



SHIKSHA CLASSES

BOARD QUESTION PAPER

Subject : Biology

Ch. : 12. Biotechnology

Total Marks : 25

Class : XII

Time : 1 Hr.

Section A

Q.1 : Select & write the most appropriate answer from the given alternatives for each sub-question. 4

- i) Molecular scissor used in genetic engineering is
- (a) DNA polymerase (b) Helicase
(c) Restriction endonuclease (d) DNA ligase
- ii) Plasmids are found in
- (a) Algae (b) Bacteria (c) Viruses (d) Fungi
- iii) The example of biopiracy related to Indian plants
- (a) Potato (b) Turmeric (c) Tomato (d) Soyabean
- iv) technique is used for in vitro gene cloning or gene multiplication.
- (a) Electrophoresis (b) SDS-PAGE
(c) Spectroscopy (d) PCR

Q.2. : Write the answer in ONE sentence. 2

- i) What is PCR?
- ii) Name the hormone which is used against diabetes.

Section B

: Attempt any THREE. 6

Q.3 : Draw diagrammatic representation of rDNA technology.

Q.4 : Draw diagrammatic representation of DNA replication through polymerase chain reaction.

Q.5 : What are the requirements of polymerase chain reaction?

Q. 6 : Enlist the diseases where clinical trials of somatic cell gene therapy have been employed?

Section C

: Attempt any THREE.

9

Q. 7 : Write a note on plasmid.

Q. 8 : Give significance of biopiracy.

Q. 9 : Sketch outline of the process of recombinant DNA technology.

Q. 10 : Give significance or functions of Transgenic plants.

Section D

: Answer the following : (ANY 1)

4

Q. 11 : Write down the steps involved in PCR.

Q. 12 : Write the applications of transgenic animals.

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