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Sea	at No.:	GUJARAT TECHNOLOGICAL UNIVERSITY ME – SEMESTER I (NEW) – • EXAMINATION – SUMMER 2016	
Subject Code: 2715003 Date:			16
	•	Name: Advance Manufacturing Processes	
	me:02 tructio	2:30 pm to 05:00 pm Total Marks: 7	70
	2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a)	List the various seven reasons which are responsible for evolution of advanced manufacturing processes.	07
	(b)	What is the principal difference between AJM & AWJM and Where are these processes used?	07
Q.2	(a)	Explain with a neat diagram the principle of ultrasonic welding and also state the advantages and disadvantages for the same.	07
	(b)	What are the process parameters of laser beam machining? Explain effect of any two parameters on material removal for the same process. OR	07
	(b)	Enlist the advantages and disadvantages of electron beam welding process?	07
Q.3	(a)	Explain the working principal of electro-hydraulic forming through sketch and enlist the process parameters of same.	07
	(b)	Write short note on electromagnetic forming process. OR	07
Q.3	(a)	How the high-energy-rate forming process is different from the conventional forming processes. Explain its working principal.	07
	(b)	What are the advantages and disadvantages of contour roll forming process?	07
Q.4	(a) (b)	Explain Squeeze casting process and its advantages. Classify modern machining processes on the basis of the type of energy. Also state the mechanism of material removal, transfer media and energy sources used. OR	07 07
Q.4	(a)	Describe with the help of sketches electromagnetic and electrostatic methods of beam focusing in EBM process.	07

Explain the working principal of stretch forming process through neat sketch.

contribute in enhancing the overall quality of casting.

limitations of vacuum molding process.

Explain continuous casting process and also stated its advantages.

What do you mean by evaporative pattern? How the use of such pattern

ORExplain with neat sketches vacuum molding process. Give advantages and

What are the advantages of metal mold casting process over the sand mold

(b)

(b)

(b)

casting process?

Q.5

Q.5

07

07

07

07

07