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**RB-0704**  
**Second Year B. Sc. Examination**  
**April / May – 2010**  
**Bioscience : Paper - IV**

Time : 3 Hours]

[Total Marks : 70

**Instructions :**

(1)

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|---|---|
| <p>नीचे दर्शाविए निशानीवाणी विगतो उत्तरवडी पर अवश्य लपवी.<br/>Fillup strictly the details of signs on your answer book.</p> <p>Name of the Examination :<br/>S. Y. B. Sc.</p> <p>Name of the Subject :<br/>Bioscience - 4</p> <p>Subject Code No. : 0 7 0 4 Section No. (1, 2,.....): Nil</p> | <p>Seat No. :<br/>□ □ □ □ □ □</p> <div style="border: 1px solid black; border-radius: 15px; height: 60px; display: flex; align-items: center; justify-content: center; margin-top: 10px;">Student's Signature</div> |
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- (2) Figures to the right indicate full marks.  
(3) Draw neat and labelled diagram wherever necessary.

- 1 Answers as directed : 12
- (i) Explain - Co-enzymes
  - (ii) Describe in brief phospholipids.
  - (iii) Enlist any four mucopoly-saccharides
  - (iv) State the importance of cholesterol.
  - (v) Describe in brief reversible and irreversible colloids.
  - (vi) Define :
    - (a) pH
    - (b) Isotopes

- 2 Describe in detail the chemistry and importance of monosaccharides. 15

**OR**

- 2 Answer the following questions :
- (i) Explain in detail a double helix structure of DNA. 9
  - (ii) Write a note on mechanism of enzyme action. 6

**3** Write an essay on - Photoelectric colorimeter. **14**

**OR**

**3** Write a detail note on :

- (i) Electrical and optical properties of colloids.
- (ii) Types of electrophoresis technique.

**4** Write an essay on - Graphical representation of data. **14**

**OR**

**4** Answer the following questions :

- (i) Define Mean, Mode and Median with suitable example.
- (ii) Explain chi-square test with suitable example.

**5** Write short notes on : (any **three**) **15**

- (i) Essential amino acids
- (ii) Fatty acids
- (iii) Transport RNA
- (iv) Electromagnetic spectrum
- (v) Working principle of electrophoresis.

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