

PYQSide

NEET BIOTECHNOLOGY AND ITS APPLICATIONS — GENE THERAPY — PYQS

Max. Marks: 32

Questions: 8

Section A (MCQ)

Q.1 In gene therapy of Adenosine Deaminase (ADA) deficiency, the patient requires periodic infusion of genetically engineered lymphocytes because:

[NEET (UG) 2022]

- (1) Retroviral vector is introduced into these lymphocytes.
- (2) Gene isolated from marrow cells producing ADA is introduced into cells at embryonic stages
- (3) Lymphocytes from patient's blood are grown in culture, outside the body
- (4) Genetically engineered lymphocytes are not immortal cells.

Scan or tap for the full solution



Q.2 When gene targeting involving gene amplification is attempted in an individual's tissue to treat disease, it is known as :

[NEET (UG) 2021]

- (1) Safety testing
- (2) Biopiracy
- (3) Gene therapy
- (4) Molecular diagnosis

Scan or tap for the full solution



Q.3 The Adenosine deaminase deficiency results into

[NEET (UG) 2021]

- (1) Addison's disease
- (2) Dysfunction of immune system
- (3) Parkinson's disease
- (4) Digestive disorder

Scan or tap for the full solution



Q.4 Which of the following is commonly used as a vector for introducing a DNA fragment in human lymphocytes?

[NEET 2018]

- (1) Retrovirus
- (2) Ti plasmid
- (3) λ phage
- (4) pBR322

Scan or tap for the full solution



Q.5 Which kind of therapy was given in 1990 to a four-year-old girl with adenosine deaminase [ADA] deficiency ?

[NEET 2016 (Phase 2)]

- (1) Radiation therapy
- (2) Immunotherapy
- (3) Gene therapy
- (4) Chemotherapy

Scan or tap for the full solution



Q.6 Which one of the following vectors is used to replace the defective gene in gene therapy ?

[NEET 2013 (Karnataka)]

- (1) Ti plasmid
- (2) Cosmid
- (3) Ri plasmid
- (4) Adenovirus

Scan or tap for the full solution



Q.7 The first clinical gene therapy was given for treating

[AIPMT 2012 (Mains)]

- (1) Rheumatoid arthritis
- (2) Adenosine deaminase deficiency
- (3) Diabetes mellitus
- (4) Chicken pox

Scan or tap for the full solution



Q.8 The genetic defect – adenosine deaminase (ADA) deficiency may be cured permanently by

[AIPMT 2009]

- (1) Introducing bone marrow cells producing ADA into cells at early embryonic stages
- (2) Periodic infusion of genetically engineered lymphocytes having functional ADA cDNA
- (3) Administering adenosine deaminase activators
- (4) Enzyme replacement therapy

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2	3	4	5	6	7	8			
Ans.	4	3	2	1	3	4	2	1			