

Code No: 57030

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, May/June - 2015

UNCONVENTIONAL MACHINING PROCESSES

(Mechanical Engineering)

Time: 3 Hours

Max. Marks: 75

Answer any Five Questions
All Questions Carry Equal Marks

1. Explain the historical development of non traditional machining ascertaining the need for the development of the same. [15]
- 2.a) Explain the mechanism of metal removal in ultrasonic machining.
b) Discuss about the limitations of ultrasonic machining. [7+8]
3. List out the parameters effecting the metal removal rate and surface roughness in abrasive jet machining and explain their influence. [15]
- 4.a) Explain the mechanism of metal removal in electrochemical grinding.
b) Derive an equation for the metal removal rate in electrochemical machining. [7+8]
- 5.a) Explain the energy discharge mechanism in electro-discharge machining.
b) Discuss the applications of wire electro discharge machining. [7+8]
6. With the help of a neat diagram explain the construction, working and applications of laser beam machine. [15]
- 7.a) Explain the application of plasma for machining.
b) Mention the characteristics of various etchants used in chemical machining. [7+8]
8. With the help of neat diagram explain the construction, working and applications of abrasive flow finishing. [15]

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