

P-254

B. Sc. (Biotechnology) Part - III Examination, 2017

Paper : XI

(Animal Biotechnology)

Time : Three Hours]

[Maximum Marks : 75

SECTION – A

[Marks : 1 × 10 = 10

Note : Attempt *all* questions. Each question carries 01 marks.

1. Which of the following stimulate glycogenolysis ?
 - (a) Insulin and glucagon
 - (b) Glucagon and epinephrine
 - (c) Insulin and epinephrine
 - (d) Glucagon and nor epinephrine
2. Cushing's disease is caused by excess production of :
 - (a) Growth hormone
 - (b) TSH
 - (c) Thyroid hormone
 - (d) ACTH
3. Insulin has 51 amino acids arranged in :
 - (a) Single polypeptide
 - (b) Two polypeptide of 21 and 30 amino acids
 - (c) Two polypeptide of 25 and 26 amino acids
 - (d) Three polypeptide of 15, 16 and 20 amino acids
4. Enzyme TPA or tissue plasminogen activator is used for :
 - (a) Dissolving blood clots
 - (b) Maintaining plasma content

P. T. C

- (c) Clearing turbidity of juices
- (d) Stimulating thromboplastin production
- 5. Kohler and Milstein developed Biotechnology for :
 - (a) Monoclonal antibodies
 - (b) Myeloma
 - (c) Immobilization of enzyme
 - (d) Steroid conversion
- 6. First hormone produced artificially by culturing bacteria is :
 - (a) Insulin
 - (b) Thyroxine
 - (c) Testosterone
 - (d) Adrenaline
- 7. A bioreactor is :
 - (a) Fermentation tank
 - (b) Culture containing radioactive isotopes
 - (c) Culture for synthesis of new chemicals
 - (d) Hybridoma
- 8. The full form of HGPRT is
- 9. Commercial insulin is produced by :
 - (a) *E. coli*
 - (b) *B. subtilis*
 - (c) *P. aeruginosa*
 - (d) *S. aureus*
- 10. Name the drug produced through biotechnology for cancer treatment :
 - (a) Insulin
 - (b) Interferon
 - (c) HGH
 - (d) TSH

SECTION – B

[Marks : 5 × 7 = 35

Note : Attempt any *seven* questions. Each question carries 05 marks.

1. Cryopreservation of Embryo
2. Interferon
3. Tissue plasminogen activator
4. RFLP

5. Transplanting cultured cells
6. *In vitro* fertilization
7. Monoclonal antibodies
8. Growth hormones
9. Germplasm Conservation
10. Polyclonal antibodies

SECTION – C

[Marks : 10 × 3 = 30

Note : Attempt any *three* questions. Each question carries 10 marks.

1. Explain the procedures and selection criteria for making an hybridoma and an EBV- transformed cell line.
 2. How do you create transgenic mice? Write about the research opportunities and applications of transgenic animals.
 3. Discuss the applications of various types of PCR in the diagnosis of animal diseases.
 4. Describe basics of animal cell culture techniques. Give brief application of animal cell culture.
-