Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

## BE - SEMESTER- IV(NEW) EXAMINATION - SUMMER 2015

	•	Code: 2142503 Date:26/05/201	15
Ti	me: 1 truction 1. 2.	Attempt all questions.  Make suitable assumptions wherever necessary.	70
	3.	Figures to the right indicate full marks.	
Q.1	(a) (b)	<ul><li>(i) Explain in detail generalized measurement system.</li><li>(ii) What is the metrology? Discuss need of inspection.</li><li>List different force measurement instruments and explain load cells in detail.</li></ul>	04 03 07
Q.2	(a) (b)	Explain working principle of LVDT with its advantages and disadvantages.  What do you mean by pyrometry? List all types of pyrometers and explain any one of them.	07 07
		OR	
	<b>(b)</b>	Write the cold junction compensation and compensation cables.	07
Q.3	(a)	Explain the working principle of vernier caliper with neat sketch and detail each part.	07
	<b>(b)</b>	Explain gear tooth terminology.	07
O 2	(a)	<b>OR</b> Explain with a sketch the three wire method of measuring the effective diameter	07
Q.3	(a)	of a screw thread.	U/
	<b>(b)</b>	Explain sine bar and sine center in brief with neat sketch.	07
Q.4	(a)	Explain the construction and working of Talysurf surface roughness measuring instrument with neat sketch.	07
	<b>(b)</b>	<ul> <li>(i) Explain different terms related to screw thread.</li> <li>(ii) State the factor affecting surface texture.</li> </ul>	04 03
		OR	
Q.4	(a) (b)	Discuss the methods of measuring surface finish briefly. Explain Tomlinson surface roughness tester with principle and neat sketch.	07 07
Q.5	(a) (b)	Explain co-ordinate measuring machine in detail.  Explain Profile projector in detail.	07 07
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Q.5	(a) (b)	Explain Tool Maker's microscope in briefly. Enlist various mechanical comparators and explain any one of them in detail.	07 07

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