Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-VII(OLD) • EXAMINATION – WINTER 2016

Subject Code: 172107

Subject Name: Surface Coating Technology (Department Elective - I)

Time: 10:30 AM to 01:00 PM

Instructions:

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

Q.1	(a)	Explain the importance of surface engineering. Discus the basic aspects for the selection of a particular surface preparation method.	07
	(b)	What is anodizing? Explain aluminum anodizing process.	07
Q.2	(a) (b)	Classify phosphating and explain the theory of phosphating. Write note on phosphating tests.	07 07
	(b)	OR Compare the Shot blasting and Hydroblasting surface preparation processes.	07
Q.3	(a) (b)	Explain Galvanizing Process and list advantages & application. Discuss chromating process and properties of coating. OR	07 07
Q.3	(a)	Discuss the process of chemical vapour deposition with advantages over other process.	07
	(b)	What are pickling and its need? Explain pickling process.	07
Q.4	(a) (b)	What is abrasive blasting? Explain different types in detail. Discuss plasma spray coating technique in detail with its application OR	07 07
Q.4	(a) (b)	What is carburizing? Briefly discuss solid carburizing process. What is the scope of surface coating technology? Discuss the property requirement of coating.	07 07
Q.5	(a) (b)	Discuss the sputtering technique. Discuss ion implantation technique in detail with its application.	07 07
		OR	
Q.5	(a) (b)	Critically compare the Boronizing and Boronitriding processes. Explain Carbonitriding process. What is penetration depth? Mention factors affecting penetration depth.	07 07
