Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-VII EXAMINATION - SUMMER 2016** 

Subject Code:172107 Date:0		Code:172107 Date:05/05/202	5/05/2016	
Tiı	•	Name:Surface Coating Technology (Department Elective - I) 2:30 PM to 05:00 PM Total Marks:	<b>70</b>	
IIIS	1. 2. 3.	Attempt all questions.  Make suitable assumptions wherever necessary.		
Q.1	(a)	What is the scope of surface coating technology in Engineering field? Discuss	07	
	<b>(b)</b>	the property requirement of coating.  Compare Sand blasting and Shot blasting methods of surface preparation.  Briefly discuss the merits & demerits of this processes.	07	
Q.2	(a) (b)	What is the principle of Anodizing? Explain anodizing process on Aluminium.  What do you mean by Chemical Conversion Coating? Explain Chromating method	07 07	
		OR		
	<b>(b)</b>	Classify Phosphating Process and explain the Theory of phosphating.	07	
Q.3	(a)	Describe Electroplating of Copper. Explain factors affecting	07	
	<b>(b)</b>	Electrodeposition Explain Galvanizing Process and list advantages & application.	07	
Q.3	(a)	OR Write the operation, mechanism, advantages and disadvantages of Hot dipping	07	
Q.S	(a)	process.	07	
	<b>(b)</b>	Explain mechanism of Sputtering technique. Enlist applications.	07	
Q.4	(a)	Explain Chemical vapor deposition technique with suitable sketch. Compare it	07	
	<b>(b)</b>	with Physical vapor deposition What is Passivation? Why it is required for Stainless Steels.  OR	07	
Q.4			07	
	<b>(b)</b>	Characteristics of this process? Mention factors affecting penetration depth.	07	
Q.5	(a)	What is carburizing? Mention different carburizing processes and Discuss the	07	
Q.	( <b>u</b> )	Gas carburizing process in detail.		
	<b>(b)</b>	Discuss plasma spray coating technique with its advantages over other techniques  OR	07	
Q.5	(a)	Compare the Chromizing and Aluminizing diffusion coating methods	07	
	<b>(b)</b>	Explain Principle of electrolytic plating process and compare it with Electro less plating. Also mention Engineering components on which these plating is applied and why?	07	