

CBCS SCHEME

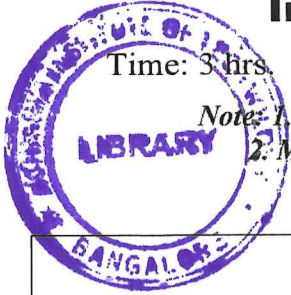
USN

--	--	--	--	--	--	--	--	--	--

BME755A

Seventh Semester B.E./B.Tech. Degree Examination, June/July 2026

Introduction to Non-Traditional Machining



Time: 3 hrs.

Max. Marks: 100

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

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
