Reg.No.					



MANIPAL INSTITUTE OF TECHNOLOGY

Manipal University, Manipal – 576 104



VI SEM. B.E. (MECHANICAL ENGG.) DEGREE EXAMINATIONS JUNE/JULY 2016

SUBJECT: ELEMENTS OF MECHATRONIC SYSTEM (MME- 306)

REVISED CREDIT SYSTEM

Time: 3 Hours.	MAX.MARK	S: 50
 Answer ANY FIVE Draw neat sketches 	Instructions to Candidates: E FULL questions. using pencil only.	
1A) Sketch and explain the	e working of linear and rotary potentiometer.	(04)
1B) Sketch and explain he the frequency shift in I	ow velocity of flow can be measured by recording laser beam.	g (03)
1C) Sketch and explain the	e working of tactile switches	(03)
2A) With a neat sketch exp architecture of microp	plain different pin configurations used in the rocessor 8085 A	(04)
2B) Explain the role of i. ALU ii. Register iii. Interrupt	control	(03)
2C) with a neat sketch exp	plain Programmable Logic Controller architecture	(03)
3A) Write a program to eva	aluate (x+y ²)×z functions in microprocessor 8085 A	A (04)
3B) Briefly explain:		(03)

Page 1 of 2

i)Artificial neural networkii)Micro electro mechanical system

3C)	With a neat sketch explain the working of engine management system.	(03)
4A)	With a neat sketch explain the working of Direct Current motor.	(04)
4B)	With a neat sketch explain the working relay switch.	(03)
4C)	Discuss the working principle and characteristics of a Bipolar Junction Transistor.	(03)
5A)	Draw the logic diagram of a 3 bit up counter with 6 count decoder	(04)
5B)	Explain the working of a LED and LCD.	(03)
5C)	With a neat sketch explain the working diode and traic	(03)
6A)	With a suitable example explain the working of pressure relive valve.	(04)
6B)	Explain the steps involved in the conversion of data from digital to analog weighted resistor network.	(03)
6C)	Derive the expression for output voltage in case of an inverting amplifier.	(03)