

B.Tech. SEM -VI Production 2014 Course (CBCS) : SUMMER - 2019
SUBJECT : ELECTIVE – I : NON TRADITIONAL MANUFACTURING

Day : Friday
Date : 31/05/2019

S-2019-2771

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

N. B. :

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labeled diagram **WHEREVER** necessary.
- 4) Assume suitable data, if necessary.

Q. 1 How non-conventional manufacturing processes differ from conventional manufacturing processes? Explain with suitable examples. **(10)**

OR

Q. 1 What are the basic factors upon which the non-conventional manufacturing processes are classified? Give classification of NCMP. **(10)**

Q. 2 Explain with suitable sketches water jet machining process and state its merits and demerits. **(10)**

OR

Q. 2 Describe process capabilities of WJM in detail. **(10)**

Q. 3 How electro chemical machining methods are classified? Discuss fundamental principles of ECM. **(10)**

OR

Q. 3 In a certain electro-chemical dissolution process of iron, a metal removal rate of $2 \text{ cm}^3/\text{min}$ was desired. Determine the amount of current required for the process. **(10)**

Assume: Atomic weight of iron = 60 gm

Valence at which dissolution occurs = 3

Density of iron = 8.5 gm/cm^3

Q. 4 With neat sketch explain chemical machining process in detail. **(10)**

OR

Q. 4 What do you understand by 'Maskants' and 'Etchants' in chemical machining? **(10)**

Q. 5 What is the principle of EDM? Discuss process parameters of EDM. **(10)**

OR

Q. 5 Explain with neat sketch wire EDM process in detail. **(10)**

Q. 6 Describe in detail plasma Arc cutting process with its applications. **(10)**

OR

Q. 6 Discuss machining application of Laser. **(10)**

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