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# SB-2721

## M. Sc. (Part - I) (Biosciences) (Sem. II) Examination

### March / April – 2011

## Bio - 201 : Biophysics & Instrumentation

Time : **3** Hours] [Total Marks :70

**Instructions :**

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
**Fillup strictly the details of ☛ signs on your answer book.**

Name of the Examination :

☛ **M. Sc. (Part - 1) (Biosciences) (Sem. 2)**

Name of the Subject :

☛ **Bio - 201 : Biophysics and Instrumentation**

☛ Subject Code No. : **2 7 2 1** ☛ Section No. (1, 2,.....) : **Nil**

Seat No. :

Student's Signature

(2) Figures to the right indicate full marks of the question.

(3) Draw neat and labelled diagrams whenever necessary.

**1** Write detailed note on : (any **two**) **18**

(a) Give an electronic structure of carbon. Describe its various forms and comment upon its biological importance.

(b) Define chromatography. Explain ion exchange chromatography and its application.

(c) Describe autoradiographic technique and its application.

**2** Explain in detail (anay **two**) **18**

(a) Radiation penetration and its effect.

(b) Construction and functioning of scintillation counter

(c) Atoms and subatomic particles.

**3** Describe any **two** of the following : **18**

(a) Design and working of GM counter

(b) Define isotope and isobar. Explain isotope in detail and summarised their similarities and differences

(c) Define cosmic rays. Explain their origin, detection and properties.

**4** Write short notes (any **three**) **16**

(a) Quantum number

(b) Dual nature of electron

(c) Linkage and bonds

(d) EM spectrum.

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