VIT®
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

SCHOOL OF ADVANCED SCIENCES
B. Tech./M.Tech – Winter Semester 2018-19
Continuous Assessment Test–II, March 2019

Course Code	**: CHY1701**	**Duration**	**: 90 min.**
Course name	**: Engineering Chemistry**	**Max. Marks**	**: 50**
Semester	**: Winter Semester 2018-19**	**Slot**	**: A1+TA1**

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Instructions: Students are allowed to carry their self-hand written note books/papers to the examination hall.

Answer ALL the Questions. (10 x 5 = 50M)

1. **You are said to dip three Fe wires in (a) NaOH solution (b) dilute HCl solution (c) 10% brine solution. Justify the relative rate of corrosion in three different solutions.**
   Ans. Highest rate of corrosion in dil. HCl solution

2. **Illustrate how to prevent the corrosion of (i) buried petrol tank in a gas station and (ii) water heater in the bathroom in detail.**

   Ans.(i) impressed current cathodic protection
   (ii) Sacrificial anodic protection

3. **Which type of alloying will you prefer for making of gear axles of motor vehicles? A metal of atomic number 29 is mixed with another metal of atomic number 30 to be alloyed, will it follow Hume-Rothery rule?**

   Ans. Ferrous alloys
   Yes, Hume-Rothery rule (Cu-Zn)

4. **Ramesh has a pair of regular lens eye glasses. Now he wants to coat the lens with aluminium. How can he achieve this?**

   Ans. PVD

5. **What is the method used for protecting cell phone towers from corrosion? Explain the process with diagram.**