Reg. No.												

Question Paper Code	12039

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2023

Fourth Semester

Instrumentation and Control Engineering

(Common to Electronics and Instrumentation Engineering)

20ICPC402 - INDUSTRIAL INSTRUMENTATION

(Regulations 2020)

Duration: 3 Hours | Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks, K-Level, CO
1.	What are the different types of viscometers?	*2,K1,CO1*
2.	What is dew point temperature?	*2,K1,CO1*
3.	Illustrate the need for cold junction compensation.	*2,K2,CO2*
4.	List the advantages and disadvantages of diaphragms.	*2,K1,CO2*
5.	What are the sections of venturi tube?	*2,K1,CO3*
6.	State the principle of mass flow meters.	*2,K1,CO3*
7.	What is the principle of electromagnetic flow meter?	*2,K1,CO4*
8.	What is the principle of vortex shedding flow meter?	*2,K1,CO4*
9.	Define transmitters.	*2,K1,CO5*
10.	Compare between float and displacer.	*2,K2,CO5*

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11.	a)	With the help of a neat diagram describing the two float type viscometers.	*13,K2,CO1*
		OR	
	b)	What is psychrometer? How does it differ from hygrometer? Explain any one Psychrometer in detail.	*13,K2,CO1*
12.	a)	Demonstrate the applications of bimetallic thermometers in detail. Mention the merits and demerits of bimetallic thermometer.	*13,K2,CO2*
		OR	
	b)	Explain in detail about bourdon tubes and its types with neat sketches.	*13,K2,CO2*

13. a) Describe the construction and working of different types of Venturimeter. *13,K2,CO3*

OR

b) Explain the principle, working features and advantages of coriolis mass flow meters. *13,K2,CO3*

14. a) Explain the principle and working of Target flow meter with a neat sketch. *13,K2,CO4*

OR

b) Explain the principle and working of vortex shedding flow meter with a neat sketch. *13,K2,CO4*

15. a) Explain the principle of operation of electronic transmitter. *13,K2,CO5*

OR

b) Explain the principle and working of Differential pressure method. *13,K2,CO*

PART - C (1 × 15 = 15 Marks)

16. a) Explain in detail about calibration using dead weight tester with neat sketches. *15,K2,CO2*

OR

b) Explain in detail about boiler drum level control. *15,K2,CO5*