Total No. of Questions – [3]

Total No. of Printed Pages: 2

G.R. No.	

PAPER CODE	U223-265 (PTE)

May 2023 (ENDSEM) EXAM

S.Y. (MECHANICAL) (AY 2022-23 SEMESTER - II)

COURSE NAME: Manufacturing Technology

COURSE CODE: MEUA22205

(PATTERN 2020)

Time: [1Hr]

[Max. Marks: 30]

(*) Instructions to candidates:

1) **Use of scientific calculator is allowed**
2) **Use suitable data where ever required**
3) **All questions are compulsory**

Question No.	Question Description	Max. Marks	CO mapped	BT Level
Q.1	a) Explain the grinding wheel specification **WA-36-M-7-V** with its application	**[4]**	[4]	[2]
	b) An Aluminum sheet of 0.1 mm thick and 400 x 100 mm is required to cut-off. Specify the cutting wheel for the prescribed operation considering less friction and heat.	**[6]**	[4]	[4]
	OR			
	c) The sides of the High-Speed Steel (HSS) cutting tool bar have to be finish ground on the surface grinder. The machine restricts the diameter of the wheel to 150 mm and no coolant is used. Specify the appropriate grinding wheel required for prescribed operation.	**[6]**	[4]	[4]
Q.2	a) Describe the Plasma Arc Machining Process with its application	**[4]**	[5]	[2]
	b) Determine the modern machining process use to make a cylindrical impression with a diameter of 10 mm and a depth of cut 1 mm on a tungsten carbide surface. The fracture hardness of tungsten carbide is 7000 N/mm^2.	**[6]**	[5]	[3]
	OR			

	c) Determine the most suitable non-conventional machining process used to cut a 100 μm- wide slot in a 1.5 mm thick tungsten sheet with neat sketch.	**[6]**	[5]	[3]
Q.3	a) Explain the diameter jig with its application	**[4]**	[6]	[2]
	b) Illustrate the principle of 3-2-1 or six-point location method used to restrict a total nine planes of movement.	**[6]**	[6]	[3]
	OR			
	c) Determine the principles of Poka-Yoke based on the occurrence of mistakes and effect of mistakes.	**[6]**	[6]	[3]

[Note- BT Level- 1: Remember 2: Understand 3: Apply 4: Analyze 5: Evaluate 6: Create]