

KENDRIYA VIDYALAYA SANGATHAN
ZIET, CHANDIGARH
REVISION PAPER, SET- III
UNIT- IX

(Chapters: Biotechnology - Principles and Processes, Biotechnology and its Applications)


Subject: Biology

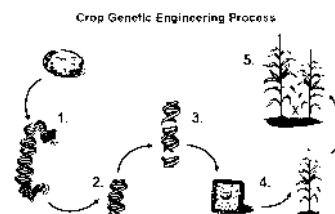
Class: XII

TIME: 1:00 Hr.

Max. Marks: 20

Note: Question no. one to four is of **01** mark each, question no five and six is of **02** marks each, question number three is of **03** marks, question no five is a case study based and is of **04** marks and question number six is of **05** marks.

SN	Question	Marks
1	Identify the given recognition site belongs to which of the followings- a- Hind II b- Eco RI c- Eco RII d- Hind III	1
		
2	Which of the following is/ are the core techniques of modern biotechnology- a- Maintenance of microbial contamination free situation b- Growing desired microbes in huge quantity c- Altering the chemistry of RNA d- All are correct	1
3	"The integration of natural science and organisms, cells, parts thereof, and molecular analogues for products and services"- the statement is related with a- Definition of biotechnology b- Definition of genetic engineering c- Explanation of r-DNA d- Explanation of produce of bioreactors/ large vessels fermenters	1
4	Which specific genes can control cotton ball worm and corn borer respectively- a- Cry II Ab and cry I Ab b- Cry I Ab and cry II Ab c- Cry I Ab d- Cry IIAb	1
5	Diagrammatically represent the recombinant DNA technology by using the following steps- i- Cleavage by restriction enzyme ii- Formation of r- DNA using enzyme (name the enzyme) iii- Transformation iv- Culture in a specific host (name the host)	2
6	i- Give one example of pathogens against which RNAi is successfully attempted. ii- What is the basic principle for the effectiveness of RNAi	2
7	i- Mention any two products obtained by GMOs that are useful for humans. ii- How biopiracy can affect new research in the field of biotechnology? iii- What is importance of a patent?	3
8	A genetically modified organism (GMO) is an animal, plant, or microbe whose DNA has been altered using genetic engineering techniques. According to the World Health Organization (WHO), GMOs, i.e., genetically modified organisms can be defined as organisms (i.e. plants, animals or microorganisms) in which the genetic material (DNA) has been altered in a way that does not occur naturally by mating and/or	4



	<p>natural recombination. Most of the GMO crops grown today were developed to help farmers prevent crop and food loss and control weeds. The three most common traits found in GMO crops are: Resistance to certain damaging insects. Many GMO crops are already been developed like corn, cotton, potato, brinjal, mustard etc.</p> <p>i- GMOs are more tolerant to which of the following abiotic stresses-</p> <p>a- Cold</p> <p>b- Drought</p> <p>c- Salt</p> <p>d- All of these</p> <p>ii- Which one of the following is true about GMOs-</p> <p>a- Vitamin A enriched rice</p> <p>b- Vitamin D enriched rice</p> <p>c- Vitamin E enriched cabbage</p> <p>d- Vitamin A enriched cabbage</p> <p>iii- Bt cotton is effective against</p> <p>a- Dipteran insects</p> <p>b- Coleopteron insects</p> <p>c- Lepidopteran insects</p> <p>d- All of these</p> <p>iv- Assertion: GMOs may include plants, animals as well as fungi. Reason: Bacteria are not included in GMOs. Both assertion and reason are correct and the reason is the correct explanation of assertion.</p> <p>b- Both assertion and reason are correct and reason is not a correct explanation of assertion.</p> <p>c- Assertion is true but the reason is false.</p> <p>e- Assertion is false but the reason is true.</p>	
9	<p>Explain the followings-</p> <p>i- Explain the process by which varied lengths of DNA fragment can obtained?</p> <p>ii- How do phenotypic markers are used for selection of recombinants during genetic engineering.</p>	5