

Paper code: U359-115 (T) CIVIL U359-135 (T) E&TC
 U359-145 (T) IT U359-125 (T) Comp
 Marking scheme U359-125 (T) Mech

OCTOBER 2019/ INSEM (T1)
T. Y. B. TECH. (E&TC) (SEMESTER - I)
COURSE NAME: Elective -I: Industrial Automation
COURSE CODE: (ETUA31175A)

(PATTERN 2017)

Time: [1 Hour] [Max. Marks: 30]

Q1	a)	Static characteristics of measurement system (min 8 characteristics):4M Dynamic characteristics of measurement system (min 4 characteristics): 2M	[6]
	b)	construction of displacement transducer: 2M working of LVDT with electrical equivalent circuit. : 3M advantages and disadvantages.: 1M	[6]
	c)	Any two types of temperature sensors construction of two temperature sensors: 2M working of two temperature sensors: 2M	[4]
OR			
Q2	a)	Block diagram of instrumentation system : 3M explanation of each block of instrumentation system: 3M	[6]
	b)	Any three types of transducers with at least two examples of each type.: 2M for each transducers construction of transducers: 1M for 1 type working of transducers:1M for 1 type	[6]
	c)	Any two types of pressure sensors construction of two pressure sensors: 2M working of two pressure sensors:2M	[4]
OR			
Q3	a)	need of signal conditioning circuit:2M explanation of different bridge circuits used for signal conditioning: 4M	[6]
	b)	circuit and working of V to I Converter.: 2M circuit and working of I to V converter.:2M	[4]
	c)	circuit and working Two wire transmitter:2M write 2 advantages and disadvantages. : 2M	[4]
OR			
Q4	a)	diagram of Smart and intelligent transmitters:3M Working of Smart and intelligent transmitters: 3M	[6]
	b)	circuit and working of V to F Converter.: 2M circuit and working of F to V converter: 2M	[4]
	c)	4 steps for designing a 3 op-amp based instrumentation amplifier :4M	[4]