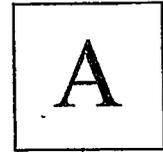


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***B.Tech. Degree III Semester Regular/Supplementary Examination
in Marine Engineering November 2024***

**19-208-0303 PRODUCTION TECHNOLOGY
(2019 Scheme)**

Time: 3 Hours

Maximum Marks: 60

Course Outcome

On successful completion of the course, the students will be able to:

- CO1: Understand the different metal fabrication processes and their characteristics.
 CO2: Understand the principle of working, specification, different types and different operations performed in lathe and drilling machine.
 CO3: Learn the principle of working, specification, different types and different operations performed in shaping machines, milling and grinding machines.
 CO4: Gain knowledge about the different measuring instruments and overhauling on board equipments.
 CO5: Get the concept of the different welding methods.

Bloom's Taxonomy Levels (BL): L1 – Remember, L2 – Understand, L3 – Apply, L4 – Analyze, L5 – Evaluate,
 L6 – Create

PI – Programme Indicators

(Answer *ALL* questions)

(5 × 15 = 75)

		Marks	BL	CO	PI
I.	(a) Explain the various functions and classifications of the following tools with neat sketches. (i) Files. (ii) Chisels.	8	L2	1	1.3.1
	(b) Differentiate between orthogonal cutting and oblique cutting with neat sketches.	7	L2	1	1.3.1
OR					
II.	(a) Explain the ASA tool signature system with suitable example.	8	L3	1	1.3.1
	(b) Explain the mechanism of chip formation and discuss on various shear zones.	7	L1	1	1.3.1
III.	(a) Describe the features and specification of engine lathe.	6	L2	2	1.3.1
	(b) Explain in detail various lathe attachments with neat sketches.	9	L3	2	1.3.1
OR					
IV.	(a) Explain the various types of lathe operations with suitable sketches.	9	L2	2	1.3.1
	(b) Explain the parts of a drilling machine with a neat sketch.	6	L3	2	1.3.1
V.	(a) Describe on the principle of jigs and fixtures.	5	L2	3	1.3.1
	(b) Explain in detail the following types of milling operations with relevant sketches (i) End milling. (ii) Straddle milling. (iii) Angular milling. (iv) Slab milling.	10	L2	3	1.3.1
OR					
VI.	(a) Describe the following abrasive operations. (i) Lapping. (ii) Honing.	7	L2	3	1.3.1
	(b) Describe the various operations done on grinding wheel.	8	L3	3	1.3.1

(P.T.O.)

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		Marks	BL	CO	PI
VII.	(a) What is the principle of interchangeability?	4	L1	4	1.3.1
	(b) Explain various types of fits with suitable sketches.	6	L2	4	1.3.1
	(c) Explain various types of mechanical hazards commonly occur in workshops.	5	L1	4	1.3.1
OR					
VIII.	(a) Discuss on various tolerance grades with applications.	4	L2	4	1.3.1
	(b) Discuss on the application of various personal protective equipment commonly used in shop practices.	5	L2	4	1.3.1
	(c) Draw and explain various types of safety symbols.	6	L1	4	1.3.1
IX.	(a) Explain various types of gas welding flames with suitable sketches.	6	L2	5	1.3.1
	(b) Describe on the followings:	6	L3	5	1.3.1
	(i) AC welding.				
	(ii) DC welding.				
	(iii) Spot welding.				
	(c) Distinguish between wave soldering and reflow soldering (Definition only).	3	L2	5	1.3.1
OR					
X.	(a) Briefly describe the various types of welding electrodes with suitable examples.	6	L3	5	1.3.1
	(b) Explain the following brazing methods	9	L2	5	1.3.1
	(i) Torch brazing.				
	(ii) Induction brazing.				
	(iii) Dip brazing.				

Blooms's Taxonomy Level

L1 – 14.67%, L2 – 56.67%, L3 – 28.66%.
