

# Biotechnology and its Applications

## CHAPTER-10

1. Cry protein works to kill which insect?

- (a) Coleopteron (bug)
  - (b) Dipteron (mosquito)
  - (c) Lithidopteron
  - (d) all
- (D)

2. The first hormone produced by biotechnology is-

- (a) Humulin
  - (b) Hirudin
  - (c) auxin
  - (d) Relaxin
- (A)

3. By which method are the gene defects identified in a child or fetus corrected?

- (a) protoplast fusion
- (b) gene therapy
- (c) micro propagation
- (d) biopsy

(B)

4. Which peptide is present in pro-insulin?

- (a) Polypeptide chain - A
- (b) Polypeptide chain - B
- (c) Polypeptide chain - C

- (d) all
- (D)

5. Which protein is present in the milk of the first transgenic cow "Rosie" which is nutritious for children?

- (a) Alpha-antitrypsin
- (b) Alpha lactalbumin
- (c) Glycoprotein
- (d) Hirudin

(B)

6. Human protein alpha-1 antitrypsin is used in the treatment of which disease?

- (a) Cancer
- (b) leukemia
- (c) emphysema
- (d) anemia

(C)

7. Which process is stopped in RNA interference?

- (a) Replication
- (b) transcripion
- (c) translation
- (d) all

(C)

8. The gene by which biotoxin is coded is called-

- (a) cry gene
- (b) Oncogene
- (c) linkage gene
- (d) promoter gene

9. The first Bt crop/plant is

- (a) cotton

- (b) tobacco
- (c) wheat
- (d) rice
- (B)

10. Golden rice is a genetically modified crop plant, the gene invested in it is for the biological synthesis of-

- (A) Vitamin - C
- (B) Vitamin - B
- (c) Vitamin - A
- (d) Vitamin - K

(C)

11. The organism is incompatible for its use in biotechnology-

- (a) Bacillus thuringiensis – cryoprotein
- (b) Thermus aquaticus – Agricultural product manufacturing
- (c) Agrobacterium tumefaciens – cloning vector
- (d) Salmonella Typhi Murium – Formation of the first rDNA molecule.

12. Transgenic plants are developed-

- (a) By gene transfer
- (b) by transformation
- (c) budding
- (d) pen planting

(a)

13. ADA deficiency in children is treated by transplantation of-

- (a) kidney
- (b) liver
- (c) lungs
- (d) bone marrow
- (D)

14. The ability to generate completely new plants from a cell is called-

- (a) completeness
- (b) heterospory
- (c) Cloning
- (d) doer

(a)

15. Allele Company manufactured insulin chains by preparing a series of DNA sequences. By which bond are they connected together?

- (a) dipeptide bond
- (b) disulfide bond
- (c) hydrogen bond
- (d) ester bond

(B)

### LONG QUESTION

Q. 1. What is called a transgenic animal? Write the importance of biological products obtained from transgenic animals.

Q. 2. What is biopiracy? Explain the importance of use of biotechnology in medical field?

Q.3. What is genetically modified organism (GMO)? G.M. How is the use of plants beneficial for us?

Q. 4. What is gene therapy? Agrobacterium is called the natural and genetic engineer of plants, why?

Q. 5. What is patent? What do you know about Bt-cotton?

Q. 6. The peel of tomato is so thick that it does not crack even if it is hit hard on the wall. What is the name of this tomato? What is the reason for this behavior? Explain.

Q.7.What will be the effect if unprocessed pre-insulin is given to diabetic patients?

Q. 8. What is gene therapy? Tell the use of this verb?

Q.9.How has human insulin been synthesized by Eli Lilly Company? Insulin is useful for the treatment of which disease?

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