

**B.TECH. SEM -VI PRODUCTION 2014 COURSE (CBCS) :**

**SUMMER - 2018**

**SUBJECT : ELECTIVE – I : NON TRADITIONAL MANUFACTURING**

Day : **Monday**  
Date : **11/06/2018**

**S-2018-2451**

Time : **02.30 PM TO 05.30 PM**  
Max. Marks : 60

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**N. B. :**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks.
  - 3) Draw neat and labelled diagram **WHEREVER** necessary.
  - 4) Use of non-programmable calculator is **ALLOWED**.
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**Q.1** What is mean by non-traditional machining process? Compare with (10) conventional machining process.

**OR**

Explain different types of non-traditional machining process and also write the advantages and disadvantages and its applications.

**Q.2** Explain in details Water Jet Machining (WJM) process and state its (10) characteristics.

**OR**

Explain process characteristics of Ultrasonic Machining (USM) Process. Also discuss the abrasive particles and tool materials.

**Q.3** Draw a neat sketch of Electro Chemical Machining Process (10) (ECM). And explain the electrolyte and process parameters used in ECM.

**OR**

Compare:

- a) ECM v/s EDM
- b) ECM v/s AJM

**Q.4** Write short notes on Chemical Machining Process and also write their (10) advantages, disadvantages and applications.

**OR**

Explain process characteristics of chemical machining and explain flow chart of Chemical Blanking process.

**P. T. O.**

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- Q.5** Explain working principle, construction, process parameters and its application of Wire cut Electro Discharge Machining (W-EDM) Process. **(10)**

**OR**

What is mean by Electro Discharge Machining Process? If in a RC type generator, to get an idle time of  $500 \mu\text{s}$  for open circuit voltage of 100 V and maximum charging voltage of 70 V determine charging resistance. Assume  $c = 10 \mu\text{F}$ .

- Q.6** Compare:

- a) LBM v/s EBM
- b) PAM v/s IBM

**OR**

Write a short note on the following:

- a) Ion Beam Machining (IBM)
- b) Electron Beam Machining (EBM)

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