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 (S), MAY 2019
Course Code: EC465
Course Name: MEMS

Max. Marks: 100   Duration: 3 Hours

PART A
Answer any two full questions, each carries 15 marks.
Marks

1	a)	Five characteristics each - 10 marks	(10)
	b)	Derivation 5 marks	(5)
2	a)	Product name – 1 marks, expln- 2 marks , figure – 2 marks	(5)
	b)	Expln(6 marks), figures – 2 marks,, relevance of k – 2 marks	(10)
3	a)	Exapln – 3 marks -, fig – 2 marks	(5)
	b)	Lorentz force – 3 marks , expn – 4 marks , fig -3 marks	(10)

PART B
Answer any two full questions, each carries 15 marks.

4	a)	Constraints in micro fluidics (5 marks), pumping scheme – 2, example with figure – 3marks	(10)
	b)	Three properties – 5 marks	(5)
5	a)	Expln – 3 marks, figure (application) – 2 marks	(5)
	b)	Expln – 4, fig –4 marks, chemicals – 2 marks	(10)
6	a)	Expln – 3 marks, figure 2 marks	(5)
	b)	Derivation with relevant expressions – 10 marks	(10)

PART C
Answer any two full questions,each carries 20 marks.

7	a)	Expln – 5 marks	(5)
	b)	Five point – 5 marks	(5)
	c)	Definition of Biomems (1 marks), Challenges (6 marks) , Appln (3 marks)	(10)
8	a)	DRIE & Plasma expn with figure 5 marks each	(10)
	b)	Anodic &Silicon Fusion Bonding - expn with figure 5 marks each	(10)
9	a)	Expln – 10 marks	(10)
	b)	Two applns with figs 5 marks each	(10)

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