

**Q.P. Code :07037**

**[Time: 2½ Hours]**

**[Marks:60]**

Please check whether you have got the right question paper.

- N.B:**
1. **All** questions are **compulsory**.
  2. **Figures** to the **right** indicate **full** marks.
  3. **Draw** neat **labelled** diagrams wherever **necessary**.

**Q.1** Define biosensors. Explain different types of biosensors used for monitoring the environment. **12**

**OR**

**Q.1** What are xenobiotics? With the help of a suitable example explain the biodegradation of an organochlorine compound. **12**

**Q.2** What are the different forms of IPRs? Explain the common procedure for patenting a biological process. **12**

**OR**

**Q.2** Discuss the role of TBGRI in the protection of 'Traditional Knowledge' in India. Add a note on the advantages of protecting the traditional knowledge. **12**

**Q.3** What are nanomaterials? Describe the use of proteins and templates like DNA for the synthesis of nanomaterials. **12**

**OR**

**Q.3** Discuss the impact of nanotechnology on environment. Add a note on environment management with respect to nanomaterial. **12**

**Q.4** What is food spoilage? Discuss the causes of spoilage of food and the effect of spoilage on various food commodities. **12**

**OR**

**Q.4** Discuss the importance of quality control in food industry. Add a note on the control measures for microbial spoilage of food. **12**

**Q.5** Write short on **any three** of the following:- **12**

- (a) Water Pollution
- (b) Bioprospecting
- (c) Hazardous waste management
- (d) Nanomaterials in cosmetics.
- (e) Use of nanomaterials in agriculture.
- (f) Role of air and water in food spoilage.