Seat No.:	Enrolment No.
Deat 110	Emonient 10.

 $\frac{GUJARAT\ TECHNOLOGICAL\ UNIVERSITY}{BE\ -\ SEMESTER-\ 1^{st}\ /\ 2^{nd}\ EXAMINATION\ (New\ Syllabus)\ -\ WINTER\ 2013}$

Subj	ect C	ode: 2110001 Date: 26-12-2013	
-		ame: Physics	
Time Instru		30 am – 01:00 pm Total Marks: 70	
Q.1	1. Q 2. N	Question No. 1 is compulsory. Attempt any four out of remaining six questions. Make suitable assumptions wherever necessary. Tigures to the right indicate full marks. Objective Question	
	(a)		07
	 2. 	In detection of C and H, the lime water turns milky due to presence of (a) Carbon (b) Hydrogen, (c) Calcium Which of the following reagent is used for detection of Carbon and Hydrogen? (a) copper oxide (b) Calcium oxide (c) Potassium Iodide.	
	3.	Phenol formaldehyde resin is also known as (a) Bakelite (b) orlon (c) Malamine	
	4.	Which of these element can be found by lessaigne test? (a) Nitrogen (b) oxygen (c) hydrogen Which Indicator is used for complexometric titration?	
	 6. 	Which Indicator is used for complexometric titration? (a) EDTA (b) EBT (c) phenolphthalein Substance which are volatile and insoluble in water are purified by	
	7.	(a) Steam distillation (b) Crystallization (c) fractional distillation Brass is an alloy of (a) Cu and Zn (b) Sn and Zn (c) Fe and Zn	
	(b)		07
	1.	Permanent hardness is due to the presence of	07
	2.	(a) Chlorides and sulphides (b) carbonate and bicarbonates (c) both (a) and (b) Which metal catches fire when comes in contact with water? (a) Na (b) K (c) Hg	
	3.	Which of the following process is to be carried out when two or more substances are to be separated? (a) Crystallization (b) Fractional crystallization (c) sublimation	
	4.	The process of separating volatile solid from a non volatile solid is called as (a) Sublimation (b) Filteration (c) Crystallization	
	5.	In purification of Petroleum, Sulphuric acid is used to separatecomponent. (a) Acidic (b) Basic (c) Both acidic and basic	
	6.	In an electrochemical cell, the current flow from to pole in the external circuit. (a) negative to positive (b) positive to negative (c) through the electrolyte.	
	7.	The alloy formed by Copper and tin is known as (a) Bronze (b) Brass (c) Steel	
Q.2	(a)	Define softening of water and explain the cold lime soda process with a neat schematic diagram.	07
	(b)	What is Corrosion? Discuss the different methods to protect metals from corrosion.	07

Q.3	(a)	What are the constituents of Portland cement? Discuss the mechanism of setting and hardening of Portland cement.	07
	(b)	What is proximate analysis and ultimate analysis of coal. Discuss its significance.	07
Q.4	(a)	What are refractory? Classify the different types of refractory and state its properties.	07
	(b)	What are alloys? Give the characteristics and classification of alloys.	07
Q.5	(a)	What is vulcanization of rubber? Discuss the different application of rubber.	07
	(b)	Discuss the refining of crude oil with the help of a suitable diagram of fractional distillation column.	07
Q.6	(a)	Give the preparation and uses of Polystyrene and Nylon.	07
2.5	(b)	What are enzymes? State its characteristics.	07
Q.7	(a)	Explain the manufacturing process of ethyl alcohol by fermentation process.	07
	(b)	What is desalination of Brackish water? Explain the method of electrodialysis.	07
