PVP 20

Code: 20ME3404

II B.Tech - II Semester – Regular / Supplementary Examinations
MAY - 2024

MANUFACTURING PROCESSES
(MECHANICAL ENGINEERING)

Duration: 3 hours Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.
2. All parts of Question must be answered in one place.

BL – Blooms Level CO – Course Outcome

			BL	CO	Max. Marks
UNIT-I					
1	a)	Explain any three types of pattern materials used in casting.	L2	CO1	7 M
	b)	Discuss various types of pattern allowances with relevant sketches.	L2	CO2	7 M
OR					
2	a)	Explain cupola furnace with a neat diagram and write its advantages.	L2	CO1	7 M
	b)	Illustrate the hot chamber die-casting process with applications.	L3	CO2	7 M
UNIT-II					
3	a)	Differentiate between hot and cold working processes.	L4	CO1	7 M
	b)	Explain any three types of forging techniques.	L2	CO2	7 M

OR					
4	a)	Explain any two types of Extrusion processes.	L2	CO1	7 M
	b)	Illustrate the spinning and stretch forming with its applications.	L3	CO2	7 M
UNIT-III					
5	a)	Explain the following: i) friction welding ii) explosive welding	L2	CO1	7 M
	b)	Differentiate between MIG welding and TIG welding.	L4	CO2	7 M
OR					
6	a)	Illustrate the thermit welding process and its applications.	L3	CO1	7 M
	b)	Write the principle of Spot welding, its advantages, and disadvantages.	L2	CO2	7 M
UNIT-IV					
7	a)	How do we interpret defects in welding by Dye penetrant test?	L2	CO3	7 M
	b)	What are the advantages of Non Destructive Testing over Destructive Testing?	L2	CO3	7 M
OR					
8	a)	Illustrate the eddy current testing process.	L3	CO3	7 M
	b)	List any four NDT tests. Discuss why Non-Destructive Testing (NDT) methods are used in the welding industry.	L2	CO3	7 M

UNIT-V					
9	a)	How is injection molding done? State its advantages, disadvantages, and applications.	L2	CO4	7 M
	b)	Explain the classification of polymers.	L2	CO4	7 M
OR					
10	a)	Explain step by step procedure how to prepare a ceramic powder?	L2	CO4	7 M
	b)	Write any two applications of powder metallurgy and briefly discuss about i) mixing ii) pressing iii) sintering	L2	CO4	7 M