



KC-6015

B. E. - I (Sem. I & II) Examination
November / December – 2012
Engineering Chemistry

Time : 3 Hours]

[Total Marks : 100

Instructions :

(1)

नीचे दृष्टावेक निशानीवाणी विगतो उत्तरवडी पर अवश्य दजवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="B. E. - 1 (SEM. 1 & 2)"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="ENGINEERING CHEMISTRY"/>	<input type="text"/>
Subject Code No. : <input type="text" value="6"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="5"/>	Section No. (1, 2,.....): <input type="text" value="NIL"/>
Student's Signature	

- (2) Give reactions and neat diagrams wherever necessary.
(3) Question 1 and 4 are **compulsory** and carries 20 marks each.
(4) Questions 2, 3 and 5, 6 are of 15 marks each.

1 (a) Fill in the blanks : 10

- (i) _____ is used to improve strength of cement.
(ii) _____ process is costly than wet process.
(iii) To protect metal from corrosion _____ are used.
(iv) Compounding is utilized to increase the _____ of polymer.
(v) _____ is material possessing adhesive and cohesive properties.
(vi) In lime soda process Ca and Mg precipitates as _____ and _____.
(vii) During electrochemical corrosion, the corrosion occurs at the _____ part.
(viii) Desalination of Brackish water is carried out by _____

- (b) Explain Cold Lime soda process in detail. 5
(c) Explain electro chemical corrosion in detail. 5

- 2** Answer any **three** : **15**
- (i) Explain Stress corrosion and its control
 - (ii) Explain Setting of portland cement
 - (iii) Explain the domestic water treatment
 - (iv) Explain the different form of Boiler corrosion.
 - (v) Describe the process of Galvanizing.
- 3** Answer any **three** : **15**
- (i) Explain the method to determine the hardness in water.
 - (ii) Describe Ion Exchange method in detail for the purification of water.
 - (iii) Explain Wet corrosion
 - (iv) Explain different techniques of decaying of cement.
 - (v) Give overview of organic coatings.
- 4** (a) Fill in the blanks : **10**
- (i) _____ indicator shows color change in basic medium.
 - (ii) Addition polymerization is carried out with _____ molecules.
 - (iii) Nylon-6,6 is prepared from _____ & _____.
 - (iv) An example of natural abrasive is _____
 - (v) Rain water is probably best form of _____ water.
 - (vi) Ozone gas in atmosphere deplets due to _____ gas.
 - (vii) Linear polymer of phenol - formaldehyde is called _____.
 - (viii) Thermosetting resins are formed by _____ polymerisation.
 - (ix) Full form of BOD is _____.

- (b) Short answer questions : 10
- (i) Write the structure of, Isoprene
 - (ii) Define Specific Conductance.
 - (iii) Principle of Silver Electrode
 - (iv) Type of pollutants of Air
 - (v) Write in short about Ozone depletion.
- 5** Answer any **three** : 15
- (i) Define Soil pollution and its causes
 - (ii) Write a note on Abrasive materials
 - (iii) Write different technique for the pollution control
 - (iv) Explain Compounding.
 - (v) Explain mechanism of polymer by anionic polymerisation.
- 6** Answer any **three** : 15
- (i) Explain Global warming.
 - (ii) Give in detail the different types of Refractories.
 - (iii) Explain Potentiometric titration in detail.
 - (iv) Write in detail Ozone depletion.
 - (v) Write in brief about
 - (a) Semiconductors
 - (b) Vulcanization of rubber
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