BME-104

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Roll No.

B. Tech
Year: 1st, Semester: 1st
Minor Test/Examination 2024-25
Manufacturing Practice Workshop

Time: 2 Hr. **Max Marks: 20**

Note: Answer all Questions

			Marks	CO	BL	PO	PI Code
Q 1.		Attempt any two parts of the following. **(Unit-1 and Unit-2)**					
	a)	What are the desirable properties required for molding sands?	4	2	1	1	
	b)	What is the manufacturing process? Classify the manufacturing processes.	2+2	1	1	1	
	c)	What do you understand by the following terms: (any four) (i) Toughness, (ii) Hardness, (iii) Elasticity (iv) Plasticity, (v) Ductility	1+1+1+1	1	2	1	
Q 2.		Attempt any two parts of the following. **(Unit-1)**					
	a)	Briefly discuss the following: (any three) (i) Grey cast iron, (ii) White cast iron (iii) Malleable CI, (iv) Nodular cast iron	1+1+1	1	1	1	
	b)	Write a brief note about stainless steel? What constitutes such steel to render them Corrosion resistance?	2+1	1	1	1	
	c)	How do you classify Plain carbon steels? Give some applications of each of them	3	1	1	1	
Q 3.		Attempt any two parts of the following. **(Unit-2)**					
	a)	Write the basic steps in the sand casting process? Write the advantages of the casting process.	2+1	2	1	2	
	b)	What is the pattern? Name the various allowances associated with pattern and why they are provided?	1+2	2	1	2	
	c)	Explain different types of casting defects found in the casting processes.	3	2	1	1	

BME-104

Roll No.	2

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B. Tech
Year: 1st, Semester: 1st
Major Test/Examination 2024-25
Manufacturing Practice Workshop
(Mechanical Engineering)

Time: 3 Hr. **Max Marks: 50**

Note: Answer all Questions

Q 1.		Attempt any **Five parts** of the following.	Marks	CO	BL	PO	PI Code
	a)	Discuss the importance of manufacturing science. Define term Manufacturing. Classify the manufacturing processes.	2	1	1	1	1.4.1
	b)	Write the basic steps in the sand casting process? Write the advantages of the casting process.	2	2	1	2	1.4.1
	c)	What are the desirable properties required for moulding sands?	2	2	1	1	1.4.1
	d)	Briefly discuss the following terms:(any two) (i) Grey cast iron (ii) White cast iron (iii) Nodular cast iron	2	1	1	1	1.4.1
	e)	What do you understand by the following terms: (any two) (i) Elasticity (ii) Plasticity (iii) Ductility	2	1	2	1	1.4.1
	f)	What is the pattern? Name the various allowances associated with the pattern and why they are provided.	2	2	1	2	1.4.1
	g)	What is the function of riser in sand casting process?	2	2	1	2	1.4.1
Q 2.		Attempt any **two parts** of the following.					
	a)	Describe the principle of oxyacetylene gas welding. How many types of flames are used for welding?	5	4	1	1	1.4.1
	b)	What is Arc welding? Write its types with neat sketch diagram.	5	4	1	1	1.4.1
	c)	Discuss types of welding joints and welding	5	4	2	2	1.4.1

		positions in Arc welding.					
Q 3.		Attempt any **two parts** of the following.					
	a)	Differentiate between hot working and cold working of metals.	5	3	1	1	1.4.1
	b)	Write notes on: (any two) (i) Rolling process (ii) Forging process (iii) Drawing process	5	3	2	1	1.4.1
	c)	Explain the difference between direct and indirect extrusion processes with the help of explanatory sketches.	5	3	1	1	1.4.1
Q 4.		Attempt any **two parts** of the following.					
	a)	List the various operations which can be performed on centre lathe.	5	5	1	1	1.4.1
	b)	Define the machining process and lists its classifications.	5	5	1	1	1.4.1
	c)	Write notes on the following: (any two) (i) Reaming ((ii) Boring (iii) Grinding	5	5	1	2	1.4.1
Q 5.		Attempt any **two parts** of the following.					
	a)	Provide a clear sketch of a lathe machine. Write about its major parts.	5	5	1	1	1.4.1
	b)	Define drilling operations. Sketch a twist drill and write its main parts.	5	5	1	1	1.4.1
	c)	What are the four major parts of a carriage? Write about its parts.	5	5	2	1	1.4.1