		SET-A	**Total Pages: 1**
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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

SECOND SEMESTER (R) M Tech. DEGREE EXAMINATION, May 2024

Discipline: MECHANICAL ENGINEERING

Course Code & Name: 222EME041 **COMPUTER AIDED MEASUREMENT**

Max. Marks: 60		Duration: 2.5 Hours

PART A

		Answer all questions. Each question carries 5 marks	Marks
	1	Explain generalised measuring system	(5)
	2	What is a passive transducer? Give examples. How does it different from an active transducer	(5)
	3	Describe proximity sensors and its applications	(5)
	4	Explain basic working principle of any one radiation sensors	(5)
	5	Write short note on the working principle of magnetic sensors	(5)

PART B

Answer any 5 questions. Each question carries 7 marks

	6	Explain about different calibration procedures	(7)
	7	What are three major classes of digital displacement transducer? Draw diagrams of each of them. Discuss their relative merits and demerits.	(7)
	8	With the aid of neat sketches explain briefly any two radiation sensors used for measurement	(7)
	9	Describe the following 1. Thermocouple 2. Thermowells	(7)
	10	Explain about an instrumentation circuit which will produce a linear output with temperature	(7)
	11	With the aid of block diagram explain generalised measuring system	(7)
	12	Define dynamic system response of a measuring system and explain 1. Amplitude response 2. Phase response 3. Delay or rise time and 4. Bandwidth of frequency response	(7)