

**P.E.S. College of Engineering, Mandya - 571 401***(An Autonomous Institution affiliated to VTU, Belagavi)***Eighth Semester, B.E. - Industrial and Production Engineering****Semester End Examination; July / August - 2022****Agile Manufacturing**

Time: 3 hrs

Max. Marks: 100

Course Outcomes*The Students will be able to:**CO1: Summarize the role of agile manufacturing in manufacturing sector.**CO2: Analyze the concept of robust design, QDF and strategies used in agile manufacturing.**CO3: Enlighten the concept CAPP cellular manufacturing and role of computer in agile manufacturing.**CO4: Describe the technique skills and factors affecting Agile manufacturing.**CO5: Analyze the role of employee in Agile manufacturing and role of management in implementing agile manufacturing.***Note:** I) PART - A is compulsory. Two marks for each question.

II) PART - B: Answer any TWO sub questions (from a, b, c) for a Maximum of 18 marks from each unit.

Q. No.	Questions	Marks	BLs	COs	POs
I : PART - A		10			
I a.	List the advantages of agile manufacturing.	2	L1	CO1	PO1
b.	List the role of It/Is concept in agile manufacturing.	2	L1	CO2	PO1
c.	What is CAPP?	2	L1	CO3	PO1
d.	List the methods of enhancing technology for machine tool system.	2	L1	CO4	PO1
e.	Explain the role of automation in manufacturing.	2	L1	CO5	PO1
II : PART - B		90			
UNIT - I		18			
1 a.	Discuss the characteristics feature of agile manufacturing.	9	L3	CO1	PO1
b.	With the help of neat sketch, explain the roadmap for Agile manufacturing.	9	L2	CO1	PO1
c.	Explain the conceptual Framework for Agile manufacturing.	9	L3	CO1	PO1
UNIT - II		18			
2 a.	Discuss the principles of integrated product and process development.	9	L2	CO2	PO1
b.	Discuss the role of QFD in Agile manufacturing with suitable example.	9	L3	CO2	PO1
c.	Discuss the IT/IS concept of agile manufacturing.	9	L2	CO2	PO1
UNIT - III		18			
3 a.	Discuss the various CAPP approaches with its implementation strategies.	9	L3	CO3	PO1
b.	Discuss the role of standards in Agile manufacturing.	9	L2	CO3	PO1
c.	Discuss about the strategic option used in Agile manufacturing.	9	L1	CO3	PO1
UNIT - IV		18			
4 a.	Briefly discuss any two design requirement for machine tool systems.	9	L2	CO4	PO1
b.	Discuss the design enhancement guidelines in Agile manufacturing.	9	L3	CO4	PO1

- c. Discuss about the resumption of design requirement geometry with suitable examples.

9 L2 CO4 PO1

UNIT - V**18**

- 5 a. Discuss about the hierarchy in organization structure in implementing agile manufacturing.

9 L2 CO5 PO1

- b. Discuss the nature of management required for implementing Agile manufacturing practices.

9 L3 CO5 PO1

- c. With suitable example, explain the advanced production techniques used in Agile manufacturing organization.

9 L2 CO5 PO1

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