


Name:			
Enrolment No:			
UPES End Semester Examination, December 2023			
Course: Manufacturing Processes Semester: V Program: B.Tech AM & NT Course Code: MECH3051		Time : 03 hrs. Max. Marks: 100	
Instructions:			
SECTION A (5Qx4M=20Marks)			
S. No.		Marks	CO
Q 1	Provide a list of some of the applications of centrifugal casting.	4	CO2
Q 2	Discuss the similarity and differences in soldering and brazing.	4	CO1
Q 3	Draw a neat sketch identifying the various HAZ zones.	4	CO1
Q 4	Explain the differences and similarities between punching and blanking.	4	CO1
Q 5	Provide a brief overview of the importance of surface finishing in the automobile industry.	4	CO3
SECTION B (4Qx10M= 40 Marks)			
Q 6	Discuss the working principle of TIG welding and the various important parameters that influence the quality of welding	10	CO2
Q 7	Illustrate and explain the various steps involved in investment casting.	10	CO2
Q 8	Give a brief explanation of how to overcome various casting defects.	10	CO4
Q9	Discuss the importance of die casting in automobile industries. OR Identify and discuss the parameters that must be adjusted to vary the heat input and concentration of the arc for welding aluminum components.	10	CO3

SECTION-C
(2Qx20M=40 Marks)

Q 10	Explain how powder metallurgy knowledge can be used to fabricate a circular PZT (lead zirconium titanate) used in ultrasonic applications. Provide a detailed description of each step.	20	CO3
Q 11	Discuss the effects of the various important process parameters in FSW welding. OR Discuss the factors that influence the properties of powder metallurgy products.	20	CO4