[Time: 2½ Hours]

Q.P. Code: 07181

[ 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. 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 06 structure in animals. Answer any two of the following:-Q.2 (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 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 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 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