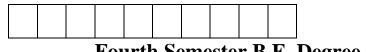
# Model Question Paper-2 with effect from 2019-20 (CBCS Scheme)

USN



# Fourth Semester B.E. Degree Examination

## **Process Instrumentation**

#### TIME: 03 Hours

Max. Marks: 100

# Note: 01. Answer any **FIVE FULL QUESTIONS**, choosing at least **ONE QUESTION** from each **MODULE**.

#### Module -1

Q.01	a	Explain the principle and working of liquid filled mechanical thermometers.	10			
	b	Discuss the principle and construction elements of platinum resistance thermometer.	10			
		OR				
Q. 02	a	With its working principle, explain the working of thermocouple circuits.	10			
	b	Define pyrometer and when these instruments are preferred. Illustrate the working of optical pyrometer.	10			
Module – 2						
Q. 03	a	Explain the working of venturi tube and pitot tube with schematic diagrams	12			
	b	Explain the working principle of electromagnetic flow meter with necessary equation and advantage.	08			
		OR				
Q. 04	a	Describe the operation of transit time ultrasonic flow meter with its equation.	10			
	b	With its working principle, explain the operation of laser anemometer.	10			

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#### Module-3

Q. 05	a	Explain the working of electromagnetic and electrodynamic type transducers for velocity measurement.	10
	b	With an Illustration discuss the principle and working of force balance accelerometer with necessary equations.	10
		OR	
Q. 06	a	Explain the principle and working of chain balanced density indicator and chain balanced density transmitter.	12
	b	Discuss the operation of sound velocity type density measurement technique.	08
		Module-4	
Q. 07	a	Define Viscosity. Describe the working of capillary extrusion viscometer with necessary diagram.	10
	b	Illustrate the working of cone and plate plastometer.	10

#### OR

Q. 08	a	Explain the working of industrial type falling piston viscometer.	10
	b	Define turbidity. Describe the working operation of light scattering turbidity meter.	10

#### Module-5

Q. 09	а	Define psychrometer. Explain the working wet and dry bulb psychrometer.	10
	b	With the neat diagram, explain microprocessor based dew point instrument for humidity measurement.	10
		OR	
Q. 10	а	Describe the working of capacitance type hygrometer.	10
	1.	With the recording and diagram discuss the marking of multiplication residure	10

b With the necessary equations and diagram, discuss the working of nuclear moisture gauge 10 method.