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M.Tech (ME) (2017 Batch) (Sem.–2)

MODERN MANUFACTURING PROCESSES

Subject Code : MTME-203

M.Code : 74979

Time : 3 Hrs. Max. Marks : 100

INSTRUCTIONS TO CANDIDATES :

1. **Attempt any FIVE questions in all, out of EIGHT questions.**
2. **Each question carries TWENTY marks.**

1. Explain the principle and working of Abrasive Jet Machining with the help of a schematic diagram.
2. Describe with sketch the working of hybrid non-conventional machining process in which two mechanical non-conventional machining processes are combined. Discuss the advantages of this hybrid process over the individual process which have been combined. Give the application of the hybrid process.
3. Give the process principles of electro-chemical machining. Explain the electrolyte circuit and describe the chemistry involved in machining a steel component by this process.
4. Discuss the effect of following factors on MRR in Electrical Discharge Machining process :
   a) Current density
   b) Work material hardness
   c) Pulse energy
5. Describe the principle and working of electrochemical stream drilling with the help of neat sketch.
6. Discuss the different techniques to form the miniature product from metal powder.
7. Describe the process of generation of electron beam. For what kind of machining work would you recommend electron beam? What are the special features of electron beam that takes it more suitable for some typical machining work as compared to laser beam? Explain.
8. Write notes on :
   a) Chemical vapour deposition.
   b) Water jet cutting.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.

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