



A-1672

**B. Sc. / M.Sc. (Integrated Biotechnology Course)
(CBCS) (Sem. III) Examination
March/April – 2015
Instrumentation & Techniques - I
(Core Course - I) (New Course)**

Time : 2 Hours]

[Total Marks : 50

Instructions : (1)

नीचे दशांशों में निशानोंवाणी विगतो उत्तरवही पर अवश्य लखवी.
Fillup strictly the details of signs on your answer book.

Name of the Examination :

B. Sc. / M.Sc. (Integrated Biotech. Course) (CBCS) (Sem. III)

Name of the Subject :

Instrumentation & Techniques - I (Core Course - I) (New)

Subject Code No. : Section No. (1, 2,.....) :

Seat No. :

Student's Signature

- (2) Figures to the right indicate full marks.
(3) Draw neat and labeled diagrams wherever necessary.

1 Answer following questions in short. 10

- (1) What do you meant by centrifugal force?
- (2) Define transmittance with mathematical expression.
- (3) State Beer's law.
- (4) Give definition of Svedberg unit.
- (5) Write the principle of dark field microscopy.
- (6) Define : Reference electrode
- (7) Give various units of radioactivity.
- (8) Define: Scintillation
- (9) What is the meaning of numerical aperture?
- (10) Define potentiometry.

2 (a) Describe principles and uses of fluorescence microscopy. 7

OR

- (a) Discuss the principle of phase contrast microscopy with 7 applications.

- (b) Write the applications of radioisotopes. (any six) **6**
- OR**
- (b) Give the advantages of Scintillation counter over Geiger-Muller Counter. **6**
- 3** (a) Write a detailed note on phosphorescence. **7**
- OR**
- (a) Discuss the laws of photometry in detail. **7**
- (b) Write a detailed note on construction, working and applications of calomel electrode. **6**
- OR**
- (b) Write a note on biomembrane electrode. **6**
- 4** Answer any two of following. **14**
- (a) Explain the basic principle of sedimentation.
- (b) Give the detailed information of different types of rotors.
- (c) How will you determine the molecular weight using ultra. centrifugation ?
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