

NEET BIOLOGY

Topic: Biotechnology and its applications

- Q.1** Introduction of foreign gens for improving genotype is called :
- (a) Vernalization (b) Tissue Culture
(c) Biotechnology (d) Genetic Engineering
- Q.2** In genetic engineering, recombinant DNA means
- (a) DNA with piece of RNA
(b) DNA with a piece of foreign DNA
(c) DNA which takes part in recombination
(d) DNA not act as biological recombination
- Q.3** Which enzyme act as biological scissors in genetic engineering?
- (a) Ligases (b) Nucleases
(c) Polymerases (d) Restriction endonucleases
- Q.4** A restriction enzyme Eco RI from E.coil cleave DNA at following seouence
- (a) GAATTC (b) AAGTTC
(c) AAGCTT (d) GATACT
- Q.5** Which of the following organelle is related to genetic engineering ?
- (a) Plasmids (b) Plastids
(c) Mutations (d) Nucleoid
- Q.6** What does Bt stand for the popular crop of Bt cotton ?
- (a) Best (b) Best type
(c) Biotechnology (d) Bacillus thuringiensis
- Q.7** In genetic engineering experiment, DNA fragments are joined by
- (a) Gyrase (b) Helicase
(c) Ligase (d) Polymerase

- Q.8** Plasmids are extra chromosomal genetic material of
- (a) Bacteria (b) Virus
(c) Algae (d) Yeast
- Q.9** PCR is useful in
- (a) DNA synthesis (b) DNA amplification
(c) Protein system (d) Amino acid synthesis
- Q.10** Gel electrophoresis is used for
- (a) Construction of rDNA by joining with cloning vectors
(b) Isolation of DNA molecules
(c) Cutting of DNA into fragments
(d) Separation of DNA fragments according to their size
- Q.11** Bacterium commonly used in plant genetic engineering is
- (a) *Agrobacterium* (b) *Corynebacterium*
(c) *Bacillus subtilis* (d) *Salmonella typhi*
- Q.12** Who discovered rDNA technology?
- (a) James D. Watson
(b) Har Gobind Khorana
(c) Walter Sutton and Oswald Avery
(d) Stanley Cohen and Herbert Boyer
- Q.13** The first plasmid used for recombinant DNA technology is obtained from
- (a) *E. Coli* (b) *Bacillus thuringiensis*
(c) *Salmonella typhimurium* (d) *Thermus aquaticus*
- Q.14** Which was the first restriction endonuclease?
- (a) Eco RI (b) Hind II
(c) Bam HI (d) EcoR II
- Q.15** In gel electrophoresis technique, DNA fragments under an electric field move towards
- (a) Anode end (b) Cathode end
(c) To both ends (d) Neither ends

- Q.16** The stain used for visualising DNA fragments in gel electrophoresis is
- (a) Ethidium chloride (b) Ethidium fluoride
(c) Ethidium bromide (d) Gram Stain
- Q.17** The colour of DNA fragments after using ethidium bromide stain in gel electrophoresis is.
- (a) Light yellow (b) Dark green
(c) Bright orange (d) Bright red
- Q.18** The process of removal of separated bands of DNA from agarose gel is called
- (a) Elution (b) Dilution
(c) Egestion (d) Digestion
- Q.19** Which of following feature is required to facilitate cloning into a vector?
- (a) Origin of replication (b) Selectable marker
(c) Cloning sites (d) All of these
- Q.20** The enzyme required for PCR is
- (a) Endonuclease (b) Ribonuclease
(c) Taq polymerase (d) RNA polymerase
- Q.21** Restriction enzymes belong to which class of enzymes
- (a) Lipases (b) Proteases
(c) Nucleosides (d) Amylases
- Q.22** The most suitable for introducing alien DNA into plant cell is
- (a) Microinjection (b) Biolistic or gene gun method
(c) Electroporation (d) All of these
- Q.23** In biolistics or gene gun method. DNA is coated around the microparticles of
- (a) Silver (b) Gold
(c) Tungsten (d) Both (a) and (b)
- Q.24** In animal cell the foreign gene is inserted by
- (a) Electroporation (b) Gene gun method
(c) Microinjection (d) Chemical method

Q.25 To isolate DNA from a plant cell which enzyme is used for breaking cell wall

- (a) Lysozyme
- (b) Cellulase
- (c) Chitinase
- (d) Protease

Q.26 Identify the plasmid

- (a) Eco RI
- (b) Hind II
- (c) Bam HI
- (d) pBR 322

Q.27 The first letter of any restriction endonuclease enzyme represents

- (a) Genus
- (b) Species
- (c) Strains
- (d) Order

Q.28 The term 'Ori' in case vectors stands for

- (a) Origin of life
- (b) Original
- (c) Origin of replication
- (d) Origin of transcription

Q.29 The selectable markers genes in vectors are mostly

- (a) Antibody resistance genes
- (b) Antigen resistance genes
- (c) Antibiotic resistance genes
- (d) All of these

Q.30 PCR stands for

- (a) Polymerase chain Reaction
- (b) Politically correct Research
- (c) Polygraphed criminal Rating
- (d) polyploidy Chromosome Restriction

ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10
Ans.	d	b	d	a	a	d	c	a	b	d
Que.	11	12	13	14	15	16	17	18	19	20
Ans.	a	d	d	b	a	c	c	a	d	c
Que.	21	22	23	24	25	26	27	28	29	30
Ans.	c	b	d	c	b	d	a	c	c	a

