Reg No.:_____ Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

SEVENTH SEMESTER B.TECH DEGREE EXAMINATION, DECEMBER 2018

Course Code: MR401

Course Name: ADVANCED AUTOMATION SYSTEMS

Max. Marks: 100 Duration: 3 Hours

PART A

Answer all questions, each carries 5 marks. Marks

1		Write down the limitations of manufacturing plants	(5)
2		Write a short note on discrete control system?	(5)
3		Explain type 3product variety with example?	(5)
4		Briefly explain cellular manufacturing	(5)
5		Define machine vision? List the benefits of machine vision?	(5)
6		Describe about contact inspection techniques	(5)
7		Briefly describe flexible manufacturing system	(5)
8		List out the functions of material handling and storage systems in an FMS	(5)

PART B

Answer any three full questions, each carries 10 marks.

9		Distinguish between continuous and batch production in process and discrete manufacturing industries?	(10)
10		Define automation? Explain the different advanced automation functions in detail.	(10)
11	a)	Briefly explain material handling system.	(5)
	b)	Briefly explain computer control system.	(5)
12		Explain group technology? list the application of group technology.	(10)
13		Explain components of a manufacturing system and explain each component briefly.	(10)

PART C

Answer any two full questions, each carries 15 marks.

14	a)	Define measurement, metrology, accuracy and precision with neat sketches	(8)
	b)	Explain about any two types of optical inspection method	(7)
15		Describe about image acquisition and digitalization, image processing and analysis and interpretation.	(15)
16		Discuss the influence of agile manufacturing in product design, marketing and production operation.	(15)
17	a)	Define FMS	(5)
	b)	Describe about the types of flexible manufacturing systems and mentioned its features	(10)

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