

Q.P. Code :07181

[Time: 2½ Hours]

[Marks:60]

Please check whether you have got the right question paper.

- N.B:**
1. All questions are compulsory.
 2. All questions carry equal marks.
 3. Draw neat and labelled diagrams whenever necessary.

Q.1 Answer any two of the following :-

- (a) Describe the effects of pressure on rate of enzyme action. 06
- (b) Explain the strategies of enzyme adaptations to pressure in marine organisms. 06
- (c) Describe the effects of pressure on transcription. 06
- (d) Explain the effects of pressure on weak bonds and its consequences for higher orders of protein structure in animals. 06

Q.2 Answer any two of the following :-

- (a) Explain in detail endothermy in invertebrates. 06
- (b) Give a brief account of thermal limits of survival. 06
- (c) Describe briefly thermal resistance of dormant and active cells. 06
- (d) Describe antifreeze substances as a biological adaptation of ectothermy. 06

Q.3 Answer any two of the following :-

- (a) Describe dormancy in freshwater animals with reference to its induction and arousal. 06
- (b) Explain induction and termination of diapause in insects. 06
- (c) Give a detailed account of synchronization of circadian rhythms. 06
- (d) Elaborate on 'Biological clocks' with suitable examples. 06

Q.4 Answer any two of the following :-

- (a) Explain in detail the technique of RIA of insulin in diagnosis. 06
- (b) Give a detailed account of ELISA test in detection of HCG. 06
- (c) Elaborate on the liver function tests. 06
- (d) Discuss the application of monoclonal antibodies as a diagnostic tool for detection of cancer. 06

Q.5 Write short notes on any two of the following :-

- (a) Fundamental effects of pressure on biological system 06
- (b) Rate effects of temperature on lipoprotein enzymes 06
- (c) Photoperiodism 06
- (d) Gastric function tests 06