GIET UNIVERSITY, GUNUPUR – 765022

B. Tech (Fourth Semester Regular) Examinations, May – 2024

22BMEPC24002 - Manufacturing Science-I

(Mechanical)

Time: 3 hrs Maximum: 70 Marks

(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. Name the steps involved in making a casting	CO1	K2
b. What is meant by grain fineness number?	CO1	K1
c. Define angle of bite in rolling.	CO3	K1
d. Differentiate compound dies and progressive dies.	CO3	K2
e. Analyze the need for rotational moulding in manufacturing plastic Components.	CO4	K4

PART – B **(15 x 4=60 Marks)**

Answer ***ALL*** questions	Marks	CO #	Blooms Level
2. a. Explain the properties required for moulding sand.	7	CO1	K2
b. Describe the operation of a cupola furnace for melting cast iron.	8	CO1	K2
(OR)			
c. Analyze various types of oxy-acetylene flames with sketches.	7	C02	K4
d. Compare TIG and MIG welding processes.	8	CO2	K2
3.a. What are the allowances given while making pattern? Explain.	8	CO1	K2
b. Enumerate the steps in sequence for producing shell moulding.	7	CO1	K4
(OR)			
c. Evaluate the Plasma Arc welding process and write its applications and demerits.	8	CO2	K4
d. Compare and Contrast Brazing and Soldering Process.	7	CO2	K5
4.a. Explain the steps involved in drop forging with neat sketches.	8	CO3	K4
b. Distinguish between wire drawing and tube drawing.	7	CO3	K2
(OR)			
c. Discuss about the application of powder metallurgy.	7	CO4	K2
d. What is an explosive forming? Explain with the sketches.	8	CO4	K2
5.a. Explain with neat sketches of upsetting and drawing down operations.	7	CO3	K3
b. Classify and write notes on various rolling stand arrangement in detail. .	8	CO3	K3
(OR)			
c. Discuss about a few commercial plastics.	7	CO4	K2
d. Write short note on (i) sintering (ii) compacting	8	CO4	K2

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