Code No: 117EV

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech IV Year I Semester Examinations, March - 2017
MECHATRONICS
(Mechanical Engineering)

Time: 3 Hours   Max. Marks: 75

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each
question carries 10 marks and may have a, b, c as sub questions.

Part- A (25 Marks)

1.a)	Write the applications of liquid flow sensors.	[2]
b)	Write the advantages of mechatronics system.	[3]
c)	Draw the diagram of FET?	[2]
d)	Write about solid state electronic devices.	[3]
e)	Write about advantages of hydraulic actuating systems.	[2]
f)	Write about control valves.	[3]
g)	Write about applications of Digital electronics and systems.	[2]
h)	Explain about the PLC Registers in brief.	[3]
i)	Write about the importance of system and interfacing.	[2]
j)	Explain about DAQS.	[3]

Part-B (50 Marks)

2.	Explain about control systems and microprocessor-based controllers.	[10]
	OR	
3.	Explain about proximity, velocity and motion sensors.	[10]
4.	Explain about DIA and TRIAC in detail.	[10]
	OR	
5.	Explain about the types of amplifiers with neat circuit diagrams.	[10]
6.	Explain about electro-pneumatic system with neat diagram.	[10]
	OR	
7.	Explain about the electro-hydraulic servo system with neat diagram.	[10]
8.	Explain about micro controllers with neat diagram.	[10]
	OR	
9.	Write about PLCs versus computers, and application of PLCs for control.	[10]
10.	Explain about D to A converters.	[10]
	OR	
11.	Explain about design of mechatronics systems and future trends.	[10]

--ooOoo--