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**B.E. / B.TECH. DEGREE EXAMINATIONS, MAY 2023**

Third Semester

**MR18302 – MARINE MANUFACTURING TECHNOLOGY***(Marine Engineering)***(Regulation 2018/2018A)****TIME: 3 HOURS****MAX. MARKS: 100**

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	The students will be able to know the different welding process and select the appropriate process for different applications	3
CO 2	The students will be able to have the knowledge of different casting process and select the appropriate process for different applications.	3
CO 3	To select the Grinding Wheel and process based on the surface finish required.	3
CO 4	The students will be able to have the depth understanding of various hot working and cold working process.	3
CO 5	The students will be able to select the appropriate machines or machines tools for different requirements .	3

**PART- A (10 x 2 = 20 Marks)**

(Answer all Questions)

	CO	RBT LEVEL
1. List out the four important arc welding equipment.	1	2
2. Name any two modern welding processes and explain shortly.	1	2
3. What is shrinkage allowance with respect to mould making?	2	2
4. Define blow moulding employed in plastic industries.	2	2
5. List out some of the abrasive materials used in lapping and honing processes.	3	2
6. What is lapping?	3	2
7. What are all the effects of cold working?	4	2
8. Define short-peening with simple example.	4	2
9. How lathes are specified and classified?	5	2
10. What is the difference between drilling and boring?	5	2

**PART- B (5 x 14 = 70 Marks)**

	Marks	CO	RBT LEVEL
11. (a) (i) Explain the principle of Plasma Arc Welding.	(7)	1	3

	(ii) Explain oxy-acetylene cutting with neat sketch.	(7)	1	3
	<b>(OR)</b>			
	(b) Explain the MIG and TIG processes with neat sketch.	(14)	1	3
<b>12. (a)</b>	(i) Explain shell moulding with neat sketch.	(7)	2	3
	(ii) Explain various defects in casting process with some sketches.	(7)	2	3
	<b>(OR)</b>			
	(b) Explain the lost foam and lost wax process with neat sketch.	(14)	2	3
<b>13. (a)</b>	Narrate the internal and external centre less grinding principle with a suitable sketch.	(14)	3	3
	<b>(OR)</b>			
	(b) Write short notes on (a) Grid (b) Grade (c) Structure (d) Honing process	(14)	3	3
<b>14. (a)</b>	(i) Explain the principle of working of progressive die with a simple sketch.	(7)	4	3
	(ii) Explain the confined system of explosive forming process by a neat sketch.	(7)	4	3
	<b>(OR)</b>			
	(b) (i) With neat sketch explain the WIRE drawing process.	(7)	4	3
	(ii) Explain Hot working process.	(7)	4	3
<b>15. (a)</b>	(i) With suitable sketch, explain the thread cutting on a lathe.	(7)	5	3
	(ii) Explain the parts of a boring machine with a neat sketch.	(7)	5	3
	<b>(OR)</b>			
	(b) Explain radial and upright drilling machine with neat sketch.	(14)	5	3

**PART- C (1 x 10 = 10 Marks)**

(Q.No.16 is compulsory)

		Marks	CO	RBT LEVEL
<b>16.</b>	How the welding or any repair work is carried out in deep sea? Explain the processes with neat sketch.	<b>(10)</b>	<b>1</b>	<b>4</b>