B. Sc. Biotechnology Fourth Semester Animal Biotechnology (BBT-18)

Duration: 3Hrs.

Full Marks: 70

PART A (Objective) =20 PART-B (Descriptive)=50

PART-B (Descriptive)

Duration: 2 hrs. 40 mins.

Marks: 50

1. Write short notes on any five of the following:

2×5=10

- 1) Serum
- 2) Interferon
 - 3) HeLa
- 4) HEPES
- 5) Monoclonal Antibody
- 6) Surrogate genetics
 Biosafety cabinet

II. Explain in short any five of the following:

3×5=15

- 1) Define cell culture. What is its importance?
- 2) Differentiate between batch culture and semi continuous batch culture.
- 3) State some applications of Animal Biotechnology.
- 4) What is SCNT? What is its significance?
- 5) Discuss the significance of in vitro fertilization.
- 6) Differentiate between finite and infinite cell line.
- 7) Describe in brief the plasma clot method of organ culture.

III. Explain briefly any five of the following:

1) Describe in details the enzymatic disaggregation process.	5
2) Describe in details the basic constituents of a suitable animal cell culture	
medium.	5
3) Describe a few applications of transgenic animals.	5
4) Describe in details any two transfection techniques.	
5) What are stem cells? What are its characteristics? What is its significance in	n
drug discovery?	2+2+1=5
6) Describe some of the substrates used in animal cell culture techniques.	5
7) Describe in brief erythropoietin (EPO) and Blood factor VIII.	2.5x2=5

B. Sc. Biotechnology Fourth Semester Animal Biotechnology (BBT- 18)

Duration: 20 minutes		Marks – 20
	PART-A (Objective)	
Time: 20 mins		Total Marks: 20
I. Choose the correct answers:		1×10=10
1. The pH of human blood is		
a) 5.4	b) 6.4	
c) 7.4	d) 8.0	
2. HEPES is a type of		
a) Buffer	b) Hormone	
c) Enzyme	d) Growth factor	
3. In animal cell culture media phen	ol red is commonly used as	
a) Energy source	b) Buffer	
c) Vitamin	d) None	
4. PDGF is		
a) Carbohydrate	b) Protein	
c) Lipid	d) None	
5. Transferrin present in serum bind	s to	
a) Mg	b) Fe	
c) Ca	d) Zn	
6. Macroglobulin inhibits action of 6	enzyme	
a) Trypsin	b) Catalase	
c) Amylase	d) Peroxidase	
7 In 1054 Travell deviced		
7. In 1954, Trowell devised a) Grid method	b) Raft method	
c) Plasma clot method	d) None	

8. Ar	important enzyme used in tissue disag		
	a) Collagenasec) Catalase	b) Urease d) Salivary amylase	
	c) Catalase	d) Sanvary amyrase	
9. Th		a biotechnology company Genetech (US	SA) was
	a) tPA c) Penicillin	b) Blood factor VIII d) Kanamycin	
	c) Femenini	d) Kanamyem	
10. H	lybridoma technology is used for produ		
	a) Monoclonal antibodiesc) Vitamins	b) Enzymesd) Contraceptives	
	c) vitaminis	d) Contraceptives	
O			
_1. F	ill in the blanks:		1×10=10
	1. SCID stands for		
	2. CHO stands for		
	3. PDGF stands for		
	4. tPA stands for		
	5. Promoter of a gene is the region w	here binds.	
	6. Thymidine kinase is a type of	marker.	
	7. SCNT stands for		
	8. IVF is the short form of		
0	9	is used as an antifoam agent in an	imal cell
,	culture medium.		
	10. Viscosity of animal cell culture m	nedium can be increased by addition of	
	*	*****	