



R20 Regulation *Subject code: 3P4CD*
TKR COLLEGE OF ENGINEERING AND TECHNOLOGY
 (Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech IV Semester Supplementary Examinations, December 2024

MANUFACTURING PROCESS
(Mechanical Engineering)

Maximum Marks: 70

Date: 10.12.2024

Duration: 3 hours

- Note:
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10X2M=20) Marks)		CO	Bloom Tx
1	What is the difference between pattern and casting?	1	L1
2	What are the advantages of casting process and mention its applications.	1	L1
3	What is the difference between TIG and MIG arc welding?	2	L1
4	Explain DC arc welding.	2	L1
5	Why do properties vary widely in most welding heat affected zones?	3	L1
6	Write about soldering.	3	L1
7	Differentiate blanking and piercing?	4	L1
8	Write about the coining and embossing operations.	4	L1
9	What is forging operation?	5	L1
10	Differentiate drop and press forging	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		CO	Bloom Tx
11	A. Differentiate between pressurized and unpressurized gating systems with reference to the applications. [5M] B. How are the centrifugal casting methods classified? [5M]	1	L2
OR			
12	A. What purpose is served by the risers in sand casting? Explain the principles of design of risers. [5M] B. What are the advantages, limitation and applications of investment casting? [5M]	1	L2
13	With the help of a neat sketch of welding torch explain the oxy acetylene process of welding. [10M]	2	L2
OR			
14	A. What is meant by edge preparation? Show neat sketches of various edge preparations. [5M] B. Explain different forge welding techniques. [5M]	2	L2
15	A. Discuss any one nondestructive testing of welds. [5M]	3	L2

	B. Distinguish soldering and brazing process and also state its applications. [5M]		
	OR		
16	Discuss magneto particle and radiographic inspection testing of welding. [10M]	3	L2
17	A. What are the various roll pass sequences? [5M] B. Explain the sequences used in wire and tube drawing operations. [5M]	4	L2
	OR		
18	Illustrate wire drawing and Tube drawing. [10M]	4	L2
19	What are the various stages encountered in drop forging of lever. [10M]	5	L2
	or		
20	A. What is impact extrusion? [3M] B. Distinguish the forward and backward extrusion process. [7M]	5	L2