Total No. of Printed Pages—2

6 SEM TDC ZOO M 4

2014

(May)

ZOOLOGY

(Major)

Course : 604

(Biotechnology and Bioinformatics)

Full Marks : 48
Pass Marks : 19

Time : 2 hours

The figures in the margin indicate full marks for the questions

Answer Question No. **1** and *any* **three** from the rest

1. *(a)* Fill in the blanks : 1×5=5

(i) Molecular scissor which cut DNA at specific site is ——.

(ii) The DNA fragment to be introduced into the host cell is called ——.

(iii) During gene cloning, —— is called 'gene taxi'.

(iv) Humuline is the term used for ——.

(v) The primary structure database include PDB and ——.

(b) Write short notes on : 3½+3½=7

(i) IPR

(ii) Cloning vector

2. Define genetic engineering. Write a detailed note on the process of synthesis and application of recombinant DNA. 2+(5+5)=12

3. What are transgenic animals? How are transgenic animals produced? Discuss the application of transgenic animals. 2+5+5=12

4. What is bioinformatics? Mention the scope of bioinformatics. What are the sources of information used in bioinformatics? 2+5+5=12

5. What is biological database? Give the sequence found in database. Write the methods of sequence alignment. 2+5+5=12

6. Write notes on (any *three*) : 4×3=12

(a) BLAST

(b) Human genome project

(c) DNA sequencing

(d) Proteomics

★★★