Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VII • EXAMINATION – WINTER 2013

Subject Code: 172107 **Date: 03-12-2013**

Subject Name: Surface Coating Technology

Time: 10:30 TO 01:00 **Total Marks: 70**

Instructions:

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

Q.1	**(a)**	What is the principle of anodizing? Explain anodizing process.	**07**
	(b)	Explain the process of physical vapour deposition.	**07**
Q.2	**(a)**	Classify phosphating and explain the theory of phosphating.	**07**
	(b)	Write note on phosphating tests.	**07**
		OR	
	(b)	What are different diffusion coating techniques? Explain carburising and carbonitriding.	**07**
Q.3	**(a)**	Discuss chromating process and properties of coating.	**07**
	(b)	Explain the process of galvanising and compare it with tinning.	**07**
		OR	
Q.3	**(a)**	What is pickling and its need? Explain pickling process.	**07**
	(b)	Discuss the process of chemical vapour deposition with advantages over other process.	**07**
Q.4	**(a)**	Write note on vapour phase degreasing and its advantages.	**07**
	(b)	Discuss plasma spray coating technique with its advantages over other techniques.	**07**
		OR	
Q.4	**(a)**	What is the scope of surface coating technology? Discuss the property requirement of coating.	**07**
	(b)	Explain method and mechanism of sputtering. Give its applications.	**07**
Q.5	**(a)**	Discuss mechanism of ion implantation technique and its application.	**07**
	(b)	Explain the process of shot blasting with its advantages.	**07**
		OR	
Q.5	**(a)**	Explain electrolytic plating process using example and compare to electroless plating.	**07**
	(b)	What is the need for surface preparation? Explain sand blasting and shot peening processes.	**07**

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