb

**3.** Describe how nematode resistant transgenic plants have been produced.

## ACKNOWLEDGEMENT

The following text books were referred to complete the assignment.

1. MTG NCERT at your finger tips Class –XI and XII
2. Self generated questions taking help of Truman's Elementary Biology Part – 2