

MODEL QUESTION PAPER

DF4

I Semester DIPLOMA Examination, August 2011 ENGINEERING CHEMISTRY – I

Time: 3 Hours

Max. Marks: 75

GROUP A : Answer any three questions.

- Q.1 Define Bronsted and Lowry's acid and bases. Give two examples for each.
- Q.2 Explain the industrial application of colloids.
- Q.3 Explain electrochemical corrosion by concentration cell formation.
- Q.4 What are the two types of solutions? Explain with examples.
- Q.5 How is corrosion prevented by Cathodic protection methods?

GROUP B : Answer any three questions.

- Q.6 Write short note on heterogeneous catalysis.
- Q.7 Explain any three properties of colloidal solution.
- Q.8 Explain the methods of control of air pollution.
- Q.9 Which process is used in the purification of drinking water? Explain.
- Q.10 Write any three principles of green chemistry.

GROUP C: All Questions are Compulsory.

Q.11 Fill in the blanks

- (i) _____ is a process of coating one metal over a another metal by principles of electrolusis.
- (ii) A coating of chromium over the base metal by principles of electrolysis is called _____ plating.
- (iii) Natural gas is also called marsh gas due to the presence of _____.
- (iv) The organic waste sis removed by _____ treatment.
- (v) $\text{PH} + \text{POH} = \text{_____}$.

Q.12 Multiple choice question.

- (i) The rate of change of viscosity of a lubricating oil with temperature is called as _____.
- | | |
|-----------------------|---------------------|
| (a) Velocity index | (b) Viscosity index |
| (c) Temperature index | (d) None of these |
- (ii) The process of union of two or more monomers is known as, _____.
- | | |
|--------------------|---------------|
| (a) Vulcanization | (b) Mounting |
| (c) Polymerization | (d) Oxidation |
- (iii) Most electronegative element is _____.
- | | |
|--------------|--------------|
| (a) Nitrogen | (b) Oxygen |
| (c) Chlorine | (d) Fluorine |
- (iv) Hardness of water is due to _____.
- | | |
|---------------------|---------------------|
| (a) Na and Ca salts | (b) Na and Cl salts |
| (c) Ca and Mg salts | (d) all of these |
- (v) Which of the following is main constituent of paint?
- | | |
|-------------|--------------|
| (a) Varnish | (b) Enamels |
| (c) Pigment | (d) Bleeding |

Q.13 True or false

- (i) Caustic embrittlement is type of corrosion by using alkaline water in boiler.
- (ii) Mica is used as solid Lubricant.
- (iii) The unwanted Substance that causes pollution is called a pollutant.
- (iv) Ozone layer is very important for the existence of life on the earth.
- (v) Smog is combination of smoke & fog.
