

NEET BIOTECHNOLOGY: PRINCIPLES AND PROCESSES — PRINCIPLES OF BIOTECHNOLOGY (GENETIC ENGINEERING) — PYQS

Max. Marks: 24

Questions: 6

Section A (MCQ) — 6 questions

Q.1 What is the fate of a piece of DNA carrying only gene of interest which is transferred into an alien organism?

- A. The piece of DNA would be able to multiply itself independently in the progeny cells of the organism.
- B. It may get integrated into the genome of the recipient.
- C. It may multiply and be inherited along with the host DNA.
- D. The alien piece of DNA is not an integral part of chromosome.
- E. It shows ability to replicate.

Choose the correct answer from the options given below:

[NEET (UG) 2024]

- (1) A and B only (2) D and E only
- (3) B and C only (4) A and E only

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Q.2 In a chromosome, there is a specific DNA sequence, responsible for initiating replication. It is called as:

[RE-NEET (UG) 2024]

- (1) Recognition sequence
- (2) Cloning site
- (3) Restriction site
- (4) ori site

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Q.3 Match List-I with List-II :

List - I		List - II	
a.	Gene gun	i.	Replacement of a faulty gene by a normal healthy gene
b.	Gene therapy	ii.	Used for transfer of gene
c.	Gene cloning	iii.	Total DNA in the cells of an organism
d.	Genome	iv.	To obtain identical copies of a particular DNA molecule

Choose the correct answer from the options given below:

[NEET (UG) 2022 (Phase 2)]

- (1) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)
- (2) (a)-(ii), (b)-(i), (c)-(iv), (d)-(iii)
- (3) (a)-(i), (b)-(iii), (c)-(ii), (d)-(iv)
- (4) (a)-(iv), (b)-(i), (c)-(iii), (d)-(ii)

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Q.4 Match the organism with its use in biotechnology

Column-I		Column-II	
a.	<i>Bacillus thuringiensis</i>	i.	Cloning vector
b.	<i>Thermus aquaticus</i>	ii.	Construction of first rDNA molecule
c.	<i>Agrobacterium tumefaciens</i>	iii.	DNA polymerase
d.	<i>Salmonella typhimurium</i>	iv.	Cry proteins

Select the correct option from the following:

[NEET (UG) 2020]

- (1) (a)-(iii), (b)-(iv), (c)-(i), (d)-(ii)
- (2) (a)-(ii), (b)-(iv), (c)-(iii), (d)-(i)
- (3) (a)-(iv), (b)-(iii), (c)-(i), (d)-(ii)
- (4) (a)-(iii), (b)-(ii), (c)-(iv), (d)-(i)

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Q.5 Which one of the following techniques made it possible to genetically engineer living organisms?

[AIPMT 2011 (Mains)]

- (1) Recombinant DNA techniques
- (2) X-ray diffraction
- (3) Heavier isotope labeling
- (4) Hybridization

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Q.6 A genetically engineered micro-organism used successfully in bioremediation of oil spills is a species of-

[AIPMT 2007]

- (1) *Trichoderma* (2) *Xanthomonas*
- (3) *Bacillus* (4) *Pseudomonas*

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ANSWER KEY

Ques.	1	2	3	4	5	6					
Ans.	3	4	2	3	1	4					