

# OPEN STUDENT FOUNDATION

## CHAPTER 10 Biotech principles STD 12TH Biology PRACTICE SHEET DAY 7

Date : 27/02/24

Time: 1 hr

### Section A

- Choose correct answer from the given options. [Each carries 1 Mark] [10]
- Which of the given statement is correct in the context of visualizing DNA separated by agarose gel electrophoresis ?  
(A) DNA can be seen in visible light  
(B) DNA can be seen without staining in visible light  
(C) Ethidium bromide stained DNA can be seen in visible light  
(D) Ethidium bromide stained DNA can be seen under exposure to UV light
  - The transfer of genetic material from one bacterium to another through the mediation of a viral vector is termed as  
(A) Transduction (B) Conjugation (C) Transformation (D) Translation
  - Which of the following enzymes catalysing the removal of nucleotides from the ends of DNA ?  
(A) Endonuclease (B) Exonuclease (C) DNA ligase (D) Hind-II
  - Rising of dough is due to  
(A) Multiplication of yeast (B) Production of CO<sub>2</sub>  
(C) Emulsification (D) Hydrolysis of wheat flour starch into sugars.
  - 'Restriction' in restriction enzyme refers to  
(A) Cleaving of phosphodiester bond in DNA by the enzyme  
(B) Cutting of DNA at specific position only  
(C) Prevention of the multiplication of bacteriophage by the host bacteria  
(D) All of the above
  - Which of the following is not required in the preparation of recombinant DNA molecule ?  
(A) Restriction endonuclease (B) DNA ligase  
(C) DNA fragments (D) E. coli
  - In agarose gel electrophoresis, DNA molecules are separated on the basis of their  
(A) Charge only (B) Size only (C) Charge to size ratio (D) All of the above
  - The most important feature in a plasmid to serve as a vector in gene cloning experiment is:  
(A) Origin of replication (ori) (B) Presence of a selectable marker  
(C) Presence of sites for restriction endonuclease (D) Its size
  - While isolating DNA from bacteria, which of the following enzymes is not required ?  
(A) Lysozyme (B) Ribonuclease (C) Deoxyribonuclease (D) Protease
  - Which of the following has popularising the PCR (polymerase chain reactions) ?  
(A) Easy availability of DNA template  
(B) Availability of synthetic primers  
(C) Availability of cheap deoxyribonucleotides  
(D) Availability of 'Thermostable' DNA polymerase

### Section B

- Write the answer of the following questions. [Each carries 2 Marks] [6]
- Give Reason : The products prepared by recombinant DNA have to be passed from down stream

processing.

2. Give Reason : Genetic engineering is better than hybridization.
3. Give Reason : In recombinant DNA technology the use of endonuclease is more proper than exonuclease.

**Section C**

- Write the answer of the following questions. [Each carries 3 Marks] [6]
- 4. Describe the role of *Agrobacterium tumefaciens* in transforming a plant cell.
- 5. Give general information about origin of recombinant DNA molecule.

**Section D**

- Write the answer of the following questions. [Each carries 4 Marks] [8]
- 6. Give information about bioreactors.
- 7. Explain separation and isolation of the Genetic material (DNA).



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CHAPTER 10 Biotech principles

STD 12TH Biology

Date : 27/02/24

Total Marks: 30

PRACTICE SHEET DAY 7

Time: 1 hr

## Section [ A ] : 1 Mark MCQ

No	Ans	Chap	Sec	Que	Universal_Queld
1.	D	Chap 9	S5	4	QP23P11B1214_P1C9S5Q4
2.	A	Chap 9	S5	3	QP23P11B1214_P1C9S5Q3
3.	B	Chap 9	S5	2	QP23P11B1214_P1C9S5Q2
4.	B	Chap 9	S5	1	QP23P11B1214_P1C9S5Q1
5.	B	Chap 9	S5	5	QP23P11B1214_P1C9S5Q5
6.	D	Chap 9	S5	6	QP23P11B1214_P1C9S5Q6
7.	B	Chap 9	S5	7	QP23P11B1214_P1C9S5Q7
8.	A	Chap 9	S5	8	QP23P11B1214_P1C9S5Q8
9.	C	Chap 9	S5	9	QP23P11B1214_P1C9S5Q9
10.	D	Chap 9	S5	10	QP23P11B1214_P1C9S5Q10

## Section [ B ] : 2 Marks Questions

No	Ans	Chap	Sec	Que	Universal_Queld
1.	-	Chap 9	S2	5	QP23P11B1214_P1C9S2Q5
2.	-	Chap 9	S2	4	QP23P11B1214_P1C9S2Q4
3.	-	Chap 9	S2	3	QP23P11B1214_P1C9S2Q3

## Section [ C ] : 3 Marks Questions

No	Ans	Chap	Sec	Que	Universal_Queld
4.	-	Chap 9	S8	2	QP23P11B1214_P1C9S8Q2
5.	-	Chap 9	S1	5	QP23P11B1214_P1C9S1Q5

## Section [ D ] : 4 Marks Questions

No	Ans	Chap	Sec	Que	Universal_Queld
6.	-	Chap 9	S1	18	QP23P11B1214_P1C9S1Q18
7.	-	Chap 9	S1	9R	QP23P11B1214_P1C9S1Q9R