

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-IV(New) EXAMINATION – SUMMER 2016

Subject Code:2140501**Date:08/06/2016****Subject Name:Physical And Inorganic Chemistry****Time:10:30 AM to 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
Q.1	Define the following	14
	1 Endothermic reaction	
	2 Triple point	
	3 Covalent bond	
	4 Nernst's Equation	
	5 Type of blasting fuses	
	6 Full form of HPLC	
	7 Components	
	8 Heat of transition	
	9 Alloy	
	10 Degree of freedom	
	11 Unit of rate	
	12 Full form of DTA	
	13 Propellant	
	14 Bond fission	
Q.2	(a) What do you understand by salt bridge ?	03
	(b) Give Handerson-Hesseblatch equation for acidic and basic buffer.	04
	(c) What is Electrochemical cell ? Explain with diagram and net cell reaction of galvanic cell.	07
	OR	
	(c) Experimental measurement of heat of reaction by Bomb calorimeter.	07
Q.3	(a) Derive derivation of Gibb's /phase.	03
	(b) Discuss with suitable example of Ionic bond and Metallic bond.	04
	(c) Differentiate between one component and two component system.	07
	OR	
Q.3	(a) Derive Pseudo-order reaction.	03
	(b) What do you understand by Fission and Fusion reaction ?	04
	(c) Discuss about breeder reactor with nuclear waste disposal.	07
Q.4	(a) Write the important properties of steel.	03
	(b) What do you understand by Hess's law of constant heat summation and its applications?	04
	(c) Explain Potentiometric analysis with suitable example.	07

OR

- Q.4** (a) Write the applications of Conductrometry. **03**
(b) Explain HPLC with suitable diagram. **04**
(c) Describe extraction and purification of metal with suitable example. **07**
- Q.5** (a) Which type of precautions take during storage of explosives ? **03**
(b) Explain basic principle used in flame photometry. **04**
(c) Explain rocket propellant and write properties of good propellant. **07**

OR

- Q.5** (a) Explain with example of Hydrogen bridge. **03**
(b) Discuss rate of reaction and molecularity of reaction. **04**
(c) Classification, preparation and uses of explosives. **07**
