Total No. of Questions : 08]

SEAT No. :

P2805

[Total No. of Pages : 2

[5024] - 403

M.Sc.

BIOCHEMISTRY

BCH - 472 : Genetic Engineering

(2013 Pattern) (Semester - IV)

Time : 3 Hours] ***[Max. Marks : 50***

Instructions to the candidates:

1) ***Neat labled diagrams must be drawn wherever necessary.***
2) ***Solve section - I and section - II an separate answer book.***
3) ***Solve any two questions from Q1 to Q3 and any two from Q5 to Q7.Question No. 4 and Q No. 8 are compulsory.***
4) ***Figures to the right indicate full marks***

SECTION - I

Q1) Answer the following.

a) What is transformation ? [2]

b) Write note on cloning vectors for yeast . [4]

c) Explain process of southern blotting . [4]

Q2) Answer the following ;

a) What is role of lac Z gene in gene cloning [2]

b) Write a note on types of reastriction enzymes . [4]

c) Write note on S1 nuclease mapping . [4]

Q3) Answer the following :

a) What are ligases ? [2]

b) Write note on Ti-plasmid and discuss T-DNA organization . [4]

c) Explain chromosomal walking . [4]

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Q4) Explain the detail.

a) Explain dideoxy method of DNA sequencing . **[5]**

OR

b) Write note on enzymes used in genetic engineering . **[5]**

SECTION-II

Q5) Answer the following :

a) What is mi RNA . [2]

b) Write note on RFLP and its applications . [4]

c) Describe production of insect resistance transgenic plants . [4]

Q6) Answer the following :

a) Give any two examples of recombinant hormones . [2]

b) Explain agrobacterium mediated gene transfer. [4]

c) Give the applications of RNA i technology . [4]

Q7) Answer the following :

a) What are proteomes ? [2]

b) List the various variations of PCR procedure and explain any one in detail . [4]

c) Explain in vitro mutagenesis . [4]

Q8) Explain the detail.

a) Explain the applications of genetic engineering in medicine and agriculture . **[5]**

OR

b) Discuss the methods used to transfer in animal cells . **[5]**
