

OPEN STUDENT FOUNDATION

CH : BIOTECH APPLICATION

STD 12TH Biology

Date : 05/03/24

Total Marks: 30

PRACTICE SHEET 17

Time: 1 hr

Section A

- Choose correct answer from the given options. [Each carries 1 Mark] [13]
- Bt crops that are grown by Indian farmers is ?
(A) Soyabean (B) Maize (C) Cotton (D) Bringle
 - The first developed hormone by r-DNA technology is ?
(A) Insulin (B) Estrogen (C) Thyroxine (D) Progesterone
 - For the sequence of human genome which vector is commonly used?
(A) T- DNA (B) BAC and YAC (C) Expressive vector (D) T/A cloning vector
 - It is associated with the transfer of t DNA.
(A) To protect plant from heat shock, change in the soil pH
(B) To protect plants from extreme cold for short period of time
(C) Roots can fix in the water
(D) To infect plants by *Agrobacterium tumefaciens*.
 - Golden rice is a genetically modified crop. Which is developed by introducing genes for _____.
(A) Vitamin A (B) Vitamin B (C) Vitamin C (D) Omega3
 - A 'new' variety of rice was patented by a foreign company, though such varieties have been present in India for a long time. This is related to
(A) Lerma Rojo (B) Sharbati Sonora (C) Co-667 (D) Basmati
 - Use of bioresources by multinational companies and organisations without authorisation from the concerned country and its people is called.
(A) Biodegradation (B) Biopiracy (C) Bio-infringement (D) Bioexploitation
 - In India, the organisation responsible for assessing the safety of introducing genetically modified organisms for public use is
(A) Research Committee on Genetic Manipulation (RCGM)
(B) Council for Scientific and Industrial Research (CSIR)
(C) Indian Council of Medical Research (ICMR)
(D) Genetic Engineering Appraisal Committee (GEAC)
 - Which of the following is true for golden rice?
(A) Its seeds are yellow because from the wild rice type genes are derived
(B) It is rich in vitamin A.
(C) It is pest resistant and contains one gene of *Bacillus thuringiensis*.
(D) It is drought resistant, *Agrobacterium* develops from the vector.
 - Which of the following features of genetic code does allow bacteria to produce human insulin by recombinant DNA technology?
(A) Genetic code is not ambiguous (B) Genetic code is redundant
(C) Genetic code is nearly universal (D) Genetic code is specific
 - Match the following and select the correct option.

Column I	Column II
(a) bt cotton	(i) gene therapy
(b) ADA deficiency	(ii) cellular defence
(c) RNAi	(iii) detection of HIV infection
(d) PCR	(iv) bacillus thuringiensis

(A) (a-iv), (b-i), (c-ii), (d-iii)

(B) (a-iii), (b-ii), (c-i), (d-iv)

(C) (a-ii), (b-iii), (c-iv), (d-i)

(D) (a-i), (b-ii), (c-iii), (d-iv)

12. Which of the following is not true?

(A) In humans insulin is synthesised as pro insulin

(B) Pro insulin has extra peptide Called c- peptide.

(C) In active insulin A and B chain joins with disulphide bond

(D) Genetically engineered insulin is synthesised in E.coli

13. Bt cotton variety that was developed by the introduction of toxin gene of Bacillus thuringiensis (Bt) is resistant to

(A) Insect pest

(B) Fungal diseases

(C) Plant nematodes

(D) Insect Predators

Section B

● Write the answer of the following questions. [Each carries 3 Marks]

[9]

1. What is Cry (crystal) protein? Give the name of organisms which produces it. How humans take benefit from this protein?
2. Explain: Pest resistance Plants.
3. Describe biopiracy.

Section C

● Write the answer of the following questions. [Each carries 4 Marks]

[8]

4. Describe: Genetic engineered insulin
5. What is gene therapy? Illustrate using the example of adenosine deaminase (ADA) deficiency.

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Section [A] : 1 Mark MCQ

No	Ans	Chap	Sec	Que	Universal_Queld
1.	C	Chap 10	S6	155	QP23P13B1214_P2C10S6Q155
2.	A	Chap 10	S6	154	QP23P13B1214_P2C10S6Q154
3.	B	Chap 10	S6	153	QP23P13B1214_P2C10S6Q153
4.	D	Chap 10	S6	152	QP23P13B1214_P2C10S6Q152
5.	A	Chap 10	S6	151	QP23P13B1214_P2C10S6Q151
6.	D	Chap 10	S6	150	QP23P13B1214_P2C10S6Q150
7.	C	Chap 10	S6	149	QP23P13B1214_P2C10S6Q149
8.	D	Chap 10	S6	148	QP23P13B1214_P2C10S6Q148
9.	B	Chap 10	S6	147	QP23P13B1214_P2C10S6Q147
10.	D	Chap 10	S6	146	QP23P13B1214_P2C10S6Q146
11.	A	Chap 10	S6	144	QP23P13B1214_P2C10S6Q144
12.	C	Chap 10	S6	145	QP23P13B1214_P2C10S6Q145
13.	A	Chap 10	S6	143	QP23P13B1214_P2C10S6Q143

Section [B] : 3 Marks Questions

No	Ans	Chap	Sec	Que	Universal_Queld
1.	-	Chap 10	S1	6	QP23P13B1214_P2C10S1Q6
2.	-	Chap 10	S1	7R	QP23P13B1214_P2C10S1Q7R
3.	-	Chap 10	S1	21	QP23P13B1214_P2C10S1Q21

Section [C] : 4 Marks Questions

No	Ans	Chap	Sec	Que	Universal_Queld
4.	-	Chap 10	S1	15	QP23P13B1214_P2C10S1Q15
5.	-	Chap 10	S1	16	QP23P13B1214_P2C10S1Q16