

Roll No. ....

Total No. of Questions : 9]  
(2034)

[Total No. of Printed Pages : 4

**UG (CBCS) IIIrd Year Annual Examination**

**3014**

**B.Sc. ZOOLOGY**

(Animal Biotechnology)

(DSE-IA)

Paper : ZOOL 301 (B) TH

**Time : 3 Hours]**

**[Maximum Marks : 50**

*Note :-* Attempt *five* questions in all, selecting *one* question each from Sections-B, C, D and E. Question No. 1 of Section-A is compulsory.

**Section-A**

**(Compulsory Question)**

1. Do as directed :

- (i) Hybrid cells formed by fusion of B-Lymphocytes and cancerous cells are called .....

**CH-314**

( 1 )

Turn Over

- (ii) BCG vaccine is a live vaccine. (True/False)
- (iii) Collection of host cells with recombinant vectors is called as .....
- (iv) Southern blotting technique was developed by .....
- (v) Full form of PCR is .....
- (vi) The cloned Dolly sheep was born on 5th July of ..... year.
- (vii) The best example of knockout mammals is .....
- (viii) The group of genetically similar cells are called .....
- (ix) The first transgenic crop produced was .....
- (x) ..... are antiviral proteins.

1×10=10

### Section-B

2. (a) What are hybridomas ? Describe the advantages of monoclonal antibodies.
- (b) Describe the scope of biotechnology in different fields. 5,5
3. Write notes on the following :
- (a) Lambda bacteriophage
- (b) Cosmids 5,5

### Section-C

4. (a) What are restriction enzymes ? Write note on their nomenclature.
- (b) Write notes on the following :
- (i) Knockout mice
- (ii) DNA micro injection 5,5
5. Describe in detail the production of transgenic plants. 10

### Section-D

6. Write notes on the following :
- (a) Cloning
- (b) DNA fingerprinting 5,5

7. Define transgenesis and write note on genetically modified crops. 10

**Section-E**

8. Enumerate the cause, symptoms of diagnosis of :
- (a) Cystic Fibrosis
  - (b) Sickle cell anaemia 5,5
9. Explain the role of recombinant DNA technology in production of Human insulin. 10