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Total No. of Pages : 02

Total No. of Questions : 18

**B.Tech. (ME) (E-I 2012 Onwards) (Sem.-6)****NON-TRADITIONAL MACHINING**

Subject Code : DE/ME-2.0

M.Code : 71252

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

**SECTION-A****Answer briefly :**

1. Enumerate the applications of non-traditional machining processes.
2. Define Computer Integrated Manufacturing.
3. Enumerate various types of electrical non-traditional machining processes.
4. Enumerate the applications of water jet machining process.
5. Explain the working principle of solid state laser machining process.
6. Explain the working principle of hot machining process.
7. Enumerate the process parameters used in WJM process.
8. Enumerate the basic characteristics of electrode materials in EDM process.
9. Explain the steps involved in material removal in chemical machining process.
10. Enumerate the process parameters affecting performance of EBM process.

### SECTION-B

11. How non-traditional machining processes can be classified?
12. Explain the material removal mechanism and construction details of RAM EDM process giving a neat sketch. Also describe the process parameters used in EDM process.
13. Describe the working and schematics of chemical machining process with the help of a neat sketch.
14. Explain the construction and working of water-shielded plasma arc machining process with the help of a neat sketch.
15. Explain the construction of electron beam gun and diffusion pump in electron beam machining process giving neat sketches.

### SECTION-C

16. (a) Describe the construction, applications and limitations of abrasive flow machining process with the help of a neat sketch.  
(b) Explain material removal mechanism, working, applications and limitations of water jet machining process with the help of a neat sketch.
17. (a) Differentiate between sludging and non-sludging electrolytes used in electro chemical machining process. How flow of electrolyte is maintained in ECM process?  
(b) Explain the classification, applications and advantages of hybrid machining processes.
18. Describe the material removal mechanism and constructional details of ultrasonic machining process with the help of a neat sketch.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**