QP Code: R252B073 | Reg. No | | | | | | | | | | | AY 24

GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY UNIVERSITY, ODISHA, GUNUPUR

(GIET UNIVERSITY)

M.Tech. (Second Semester) Regular Examinations, July – 2025

24MMTPC12002 – Advanced Manufacturing Processes

(Manufacturing Technology)

Time: 3 hrs | Maximum: 60 Marks

Answer ALL questions

(The figures in the right hand margin indicate marks)

PART – A **(2 x 5 = 10 Marks)**

Q.1. Answer ***ALL*** questions	CO #	Blooms Level
a. Explain the term fettling	CO1	K1
b. Differentiate between AJM and AWJM.	CO3	K1
c. How slag inclusions in welding can be avoided?	CO3	K2
d. Explain the phenomenon surface jetting observed during EXW.	CO6	K2
e. Describe hydro forming process.	CO4	K1

PART – B **(10 x 5 = 50 Marks)**

Answer ***ALL*** the questions	Marks	CO #	Blooms Level
2. a. Define Casting? Briefly explain the different types of casting process.	5	CO1	K3
b. Explain with neat sketch friction sir welding process.	5	CO1	K3
(OR)			
c. Explain the factors to control directional solidification.	5	CO3	K4
d. Write a short note on different theories associated with Adhesive Bonding process.	5	CO1	K3
3.a. Give a step-by-step procedure for the cold chamber die-casting process. Also discuss the advantages and limitations of hot and cold chamber processes.	10	CO5	K4
(OR)			
b. Classify different non destructive testing (NDT) methods and explain with a neat sketch Magnetic particle inspection Method.	10	CO2	K4
4.a. Discuss the sequence of operations in hybrid welding.	5	CO1	K4
b. Differentiate between PVD and CVD.	5	CO3	K3
(OR)			
c. Explain how tube welding is done with the help of explosive welding technique. How it is different from diffusion welding.	10	CO5	K4
5.a. Explain the process characteristics of sheet metal forming process	5	CO3	K4
b. Explain magnetic pulse forming process with a neat sketch.	5	CO4	K4
(OR)			
c. Classify various surface treatment process, with neat sketch explain thermal spraying and diffusion coating.	10	CO2	K4
6.a. Explain advantages of hydro chemical forming.	5	CO4	K3
b. Explain formability tests for bulk deformation.	5	CO3	K3
(OR)			
c. Explain Electro chemical machining.	5	CO4	K3
d. Explain plasma arc machining, how it is different from EBM.	5	CO4	K3

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