Online Mode

Unique Paper code : 32237903 Name of the Paper : DSE- Animal Biotechnology Set-I Name of the Course : B.Sc.(Hons.) Zoology – CBCS Semester : VI

Duration : 2 Hours

Maximum Marks: 75

Instruction for Students :

Write your Roll No., Name of the paper, Course, Semester, and Date of examination On the first page of answer sheet .

Attempt ANY FOUR questions . All questions carry equal marks .(18.75 each)

- Describe a strategy using restriction endonucleases to clone a bacterial gene into a vector for propagation in *E.coli*. Assume that the target sequence is known. Describe the selection Of *E.coli* cells that carry the cloned gene.
- 2. If you were to construct a new plasmid cloning vector , What are the three important desirable characteristics you would like to incorporate in it . Explain with the help of a well labeled diagram . What is the main application of bacteriophage M13 based cloning vectors .
- 3. How the insulin molecule is synthesized by the processing of Preproinsulin ? How does this Known detail help in the synthesis of Recombinant Insulin ?
- 4. What does cDNA library represent ? How does full length double stranded cDNA for cloning Is created ? How does Grunstein – Hogness method detect recombinant clone by colony hybridization .

- 5. How are transgenic mice created ? Discuss some of the advantages and disadvantages of the two major approaches to create transgenic mice. Write an application for a transgenic mice.
- 6. What is dideoxynucleotide ? How is it used to determine the sequence of a DNA molecule ?