

BHARATIYA VIDYA BHAVAN'S V.M.PUBLIC SCHOOL, VADODARA
SESSION 2017-18
Question Bank

CHAPTER-11

BIOTECHNOLOGY: PRINCIPLES AND PROCESSES

VERY SHORT ANSWER QUESTIONS (1 marks each)

- Q1 What is Biotechnology?
- Q2 Expand EFB.
- Q3 Which enzyme is known as molecular scissors?
- Q4 What is the function of restriction enzyme?
- Q5 Name the first plasmid used as vector.
- Q6 What is genetic engineering?
- Q7 What are the molecular scissors?
- Q8 What are palindromes?
- Q9 What is DNA probe?
- Q10 What is bioreactor?
- Q11 What is cloning vector?
- Q12 What is recombinant DNA?
- Q13 What is ori?
- Q14 What is gene gun?

SHORT ANSWER TYPE QUESTIONS (2 marks each)

- Q1 Differentiate between gene therapy and gene cloning.
- Q2 Explain any two methods of vectorless gene transfer.
- Q3 What is Ti plasmid? Name the organism where it is found. How does it help in genetic engineering?
- Q4 How does a transgenic organism differ from the rest of its population? Give any two examples of such organisms for human advantage.
- Q5 Differentiate between rDNA and cDNA.
- Q6 Define genetic engineering. Name one natural genetic engineer of plants.
- Q7 What is the role of lysing enzyme in biotechnology?
- Q8 What do you mean by a clone?
- Q9 What is elution?
- Q10 What is the importance of biotechnology?

SHORT ANSWER QUESTION (3 marks each)

- Q1 Why is Agrobacterium mediated genetic transformation described as natural genetic engineering in plants?
- Q2 What is genetic engineering? List the steps involved in rDNA technology.
- Q3 Why are cloning vectors necessary in cloning?
- Q4 How is DNA isolated from a cell?
- Q5 What is PCR? Describe the process of PCR.
- Q6 Illustrate briefly downstream processing.

LONG ANSWER QUESTIONS (5 marks each)

- Q1 What is a cloning vector? Explain the technique of using such a vector in E. coli.
- Q2 What is rDNA? Explain the technique of cloning rDNA.
- Q3 Represent diagrammatically the steps in amplification of a DNA segment. Who designed the process?
- Q4 Represent diagrammatically the steps involved in rDNA technology.
- Q5 Explain the different steps in the construction of recombinant DNA.