1058

Exam.Code:0942
Sub. Code: 7063

B.E. (Mechanical Engineering), Sixth Semester
MEC-606: Non Conventional Manufacturing

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting two questions from each Group.

x-x-x

Q. No.	Questions	Marks
1 a	What are the limitations in ultrasonic machining process?	
b	List the process capabilities of electron beam machining?	
c	How will you select an electrode material for EDM process? Answer with justifications.	
d	Distinguish between conventional and electrochemical grinding.	
e	Write four applications of abrasive flow machining.	
f	What are the ranges of inter electrode gap usually maintained during electro chemical machining and why?	
g	Write the name of the various components used in abrasive flow machining.	
h	What is chemical machining?	
i	What is Laser beam machining?	
j	Write the principle of water jet machining?	
	Group-A	
2 (a)	How is the development taking place in the area of modern machining processes? Give trends in manufacturing machining in support of your answer.	
(b)	What do you understand by transducer and magneto-striction effects? Explain the function of horn in ultrasonic machining process?	
3	During electrochemical machining of iron using aqueous solution of NaCl as electrolyte, what are the possible reactions at anode and cathode? Explain why such types of reactions occur at anode and cathode?	
4	With a simple sketch explain the working principle of electrochemical honing process. How this process is different from electro chemical deburring process. Give simple sketch of electro chemical deburring process and explain its working?	
	Group-B	
5 (a)	Draw neat diagram of EDM (Electrical Discharge Machining). Explain its construction and working.	
b	Write the name of the different feasible dielectric techniques applicable in case of electrical discharge machining and explain any one from your answer.	
6 a	Write down the fundamentals, machining stup, applications, advantages and	

	limitations of Electro-chemical Grinding?	
b	Explain the effect of focusing on material removal by laser beam machining. Write the advantages of such machining	
7	State and explain the mechanism of material removal in plasma machining process? Write its working principle. Give simple sketch of this machining process. What are the safety precautions that should be taken during such machining operation?	

x–x–x