

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Scheme for Valuation/Answer Key

Scheme of evaluation (marks in brackets) and answers of problems/key

EIGHTH SEMESTER B.TECH DEGREE EXAMINATION, MAY 2019

Course Code: AE466

Course Name: INDUSTRIAL ROBOTICS

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any two full questions, each carries 15 marks.

		Marks
1	a) Forward kinematics (2.5 marks) Inverse kinematics (2.5 marks)	(5)
	b) Diagram (3 marks) Explanation (7 marks)	(10)
2	a) Differences with explanations (5 marks)	(5)
	b) Explanation (6 marks) Diagram (4 marks)	(10)
3	a) Definitions (2 marks+2.5 marks+2.5 marks)	(7)
	b) Explanation (5 marks) Diagram (3 marks)	(8)

PART B

Answer any two full questions, each carries 15 marks.

4	a) At-least 5 points(5x1=5 marks)	(5)
	b) Any 3 types(3x3=9 marks) Need of Actuator in robotics-1 mark	(10)
5	a) Figure-2 marks Explanation-3 marks	(5)
	b) Figure-5marks explanation-5marks	(10)
6	a) Explain any 3 methods:- Gears, Power screws etc.(7 marks)	(7)
	b) (i)Stamp Pressing Explanation-4 marks (ii)Plastic Moulding Explanation-4 marks	(8)

PART C

Answer any two full questions, each carries 20 marks.

7	a) Two differences (2.5+2.5)	(5)
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- b) Concept of three modes, monitor mode(1), run mode or execute mode(2) and editor mode(2) (5)
- c) Tree- 6 marks (10)
Table -2 marks
Explanation- 2 marks
- 8 a) Explanation with definition-5 marks (5)
b) Definition-2 marks (5)
Explanation-3 marks
- c) Robot Centred Work cell, In-line Robot Cell-Mobile robot cells(1 mark) (10)
Explanation of each techniques with figures(3+3+3)
- 9 a) Any 5 techniques with proper description (5* 2 marks) (10)
b) Explanation- 10 marks (10)

