



Name:

Enrolment No:

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2022

Programme Name: B. Tech- Mechanical

Semester : VIII

Course Name : Computer Integrated Manufacturing

Time : 03 hrs.

Course Code : MEPD 4007P

Max. Marks : 100

Nos. of page(s) : 2

Instructions:

- i. Read the instruction carefully before attempting.
- ii. No submission of the Answer Sheet shall be entertained after due time.
- iii. Attempt All Questions. One question from section B and C have an internal Choice.

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	List out the various processes involved in a CIM.	4	CO1
Q 2	Discuss product layout with a block diagram.	4	CO1
Q 3	Explain the subtractive process in RPT with a block diagram.	4	CO2
Q 4	Mentioned the two major tasks that a company undertakes when it implements group technology.	4	CO2
Q 5	Identify and discuss the decisions and details which usually included within the scope of process planning.	4	CO3

SECTION B
(4Qx10M= 40 Marks)

Q 6	Discuss the various key aspects of Rapid Prototyping with the help of RP wheel.	10	CO1
Q 7	Explain three general methods used to classify and code the components of the part family.	10	CO1
Q 8	Summarize the benefits of computer-aided process planning and discuss the Retrieval CAPP and Generative CAPP Systems	10	CO2
Q 9	(a) Identify various components of a Shop Floor and discussed the objectives and benefits of Shop Floor Management.	5+5	CO3

	<p>(b) Identify the techniques used for collecting the data from shop floor</p> <p style="text-align: center;">OR</p> <p>(a) Write a short note on computer-aided cost estimation technique. (b) Identify the various component of computer-aided shop floor control and discussed them with the help of a block diagram.</p>		
SECTION-C (2Qx20M=40 Marks)			
Q 10	<p>(a) Explain concurrent engineering with a suitable block diagram (b) Illustrate the principles of rapid prototyping with a suitable scheme. (c) Summarize the limitation of production flow analysis.</p>	5+10+5	CO2
Q 11	<p>(a) Identify the objectives of material requirements planning. (b) List out benefits of a well-designed MRP system. (c) Identify the different types of inspection methods used in computer-aided inspection & quality control and discussed them.</p> <p style="text-align: center;">Or</p> <p>(a) Compared the benefits of computer-aided design and management systems over manual design and drafting methods. (b) Explain the various objectives of Inventory Management. (c) Identify the techniques used for Inventory Control and discussed them.</p>	5+5+10	CO3