

8. Write short notes on the following : 5×3

- (a) 3D-Scanning Facilities
- (b) Factors affecting precision of non-traditional machining processes
- (c) Coordinate Measuring Machine (CMM).

No. of Printed Pages : 04

Roll No.

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M. Tech. EXAMINATION, Dec. 2018

(Second Semester)

(B. Scheme) (Re-appear Only)

(ME)

MEP502B

NON-TRADITIONAL MACHINING AND
ADVANCED MANUFACTURING

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

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Unit I

1. (a) Classify non-traditional machining processes in detail using tree structural chart.
(b) Specify the need of non-traditional machining processes. List the general machining processes parameters involved in non-traditional machining processes.
(c) Write a short note on Programmable Logic Controllers (PLC). **5×3**
2. Differential among traditional, non-traditional and advance manufacturing processes using basic principle, process parameters classification, characteristics, applications limitations, merits, demerits etc. **15**

Unit II

3. Differentiate among Abrasive Jet Machining (AJM), Electro-Chemical Machining (ECM) and Electro-Discharge Machining (EDM) based on basic principle, process setups, process parameters, steps involved, merits, demerits and applications for each. **15**

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4. Differentiate among Ultrasonic Machining (USM), Electro-Chemical Grinding (ECG) and wire cut EDM based on basic principle, process setup, process parameters, procedural steps merits, demerits and applications. **15**

Unit III

5. (a) What do you understand by Tool Room, its infrastructural facilities and its role in industry ? **10**
(b) Discuss the procedure of die making for sheet metal components. **5**
6. (a) Differentiate between signs and fixtures used in non-traditional machining. **7**
(b) Write a short notes on gauges for inspection and optical profile properties. **8**

Unit IV

7. (a) Discuss in detail developmental time line trends adopted in manufacturing. **10**
(b) Write short note on revenue engineering. **5**

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P.T.O.