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**B. Sc. Biotechnology Part III Examination– May, 2016**

**ANIMAL BIOTECHNOLOGY**

**Course : XI**

**Time : Three Hours ]**

**[ Maximum Marks : 75**

**Note :** Attempt *all* questions from Section - A (Objective type questions), *seven* questions from Section - B (Short answer type questions) and *two* questions from Section - C (Long/Essay type questions).

**SECTION – A**

**(Multiple Choice Questions)**

1. Taq polymerase was isolated from :

- |                                   |                              |
|-----------------------------------|------------------------------|
| (a) <i>Escherichia coli</i>       | (b) <i>Thermus aquaticus</i> |
| (c) <i>Haemophilus influenzae</i> | (d) <i>Bacillus subtilis</i> |

2. The cutting sites of EcoRI is

- (a) 5'TCGA3'  
3' AGCT 5'
- (b) 5'AAGCTT3'  
3'TTCGAA5'
- (c) 5'GAATTC3'  
3' CTTAAG 5'
- (d) 5'GGATCC3'  
3'CCTAGG5'

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3. Name the scientist who cloned 'Dolly' the sheep :
- (a) Kerry Mullis (b) Youyou Tu  
(c) W. Campbel (d) Ian Wilmut
4. The approximate size of DNA a cosmid vector can carry is :
- (a) Up to 50 Kb (b) Up to 100 Kb  
(c) Up to 150 Kb (d) Up to 200 Kb
5. Type II family interferons are :
- (a) Alpha (b) Beta  
(c) Gamma (d) Delta
6. The chemical used in cryopreservation of animal cells :
- (a) Ethanol (b) Glycerol  
(c) Methanol (d) Water
7. The stationary phase used in size exclusion based proteins purification is :
- (a) DEAE cellulose (b) Silica  
(c) Sephadex (d) CM Cellulose
8. Protein estimation by Lowery's methods is performed at :
- (a) 595nm (b) 660nm  
(c) 280nm (d) 260nm
9. *In vitro* method for cloning uses :
- (a) Plasmid (b) Cosmid  
(c) Phage (d) PCR



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2. What are secondary metabolites? What is their health utility? Discuss in details about elicitor mediated synthesis of secondary metabolites.
  3. Explain the working of bioreactor with suitable illustrations.
  4. What do you mean by transgenic animals? Comment on ethical issues associated with transgenic animals. Explain the advantages of transgenic animals with suitable examples.
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