Exam.Code:1015
Sub. Code: 35217

2055
M.E. (Mechanical Engineering)
Second Semester
MME-202: Advanced Manufacturing Processes

Time allowed: 3 Hours **Max. Marks: 50**

NOTE: Attempt five questions in all, selecting atleast two questions from each Part.

x-x-x

	PART-A	
1(a)	What are Advanced Manufacturing Processes (AMP)? Justify the need of non conventional machining processes in current industrial scenario.	5
(b)	What is hybrid machining? Explain it by selecting one suitable example. Also state its advantages over AMP's.	5
2(a)	What is standoff distance in Water Abrasive Jet machining? Explain its effect on process performance?	5
(b)	What are the various energies used in USM process? Describe the constructional features of USM machine?	5
3 (a)	Describe Chemical Milling process with a neat schematic representation.	5
(b)	State and explain the various process parameters of chemical machining?	5
4	Estimate the MRR in AJM of a material with flow strength of 3 GPA. The abrasive flow rate is 2.5 gm/min, velocity is 205m/s, density of abrasive is 3 gm/cc. dia of abrasive is 100 micron (a) Consider brittle material MRR=80 mm3 /min (b) Consider ductile material MRR=17.5 mm3 /min	10
	PART-B	
5(a)	Explain the principle of Electron beam machining. Describe its construction with the help of neat sketches?	5
(b)	State and explain the various process parameters, the advantages, disadvantages and applications of EBM.	5
6	What is EDM process? Describe its construction in details. Also explain the various input and output process parameters for stainless steel and die cast iron workpiece.	10
7(a)	Elucidate the working of Electro-chemical Grinding (ECG) with neat sketch.	5
(b)	Characterize Travelling Wire EDM process with schematic representation.	5
8	With a neat sketch, explain the Laser beam machining (LBM) process and also mention its applications.	10

x-x-x