

[Time: 3 Hours]

[Marks:100]

Please check whether you have got the right question paper.

- N.B:
1. All questions are compulsory and carry equal marks.
 2. Figures to the right indicate full marks.
 3. Draw neat and labelled diagrams wherever necessary.
 4. Answer the questions in proper order.

- Q. 1** Describe **Any Two** of the following: (20)
- a) Effect of different factors on enzyme activity.
 - b) Regulation of enzyme activity.
 - c) Lock and key and induced fit model of enzyme action.
- Q. 2** Explain **Any Two** of the following: (20)
- a) Positive feedback mechanism with a suitable example.
 - b) Osmotic and ionic regulation in hypo-osmotic environment.
 - c) Hibernation.
- Q. 3** Give an account on **Any Two** of the following: (20)
- a) Histological structure of Thyroid gland and its functions.
 - b) Histological structure of Pancreas and functions of its hormones.
 - c) Mechanisms of hormone action.
- Q. 4** Describe **Any Two** of the following: (20)
- a) Method used for isolation and preparation of cells for culture.
 - b) Types of media used for animal tissue culture.
 - c) Basic principles of sterilization.
- Q. 5** Write short notes on (**Any Four**): (20)
- a) Lineweaver Burk plot and its significance.
 - b) Ectothermy versus Endothermy.
 - c) Circadian rhythms.
 - d) Hormones of Neurohypophysis and their functions.
 - e) Complete media.
 - f) Coverslip culture.
