CBCS SCHEME

USN | | | | | | | | | | |

18IP741

Seventh Semester B.E. Degree Examination, Feb./Mar. 2022
Non-Conventional Machining Processes

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

Module-1

1 a. Classify non-conventional machining process. Differentiate between conventional and non-conventional machining process. **(10 Marks)**

b. Sketch and explain ultra-sonic machining process. **(10 Marks)**

OR

2 a. Explain the mechanics of cutting in USM process. **(10 Marks)**

b. Briefly explain the characteristics of USM process. **(10 Marks)**

Module-2

3 a. Sketch and explain the working principle in Abrasive jet machining. **(10 Marks)**

b. Briefly explain the process characteristics in Abrasive jet machining. **(10 Marks)**

OR

4 a. Sketch and explain electro chemical machining process. **(10 Marks)**

b. Briefly explain the process characteristics in ECM process. **(10 Marks)**

Module-3

5 a. Briefly explain the tooling technique in ECM. **(10 Marks)**

b. Explain electro chemical grinding and honing process. **(10 Marks)**

OR

6 a. Explain chemical machining process, along with its elements. **(10 Marks)**

b. Briefly explain process characteristics of CHM. **(10 Marks)**

Module-4

7 a. Explain the mechanism of metal removal in EDM process. **(10 Marks)**

b. Explain the criteria to be considered for EDM tool design. **(10 Marks)**

OR

8 a. Explain the process characteristics in EMD. **(10 Marks)**

b. What is flushing? Explain the method of flushing **(10 Marks)**

Module-5

9 a. Explain the mechanism of metal removal in PAM. **(10 Marks)**

b. Briefly explain the process characteristics in PAM. **(10 Marks)**

OR

10 a. Explain the mechanism of metal removal in LBM. **(10 Marks)**

b. Explain the mechanism of metal removal in Ion Beam machining. **(10 Marks)**

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