



RAN-1887

B. Sc. Biotechnology Semester-5 Examination

March / April - 2019

Core:l: Course : 5-BT15 : GENETIC ENGINEERING

Time: 2 Hours]

[Total Marks: 50

સૂચના : / Instructions

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of signs on your answer book

Name of the Examination:

B. Sc. Biotechnology Semester-5

Name of the Subject :

BT15 : GENETIC ENGINEERING

Subject Code No.: 1 8 8 7

Seat No.:

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Student's Signature

Q.1 Answer the following questions (Any Two). (08)

- Name two sources each of Ligase and Alkaline Phosphatase enzymes.
- What is 2 μ Circle? List important genes/sequences present in it.
- Give full name for CHO Cells. Explain at least 2 uses of these cells.
- Give examples of two diseases where gene replacement therapy is proved to be useful.

Q.2 Answer the following questions (Any Two). (14)

- Describe how restriction enzymes can be used to create recombinant DNA?
- Make a list of characters expected in an ideal vector of genetic engineering.
- What is 'Blue-White Screening'? Describe the mechanism behind this process.

Q.3 Answer the following questions (Any Two). (14)

- a. Make a list of various λ , phage derived vectors. Describe any one of them in detail.
- b. Describe the construction and mechanism of vector derived from Ti plasmid.
- c. What is a helper phage? Describe any one of SV40 based vectors.

Q.4 Answer the following questions (Any Two). (14)

- a. Make a list of techniques used to transfer DNA to eukaryotic cells. Explain any one of them.
 - b. Why 'Shotgun method' is named so? Describe the need behind and process of this method.
 - c. Explain use of genetic engineering in the field of agriculture with appropriate examples.
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