

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**
