Code No.: ME511PE	R20	H.T.No.			8	R						

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
III–B.TECH–II–Semester End Examinations (Supply) – December - 2025
UNCONVENTIONAL MACHINING PROCESSES
(MECH)

[Time: 3 Hours] **[Max. Marks: 70]**

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

PART-A **(20 Marks)**

1.	a)	What are the different machining characteristics analyzed in non-traditional machining?	[2M]
	b)	What are the various applications of USM?	[2M]
	c)	What are the various abrasives used in AJM process?	[2M]
	d)	What are the applications of ECM?	[2M]
	e)	List down the process parameters which govern the MRR in EDM.	[2M]
	f)	What are the materials that can be machined in EDM?	[2M]
	g)	State the characteristics of laser beam.	[2M]
	h)	What are the limitations of EBM?	[2M]
	i)	List the process parameters of PAM.	[2M]
	j)	What are the limitations of ECM?	[2M]

PART-B **(50 Marks)**

2.	Classify unconventional machining processes based on basic mechanism involved in the process.	[10M]
	OR	
3.	Briefly explain the effect of operating parameters on material removal rate and list the advantages and limitations of USM.	[10M]
4.	Explain the applications, advantages and limitations of water Jet Machining (WJM).	[10M]
	OR	
5.	Explain the principle of working Electro chemical Honing with neat sketch.	[10M]
6.	Explain the EDM process and list its advantages, disadvantages and applications.	[10M]
	OR	
7.	Write the differences between EDM and Electric discharge Grinding processes.	[10M]
8.	Define LASER? Write the advantages, disadvantages and applications of LBM process.	[10M]
	OR	
9.	Why is Electron Beam Machining carried out in vacuum? Explain the process with neat sketch.	[10M]
10.	Draw the schematic set-up of PAM, Indicate various parts and write its advantages and disadvantages.	[10M]
	OR	
11.	Write its Applications, Advantages and drawbacks of Electro chemical machining.	[10M]

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