



SB-3488

M. Sc. (Sem. II) (Self Finance) Examination

March / April – 2011

Chemistry : Paper - III

(Physical Chemistry)

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

नीचे दशांशविक निशानीवाणी विगतो उत्तरवही पर अवश्य लभवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="checkbox"/> M. Sc. (Sem. II) (Self Finance)	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="checkbox"/> Chemistry : Paper - III	<input type="text"/>
Subject Code No. : <input type="text" value="3"/> <input type="text" value="4"/> <input type="text" value="8"/> <input type="text" value="8"/>	<input type="text"/>
Section No. (1, 2,.....) : <input type="text" value="Nil"/>	
Student's Signature	

(2) Attempt all **four** questions.

(3) Figures to the **right** indicate **full** marks.

1 Answer any **three** of the following :

18

- Write a short note on breeder reactor.
- Describe principle and working of Gas ionization detector.
- Explain the various components of nuclear reactor.
- Explain neutron activation analysis.

2 Answer any **three** of the following :

18

- Write note on catalysis giving the type and characteristics.
- Define the terms : micelles, krafft point, cloud point and HLB.
- Write a note on nano technology and its applications.
- Write a note on emulsions and microemulsions.

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[Contd...

- 3** Answer any **three** of the following : **18**
- (a) Explain the method of determination of activity coefficient by solubility measurements.
 - (b) Define corrosion and corrosion inhibitors ? How to prevent corrosion ?
 - (c) Show relation between thermodynamic dissociation constant and dissociation function for an electrolyte.
 - (d) Explain the determination of activity coefficient from cell EMF.
- 4** Answer any **three** of the following : **16**
- (a) Give classification of surfactants giving examples. Explain micelle formation.
 - (b) Explain reverse micelles and solubilization.
 - (c) Write a note on G.M. counter.
 - (d) Discuss Debye-Huckel limiting law for activity coefficient of electrolyte.
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