

M

0800ICT281122001

Pages:

Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
Third Semester B.Tech (minor) Degree Examination December 2020



**Course Code: ICT281**

**Course Name: INTRODUCTION TO SENSORS AND TRANSDUCERS**

Max. Marks: 100

Duration: 3 Hours

**PART A**

*Answer all questions. Each question carries 3 marks*

	Marks
1 How sensors are different from transducers?	(3)
2 What is a dumb instrument?	(3)
3 Define standards. What is its significance?	(3)
4 Name any two interfering inputs that are commonly occurred with process measurements.	(3)
5 What are the applications of strain gauges?	(3)
6 Define accuracy.	(3)
7 Define seebeck effect.	(3)
8 What is LDR.	(3)
9 What you meant by loading effect?	(3)
10 Define true value.	(3)

**PART B**

*Answer any one full question from each module. Each question carries 14 marks*

**Module 1**

- 11 Compare deflection and null type instrument. also give their advantages and disadvantages. (14)
- 12 Explain the working of any one of the manually operated instrument. (14)

**Module 2**

- 13 Explain the calibration of any one transducer with suitable schematic. (14)
- 14 Show that how a measuring instrument is configured in terms of inputs and outputs? (14)

**Module 3**

- 15 Explain the working of capacitive transducer which utilize the variable distance between the capacitive plates. (14)

16 Outline the construction details of LVDT. (14)

**Module 4**

17 Explain the principle and working of a thermocouple. (14)

18 Compare photovoltaic cell and photo diode. (14)

**Module 5**

19 Summarize the effects of desirable static characteristics (14)

20 Define the following terms: (14)

- a. Threshold
- b. Dead zone
- c. Linearity
- d. Sensitivity

\*\*\*\*\*