CBCS SCHEME

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BME755A

Seventh Semester B.E./B.Tech. Degree Examination, June/July 2026
Introduction to Non-Traditional Machining

Time: 3 hrs. Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

LIBRARY

		Module – 1	M	L	C
Q.1	a.	Define Non-traditional process. Discuss the need for NTM and general classification of NTM.	10	L2	CO1
	b.	Discuss the comparison between Traditional and Non-traditional machining process.	10	L2	CO1
		OR			
Q.2	a.	Mention the specific advantages, limitation and applications of NTM.	10	L2	CO1
	b.	Describe physical parameters and process capabilities of Non-traditional machining.	10	L2	CO1
		Module – 2			
Q.3	a.	Explain with neat sketch working principle of Abrasive Jet Machining (AJM). List the applications of AJM.	10	L2	CO2
	b.	Discuss the effect of following process parameters on Ultrasonic Machining. i) Amplitude and frequency of vibration of the tool ii) Slurry concentration iii) Abrasive size iv) Effect of applied static load	10	L3	CO2
		OR			
Q.4	a.	Explain with neat sketch working of Ultrasonic Machining (USM)	10	L2	CO2
	b.	Discuss the process parameters of Abrasive Jet Machining (AJM).	10	L3	CO2

		Module – 3			
Q.5	**a.**	Explain Electrochemical Machining (ECM) Process with a neat diagram.	**10**	**L2**	**CO3**
	b.	List the advantages, limitations and applications of ECM.	**10**	**L2**	**CO3**
		OR			
Q.6	**a.**	Explain Process Characteristics of Chemical Machining (CHM)	**10**	**L2**	**CO3**
	b.	With neat sketch, explain the working and steps involved in the CHM.	**10**	**L2**	**CO3**
		Module – 4			
Q.7	**a.**	Discuss in brief about i) Pressure flushing ii) Suction flushing iii) Side flushing iv) Pulse flushing	**10**	**L2**	**CO4**
	b.	With neat sketch, explain the working principle of EDM (Electrical Discharge Machining).	**10**	**L3**	**CO4**
		OR			
Q.8	**a.**	Explain with sketch, working principle of PAM (Plasma Arc Machining)	**10**	**L2**	**CO4**
	b.	Discuss process parameters of PAM and also discuss safety precautions of PAM.	**10**	**L3**	**CO4**
		Module – 5			
Q.9	**a.**	Illustrate the working of EBM (Electron Beam Machining) with neat sketch.	**10**	**L2**	**CO5**
	b.	Elucidate Process Parameters of EBM.	**10**	**L2**	**CO5**
		OR			
Q.10	**a.**	Illustrate the working of LBM (Laser Beam Machining) with neat sketch.	**10**	**L2**	**CO5**
	b.	Mention the Advantages, limitations and applications of LBM.	**10**	**L2**	**CO5**

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