I D NO.	

PRESIDENCY UNIVERSITY, BENGALURU

SCHOOL OF ENGINEERING

Weightage: 40 % Max Marks: 80 Max Time: 2 hrs. 11th May 2018, Friday

ENDTERM FINAL EXAMINATION MAY 2018

Even Semester 2017-18 Course: **MEC 302 COMPUTER INTEGRATED MANUFACTURING** VI Sem. Mechanical

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Instructions:

(i) *Read the question properly and answer accordingly.*
(ii) *Question paper consists of 3 parts.*
(iii) Scientific and Non-programmable calculators are permitted

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Part A

(5 Q x 4 M = 20 Marks)

1. Write a short note on process planning.
2. What is cellular manufacturing? List out the objective of cellular manufacturing.
3. What are the advantages and disadvantages of retrieval type of computer aided process planning.
4. Explain the procedure of Production flow analysis (PFA) method to identify the part families and machine grouping.
5. Briefly explain offline inspection process with schematic diagram.

Part B

(3 Q x 10 M = 30 Marks)

6. Define CAPP, with a block diagram, explain variant type of CAPP system.
7. Explain OPITZ part classification and coding system.
8. With schematic diagram explain in detail i) FMS rectangular layout system ii) FMS open field layout system.

Part C

(2Q x 15 M = 30 Marks)

9. Explain the types of flexible manufacturing system in detail.
10. Apply the rank order clustering technique to the part machine incidence matrix in the following table to identify logical part families and machine group. Parts are identified by letters and machines are identified by numericals.

	A	B	C	D	E	F
1	1				1	
2				1		1
3	1	1				
4			1	1		
5		1			1	
6			1	1		1

ID NO:	

PRESIDENCY UNIVERSITY, BENGALURU

SCHOOL OF ENGINEERING

Weightage: 20% Max Marks: 40 Max Time: 1 hr. 28 March Wednesday 2018

TEST – 2 **SET A**

Even Semester 2017-18 Course: **MEC 302 Computer Integrated Manufacturing** VI Sem. Mechanical

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Instruction:

(i) Read the question properly and answer accordingly.

(ii) Question paper consists of 3 parts.

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Part A

(3 Q x 5 M = 15 Marks)

1. Explain the basic component of Numerical control (NC) machine.
2. Clearly give main features of Computer Numerical Control (CNC) machine.
3. What is the importance of higher axes machines in CNC.

Part B

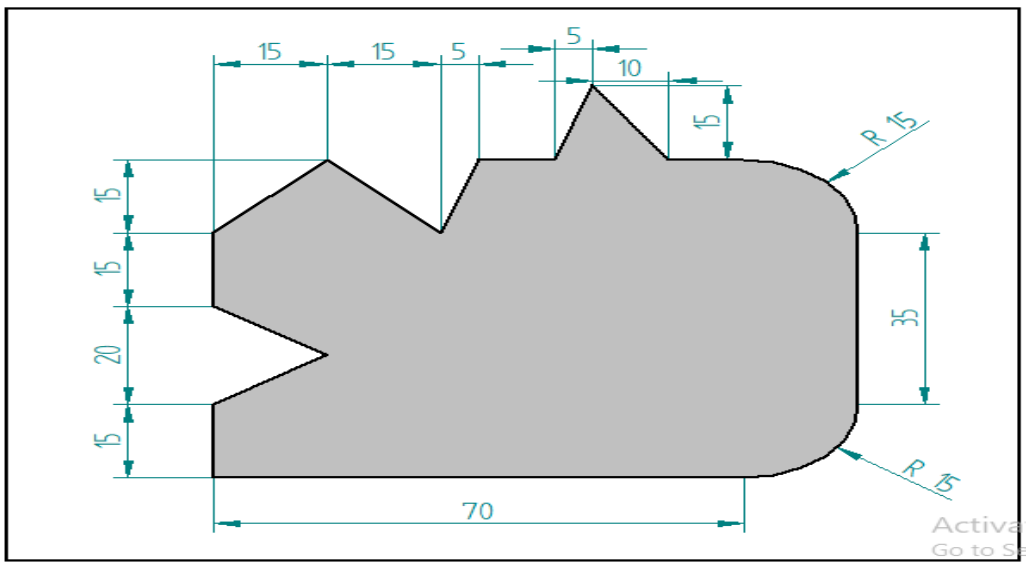
(1Q x 10 M = 10 Marks)

4. Describe CNC machine center and give the classification of CNC machine centers in detail.

Part C

(1Q x 15M = 15 Marks)

5. Write the programme in absolute system for the diagram given below for milling operation with diameter of milling cutter tool as 100 mm, spindle speed 1000 rpm, feed is 10mm/min and depth of cut is 10mm. All the dimensions are in mm.



ID NO:	

PRESIDENCY UNIVERSITY, BENGALURU

SCHOOL OF ENGINEERING

Weightage: 20 % Max Marks: 40 Max Time: 1 hr. 20 Feb Tuesday 2018

TEST – 1

Even Semester 2017-18 Course: **MEC 302 Computer Integrated Manufacturing** VI Sem. Mechanical

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Instruction:

(i) Read the question properly and answer accordingly.

(ii) Question paper consists of 3 parts.

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Part A

(4 Q x 4 M = 16 Marks)

1. Write a short note on a) Programmable Automation b) Flexible Automation
2. Explain the Carousel Assembly system with simple Sketch.
3. What is Buffer storage and give reason for using buffer storage.
4. Briefly explain the function of Escapement and Placement devices.

Part B

(2 Q x 8 M = 16 Marks)

5. Explain any four major elements of Computer Integrated manufacturing system.
6. What are the different techniques used in CIM? Explain any three techniques in detail.

Part C

(1Q x 8 M = 8 Marks)

7. Explain any two automated production line system configuration with simple sketch.