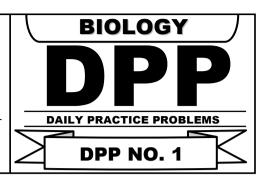


TARGET: NEET (UG) 2024

Course: SARANSH (Youtube Live CRASH COURSE)



ZOOLOGY: Biotechnology: Principles and Processes

DPP No.: 1

- 1. A definition of biotechnology that encompasses both traditional view and modern view are given by
 - (1) European forum on Biotechnology
 - (2) European focus on Biotechnology
 - (3) European Federation of Biotechnology
 - (4) European Centre of Biotechnology
- 2. The main function of Restriction endonuclease
 - (1) To cut the DNA at the ends
 - (2) To anneal the cut DNA segments
 - (3) To cut the DNA at specific sites resulting sticky ends are formed
 - (4) To cut the DNA at the middle part
- 3. In EcoRI RY 13, E and co represent
 - (1) E= Endangered species, co = carbonmonooxide
 - (2) E = genus Escherichia, co = species coli
 - (3) E = Emigration, co = co-evolution
 - (4) E = Escherichia, co = Strain name
- **4.** Which of the following is a method of gene transfer

(1) Microinjection

(2) Particle gun

(3) Electroporation

(4) All of these

- 5. Polymerase chain reaction is most useful in
 - (1) DNA synthesis

(2) DNA amplification

(3) Protein synthesis

- (4) Amino acid synthesis
- **6.** Gene gun or biolistic method is direct DNA transfer technique, In which before projected on target cell desired DNA is coated by

(1) Iron & silver

(2) Silver & tungsten

(3) Copper & silver

(4) Gold & tungsten.

7. Agarose extracted from sea weeds finds use in:

(1) Spectrophotometry

(2) Tissue Culture

(3) PCR

(4) Gel electrophoresis

8. In gel electrophoresis, the separated bands of DNA are cut from the agaros gel & extracted from the gel piece it is called

(1) Separation

(2) Insertional inactivation

(3) Elution

(4) Eluviation



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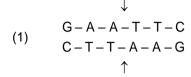
Toll Free : | 1800 258 5555 | CIN: U80302RJ2007PLC024029

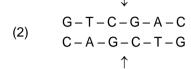
- 9. In gel electrophoresis which of the following compound is used in the staining of DNA
 - (1) Methyl bromide

(2) Ethyle ethane sulphonate

(3) Ethedium bromide

- (4) Ethyl bromide
- 10. Which of the following correctly depicts the recognition site for **Eco** RI?





$$(3) \qquad \begin{matrix} \downarrow \\ G-T-C-G-A-C \\ C-A-G-C-T-G \\ \uparrow \end{matrix}$$

(4)
$$G-A-A-T-T-C$$

 $C-T-T-A-A-G$

11. ASSERTION: Restriction enzymes cut the strand of DNA to produce sticky ends.

REASON: Stickiness of the ends facilitates the action of the enzyme DNA polymerase.

Read the **Assertion** and **Reason** carefully to mark the correct option out of the options given below:

- (1) Both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.
- (2) Both Assertion and Reason are true but Reason is not the correct explanation of the Assertion.
- (3) Assertion is true but Reason is false.
- (4) Both Assertion and Reason are false
- 12. ASSERTION: The first discovered restriction endonuclease was Hind II.

REASON: Hind III was discovered earlier than Hind II.

Read the **Assertion** and **Reason** carefully to mark the correct option out of the options given below:

- (1) Both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.
- (2) Both Assertion and Reason are true but Reason is not the correct explanation of the Assertion.
- (3) **Assertion** is true but **Reason** is false.
- (4) Both Assertion and Reason are false
- **13.** What does the term 'competent' refer to in transformation experiments?
 - (1) Piece of DNA carrying desired gene
 - (2) Vector used to carry desired gene
 - (3) Cell in which desired gene is to be inserted
 - (4) Bacteria from which restriction endonuclease is to be obtained
- **14.** The processes include ___A__ and ___B__, which are collectively referred to as downstream processing. Select the option which correctly fills A and B -
 - (1) A- Separation, B- Purification
 - (2) A- Creating recombinant DNA, B- Formation of recombinant protein
 - (3) A- Separation, B- packaging of product
 - (4) A- Selection of recombinant DNA, B- Separation of DNA.
- **15.** Sticky ends facilitate action of which enzyme?
 - (1) DNA polymerase

(2) DNA ligase

(3) Restriction endonuclease

(4) Reverse transcriptase

- **16.** The most important feature in a plasmid to be used as a vector is:
 - (1) Origin of replication (ori)
 - (2) Presence of a selectable marker
 - (3) Presence of sites for restriction endonuclease
 - (4) Its size
- 17. Principle benefit of using tag DNA polymerase in PCR is-
 - (1) Its accuracy level is very high
 - (2) It can be used for invitro replication of DNA
 - (3) It remain stable even at high temperature induced denaturation of DNA
 - (4) It can replicate RNA as well as DNA
- 18. Which of the following is an essential condition to produce a recombinant DNA molecule?
 - (1) The two strands of DNA which are to be joined should be palindrome
 - (2) The two strands of DNA which are to be joined should be cleaved by same restriction endonuclease
 - (3) The two strands of DNA which are to be joined should be joined by separate DNA ligase enzymes
 - (4) The two strands of DNA which are to be joined should be from prokaryotes only.
- **19.** What is true for plasmid
 - (1) Found in viruses
 - (2) Contains genes for vital activities
 - (3) Part of nuclear chromosome
 - (4) Widely used in gene transfer
- 20. Assertion: DNA ligase joins two DNA chains.

Reason: DNA ligase catalyzes the formation of phosphodiester bonds between two chains.

- (1) Both assertion and reason are true but reason is the correct explanation of assertion.
- (2) Both assertion and reason are true but reason is not the correct explanation of assertion.
- (3) Assertion is true but reason is false.
- (4) Both assertion and reason are false