APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
Scheme for Valuation/Answer Key
Scheme of evaluation (marks in brackets) and answers of problems/key
SEVENTH SEMESTER B.TECH DEGREE EXAMINATION, DECEMBER 2018
Course Code: ME407
Course Name: MECHATRONICS

Max. Marks: 100   Duration: 3 Hours

PART A
Answer any three full questions, each carries 10 marks.

			Marks
1	a)	Basic principle 2	(2)
	b)	Schematic and working of thermopile 2, connecting thermocouple in series to increase sensitivity 2	(4)
	c)	Any noncontact method explanation 2 diagram 2	(4)
2	a)	Diagram-4	(8)
		Explanation-4	
	b)	Each example-0.5 marks	(2)
3	a)	Two applications with reason 2	(2)
	b)	Block diagram 2, Details of each component 2	(4)
	c)	Schematics 2 explanation 2	(4)
4	a)	Difference 2	(2)
	b)	Complete functional schematic diagram 4 explanation 4	(8)

PART B
Answer any three full questions, each carries 10 marks.

5	a)	Sketch-3	(6)
		Explanation-3	
	b)	Each method-2 marks each	(4)
6		Sketch-5	(10)
		Explanation-5	
7	a)	Diagram 3 explanation 3	(6)
	b)	Compression and tension preloading 2 diagrams 2	(4)
8	a)	Schematic of each logic 1 each	(4)
	b)	Any one significance 2	(2)
	c)	Logic 2 explanation 2	(4)

PART C
Answer any four full questions, each carries 10 marks.

9	a)	Diagram-4 operation 4	(8)
	b)	Any two advantages 2	(2)
10	a)	3 marks each	(6)
	b)	Any 2 methods: 2 marks each	(4)
11	a)	Sketch – 3 marks, Explanation – 2 marks	(5)
	b)	Diagram – 2 marks, Explanation – 1 mark	(3)
	c)	Two requirements – 2 × 1 = 2 marks	(2)
12	a)	Block diagrams – 3 marks, Explanation of each block and working of the system – 3 marks	(6)
	b)	Two techniques – 2 × 1 = 2 marks	(2)
	c)	Logically correct definition-2	(2)
13	a)	Each definition-(2 marks) x 2, Histogram use -3	(7)
	b)	1 Mark each	(3)
14		Schematic sketch of the system-3 logically correct ladder diagram-4 Explanation-3	(10)

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