

GUJARAT TECHNOLOGICAL UNIVERSITY**BVOC – SEMESTER IV – EXAMINATION – WINTER 2021****Subject Code: 1140304****Date: 05/01/2022****Subject Name: Non-conventional Machining****Time: 02:30 PM to 04:30 PM****Total Marks: 50****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		Marks
Q.1	(a) Classify the non-conventional machining.	05
	(b) What are the advantages of the unconventional machining process	05
Q.2	(a) Explain the principle and working of ultrasonic machining process with neat sketch.	05
	(b) Explain in details the benefits of Abrasive Jet Machining process with its applications.	05
OR		
	(b) Explain the working of Electro-Chemical Machining process with neat diagram.	05
Q.3	(a) Explain the plasma arc welding process with its application.	05
	(b) Write the advantages and application of Laser beam welding process.	05
OR		
Q.3	(a) Explain the principle and working of electron beam welding process.	05
	(b) Draw a neat and labeled diagram of Laser Beam welding and explain the principle of it.	05
Q.4	(a) Explain the underwater dry welding method and state its advantages.	05
	(b) State the applications of ECM process and USM process.	05
OR		
Q.4	(a) Explain the underwater wet welding method and state its disadvantages.	05
	(b) Draw neat and labeled diagram of Electric Discharge Machining process and state its principle.	05
Q.5	(a) Explain the principle and working of explosive forming process.	05
	(b) State the application and limitations of high energy forming process.	05
OR		
Q.5	(a) How does forming takes place by water hammer process?	05
	(b) Explain the working of electro-magnetic forming process with the help of diagram.	05