

Reg.No. _____



Karunya UNIVERSITY

(Karunya Institute of Technology & Sciences)
(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

End Semester Examination – Nov/Dec – 2016

Code : 14EI2008
Sub. Name : INDUSTRIAL INSTRUMENTATION

Semester : 2016-17 ODD
Duration : 3hrs
Max. marks : 100

ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)

Q. No.	Sub Div.	Questions	Course Outcome	Marks
1.	a.	What are the types of electrical pressure transducers used in process industry? Explain with a neat sketch, the construction and working of a strain gauge pressure transducer, with its advantages and disadvantages.	CO1	12
	b.	What are the different steps to be followed during calibration of a pressure transmitter?	CO2	8
(OR)				
2.	a.	Explain with the neat sketches, the working and construction of Fiber – Optic temperature measurement system.	CO2	10
	b.	What do you mean by the term 'Periodic Maintenance'? Explain.	CO2	10
3.	a.	Explain, with a neat sketch, the construction and working of a McLeod gauge.	CO3	10
	b.	Define the following terms: gauge pressure b) absolute pressure c) differential pressure	CO3	10
(OR)				
4.	a.	With the neat sketch explain the operation of eddy current level measurement.	CO1	10
	b.	Describe any method of liquid level measurement for measuring the level of a corrosive liquid.	CO3	10
5.	a.	Explain the principle and operations of air purge system. Discuss its merits and demerits.	CO2	10
	b.	With the neat sketch explain the concept of capacitance type level measurement and discuss its advantages and disadvantages.	CO1	10
(OR)				
6.	a.	Explain the principle and operation of electromagnetic flow meter with neat sketches.	CO2	10
	b.	Describe the theory of fixed restriction variable head flow meter.	CO1	10
7.	a.	How pressure is measured using diaphragms? Give the relation between displacement and pressure.		
	b.	Explain the principle and operations of ultrasonic level detector. Discuss its merits and demerits.	CO2	10
(OR)				
8.	a.	Describe with the help of a diagram, the construction and working of a thermocouple type pyrometer.	CO3	10
	b.	With the neat sketch explain the operating principle of Optical Pyrometer.	CO2	10
<u>Compulsory:</u>				
9.	a.	With a neat sketch, explain the construction and working of a magnetic method of density measurement.	CO1	10
	b.	Describe with neat sketch the construction and working of pycnometric densitometer.	CO3	10

ALL THE BEST