Nama					Uneah	
Roll No	o.:	• • • • •			As Phones (y'Exemples prof Explored	
Invigil	ator'.	s Sig	gnature :			
	CS	5/M	.Sc (GE)/SEM-3/1	MSGEN(	(ABT)-305A/2012-13	
			20	12		
	G	EN]	ETIC ENGINEE	RING	IN ANIMALS	
Time Allotted: $1\frac{1}{2}$ Hours					Full Marks: 35	
		The	e figures in the marg	in indica	te full marks.	
Cano	didat	es a	re required to give th	heir ansv	vers in their own words	
			as far as	s practica	able.	
			GROU	P – A		
			( Multiple Choice	Type Qu	estions )	
1. (	Choo	se tł	ne correct alternativ	es for ar	by five of the following $5 \times 1 = 5$	
i)	) 1	A no	rmal ejaculate from	a dairy	bull will contain	
	á	a)	1 to 2 billion spern	ns		
	l	<b>b</b> )	2 to 4 billion spern	ns		
	•	c)	5 to 10 billion spen	rms		
	(	d)	10 to 20 billion spe	erms.		
ii) Most commonly used cryoprotectant is					tant is	
	í	a)	DMSO	<b>b</b> )	Glycerol	
	(	c)	both (a) and (b)	d)	none of these.	
ii	i) (	Gan	nciclovir is an analog of			

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b)

d)

Guanosine

None of these.

a)

c)

Adenosine

Thymidine

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- Interferon-gamma is an iv) Antiviral agent Antibacterial agent b) both (a) and (b) d) None of these. c) v) A normal ejaculate from a dairy bull can be used to inseminate 50 to 100 cows a) b) 100 to 200 cows 200 to 400 cows d) 300 to 1000 cows. c) vi) First chimeric mice were produced in 1960s b) 1970s a) d) c) 1980s 1990s. vii) First successful embryo transfer was done in 1850 b) 1870 a) d) c) 1880 1890. viii) Half-life of FSH is 4 hrs. b) 10 hrs. a) 20 hrs. c) d) 40 hrs. **GROUP - B** (Short Answer Type Questions) Answer any three of the following.  $3 \times 5 = 15$ Discuss cell potencies.
- 2.
- 3. Discuss the uses of transgenic goats.
- Discuss the transgenic production of spider silk in 4. mammalian system and what are its uses?
- 5. Discuss briefly the method of DNA microinjection in oocytes.
- What is zenografting? 6.

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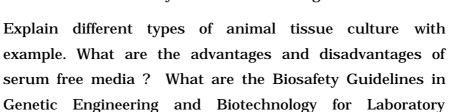
## **GROUP - C**

## (Long Answer Type Questions)

Answer any one of the following.

7.

work?



4 + 5 + 6

8. What is artificial insemination (AI)? What are the advantages and disadvantages of AI? Discuss the method

of AI. 2 + 3 + 10

9. What is animal pharming? Discuss the production immunobodulators, vaccine and hormones in transgenic animals. Discuss the advantages and disadvantages of DNA microinjection in creating transgenic animals. 2 + 8 + 5

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