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3 (Sem 6) ZOO M4

2015

ZOOLOGY

(Major)

Theory Paper : M-6.4

Full Marks – 60

Time – Three hours

The figures in the margin indicate full marks for the questions.

GROUP – A

(Biotechnology)

1. Define the following (any *four*) : 1×5=5
 - (a) Cloning vector
 - (b) Gene of interest
 - (c) Linkevs
 - (d) Electroporation
 - (e) Adaptors
 - (f) Reporter genes
 - (g) Gene tagging.

[Turn over

2. Answer the following (any *five*) : $2 \times 5 = 10$

- (a) What are the different applications of Recombinant DNA technology ?
- (b) What is primary cell culture ?
- (c) What are the media used for animal tissue culture ?
- (d) What are fundamental features of a genomic library ?
- (e) What are the applications of cDNA library ?
- (f) What are different types of pro-karyotic vectors ?

3. Answer any *two* from the followings : $5 \times 2 = 10$

- (a) Describe the process of sterilization of media for cell culture.
- (b) Distinguish between Genomic library and cDNA library.
- (c) Describe the usage of Northern blotting.
- (d) What are disadvantages of transgenic animals ?

4. Answer any *two* of the following : $10 \times 2 = 20$

- (a) What is gene cloning ? Give a detailed account of its methodology.

(b) Write an essay on the utility of different enzymes used in the construction of a recombinant DNA molecule.

(c) What is animal cell culture ? Write about its advantages and disadvantages.

GROUP – B

**(Bioinformatics and Computer
Application for Biologist)**

5. Write briefly on the following (any *one*) : 5

(a) WINDOWS

(b) Data analysis

(c) C++

6. Describe about the operating system DOS and UNIX. 10

Or

Write about Computer aided techniques in statistical analysis.