Code: 9A03708 **R09**

B.Tech IV Year I Semester (R09) Supplementary Examinations June 2016

MODERN MANUFACTURING METHODS

(Mechanical Engineering)

Time: 3 hours Max. Marks: 70

Answer any FIVE questions

All questions carry equal marks

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1 (a) Enumerate general considerations in process selection for modern machining processes.
(b) Explain the role of non-traditional processes in present industries.

2 (a) Define ultrasonic and describe the process with the help of neat sketch.
(b) Sketch and describe any two types of tool feed system in ultrasonic machining.

3 (a) Discuss why the AJM technique when applied to ductile materials leads to a low rate of metal removal.
(b) Describe at least two typical engineering applications of AJM and WJM.

4 (a) What is the principle of electrochemical machining? What are the materials commonly used for making a tool for use in this method?
(b) What are the functions of an electrolyte? What factors need to be considered while selecting.

5 (a) Discuss the advantages of EDM as compared to other non-traditional methods.
(b) With the help of neat sketch, explain the process EDM. Mention the applications.

6 (a) With the help of neat sketch, explain the EBM process and compare thermal and non-thermal process.
(b) What is the general principle of LBM and write its applications.

7 (a) Discuss the factors that influence the quality of the cut in plasma machining.
(b) What is meant by chemical machining? Write down its advantages and applications.

8 Write short notes on:
(a) Magnetic abrasive finishing.
(b) Rapid prototyping.

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