Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

(A constituent unit of MAHE, Manipal)

IV SEMESTER B.TECH. (INDUSTRIAL AND PRODUCTION ENGINEERING)

END SEMESTER EXAMINATIONS, APRIL 2018

SUBJECT: NON CONVENTIONAL MANUFACTURING TECHNIQUES [MME 2212]

REVISED CREDIT SYSTEM

Time: 3 Hours MAX. MARKS: 50

Instructions to Candidates:

- Answer all the questions.
- Missing data may be suitable assumed.

	Derive an expression for the following processes		
1A.	i)	Material Removal Model for Ultrasonic Machining	**5**
	ii)	Design of Horn (Velocity Transformer)	
1B.	Explain Biodegradable plastics		**2**
1C.	Explain with sketch Electric Discharge Drilling.		**3**
	Explain the following processes		
2A.	i)	Transfer Molding	**5**
	ii)	Injection Molding	
2B.	Explain the need for development of non conventional machining techniques.		**2**
2C.	Explain with sketch Abrasive jet machining.		**3**
3A.	With neat sketches Explain Ion beam machining and Plasma arc machining.		**5**
3B.	Explain Wire Electric discharge Machining.		**2**
3C.	Write a short note on thermo plastics and thermo setting plastics.		**3**
4A.	Explain with sketch Water jet machining and Electron Beam Machining .		**5**
4B.	Write a short note on polymers		**2**
4C.	Explain with sketch Gas laser.		**3**
5A.	Write a note on following		
	i)	Chemical Machining	**10**
	ii)	Pulse Generators	
	iii)	Elastomers	
	iv)	Blow Molding	
	v)	Compression Molding	