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Second Semester M.Tech. Degree Examination, June/July 2016
Non Traditional Machining

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

- 1
 - a. Write the classification of Non-traditional machining processes. (05 Marks)
 - b. Explain the need for non-traditional machining parameters in ultrasonic machining process with sketches. (05 Marks)
 - c. Discuss the effect of process parameters in ultrasonic machining process with sketches. (10 Marks)
- 2
 - a. Explain the principle and operation of water jet machining process with the help of neat sketch. (10 Marks)
 - b. Discuss the effect of process parameters on Material Removal Rate (MRR) in abrasives jet machining process with neat sketches. (10 Marks)
- 3
 - a. Explain the principle of the operation and mechanics of material removal in Electric Discharge Machining (EDM) with the help of neat sketch. (10 Marks)
 - b. List various die electric fluids and explain the properties of die electric fluids used in EDM. (07 Marks)
 - c. List the application of the EDM process. (03 Marks)
- 4
 - a. Derive the relation for determination of the material removal rate in Electro Chemical machining (ECM). (10 Marks)
 - b. Explain the principle of Electro Chemical Grinding (ECG) with a neat sketch. (10 Marks)
- 5
 - a. Explain the principle of operation of chemical blanking with a neat sketch. (10 Marks)
 - b. Write the differences between chemical blanking and chemical milling. (05 Marks)
 - c. List the applications of chemical machining process. (05 Marks)
- 6
 - a. Explain the principle of Plasma Arc Machining (PAM) with a neat sketch. (10 Marks)
 - b. Explain the modes of operation of D.C plasma torches. (10 Marks)
- 7
 - a. Explain Laser Beam Machining (LBM) with a neat sketch. (10 Marks)
 - b. List the types of Lasers. (04 Marks)
 - c. Write the advantages and Limitations of LBM. (06 Marks)
- 8
 - a. Explain the principle of Magnetic Pulse forming with a neat sketch. (10 Marks)
 - b. List the applications, advantages and limitations of magnetic pulse forming. (10 Marks)

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