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**R16**

Code No: 138FA

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. Tech IV Year II Semester Examinations, July - 2021**

**UNCONVENTIONAL MACHINING PROCESSES**

(Mechanical Engineering)

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Time: 3 hours

Max. Marks: 75

**Answer any Five Questions  
All Questions Carry Equal Marks**

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AG 1.a) Justify the importance of non-traditional machining methods and discuss different applications. A

b) Explain the selection of a typical nontraditional machining process based on the shape to be produced. [7+8]

2.a) Explain the influence of various parameters on the metal removal rate in ultrasonic machining.

AG b) Comment about the modification brought in for ultrasonic machining in the recent past. A [8+7]

3.a) Explain the influence of fineness of abrasive particles on metal removal rate and design of nozzle in abrasive jet machining.

b) What are the limitations of water jet machining? Suggest methods to overcome these limitations. [8+7]

AG 4.a) Derive an equation for metal removal rate in electro chemical machining and discuss the parameters. A

b) What are the limitations of chemical machining? [8+7]

5.a) Explain how the factors influencing the electric discharge machining process.

b) What are the applications of electro discharge machining process? [8+7]

AG 6.a) Spark eroded surfaces are best suited for tribological applications. Comment the statement. A

b) Discuss the size limitation of work in electron beam machining. [8+7]

7.a) Comment about accuracy of cut in laser beam machining and explain the importance.

b) Explain the application of plasma in manufacturing industries and discuss their merits. [8+7]

AG 8. With the help of a suitable sketch explain the construction, working and applications of electrolyte machining process. A [15]

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