Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VI (NEW) - EXAMINATION – SUMMER 2018

Subject Code: 2163901 **Date: 28/04/2018**

Subject Name: Coating technology

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.**

Q.1	**(a)**	Write the importance of metal coating and polymer.	**03**
	(b)	Give the merits and demerits of spray and dip coating.	**04**
	(c)	Write short note on Surface engineering.	**07**
Q.2	**(a)**	How wear occur?	**03**
	(b)	How can we measure the thickness of coating? Explain any one technique in short.	**04**
	(c)	Explain the term Rheology and write it's important in coating technology.	**07**
		OR	
	(c)	Explain the SEM.	**07**
Q.3	**(a)**	Write advantage of antifriction coating.	**03**
	(b)	Give the difference between alloying and cladding.	**04**
	(c)	Explain the wetting with surface energy equation and neat diagram.	**07**
		OR	
Q.3	**(a)**	Give the advantage and disadvantage of electroplating.	**03**
	(b)	Write the faraday's law of Electrolysis.	**04**
	(c)	Write short note on electroplating With neat diagram.	**07**
Q.4	**(a)**	Write the advantage of PTFE coating.	**03**
	(b)	Define metal coating and non-metallic coating.	**04**
	(c)	Write the full form of EPD and explain with neat diagram.	**07**
		OR	
Q.4	**(a)**	Write the importance of Ion-implation in electronic industries.	**03**
	(b)	Explain any one technique for metallic coating with example.	**04**
	(c)	Write the two suitable SOL-GEL coating techniques.	**07**
Q.5	**(a)**	Give the difference between Electroplating and EPD.	**03**
	(b)	Write short note on Newtonian Fluid and Non Newtonian Fluid.	**04**
	(c)	Explain laser Cladding with neat diagram.	**07**
		OR	
Q.5	**(a)**	Give the advantage and disadvantage of Ion beam implation.	**03**
	(b)	Why Electroplating is important in metal coating. (Write four point in brief).	**04**
	(c)	Explain the electron beam hardening.	**07**

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