CBCS SCHEME

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

18ME641

Sixth Semester B.E. Degree Examination, June/July 2023
Non - Traditional Machining

Time: 3 hrs. Max. Marks: 100

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

Module-1

1 a. Define Non-traditional Machining. What are the need of NTM? Explain briefly. **(08 Marks)**
b. What are difference between Conventional and Non – conventional Machining? **(06 Marks)**
c. List and explain the various factors to be considered for selection of NTM process. **(06 Marks)**

OR

2 a. Give classification of NTM process. **(08 Marks)**
b. List applications of NTM. **(06 Marks)**
c. List any 3 advantages and limitations of NTM. **(06 Marks)**

Module-2

3 a. With neat sketch, explain USM process. **(10 Marks)**
b. Explain with neat diagram, process parameters in USM. **(10 Marks)**

OR

4 a. Explain with neat sketch, working principle of Abrasive Jet Machining and also give advantages of AJM. **(10 Marks)**
b. With the neat sketch, explain Water Jet Machining process and also give advantages and limitations of WJM. **(10 Marks)**

Module-3

5 a. With neat sketch, explain the working of ECM process. **(10 Marks)**
b. With neat sketch, explain ECG. Also give the advantages and limitations of ECG. **(10 Marks)**

OR

6 a. Explain the following in Chemical Machining Process :
i) Maskants ii) Etchants. **(08 Marks)**
b. List out advantages and applications of Chemical Machining. **(06 Marks)**
c. Write a short note on Chemical Blanking. **(06 Marks)**

Module-4

7 a. Explain with neat sketch the mechanism of metal removal in Electric discharge machining and also give applications. **(10 Marks)**
b. Explain Die Electric Medium, its functions and desirable properties in EDM process. **(10 Marks)**

OR

8 a. With a neat sketch, explain Plasma Arc Machining Process. **(10 Marks)**
b. Discus some of the important considerations in the design of Plasma torch in PAM. **(10 Marks)**

Module-5

9	a.	With a neat sketch, explain working principle of Laser Beam Machining.	(08 Marks)
	b.	What are the advantages and disadvantages of LBM process?	(06 Marks)
	c.	List the limitations and applications of LBM proces.	(06 Marks)

OR

10	a.	Explain with the help of neat diagram Principle of Electron Beam Machining (EBM).	(10 Marks)
	b.	What are the advantages , disadvantages and applications of EBM process?	(10 Marks)

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