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**Question Paper Code: 33603**

B.E. / B.Tech. DEGREE EXAMINATION, AUGUST 2021

Third Semester

Instrumentation and Control Engineering

01UIC303 – SENSOR AND TRANSDUCERS

(Common to Electronics and Instrumentation Engineering)

(Regulation 2013)

Duration: 1:45 hour

Maximum: 50 Marks

PART A - (10 x 2 = 20 Marks)

**(Answer any ten of the following questions)**

1. Define measurement.
2. Define static calibration.
3. Differentiate between resolution and threshold.
4. Define Resolution.
5. List the applications of inductive transducers.
6. Define gauge factor.
7. What is SQUID?
8. What is piezoelectric effect?
9. What are the features of smart sensors?
10. Define manosensor.
11. Compare constant temperature type and constant current type anemometers.
12. State the principle of photoelectric Tachometer?
13. What is a SQUID sensor? List the types of SQUID?

14. Give some application of MEMS sensor.

15. List the application of seismic sensor.

PART – B (3 x 10= 30 Marks)

**(Answer any three of the following questions)**

16. Explain in detail about fundamental units and standards of a measurement system. (10)
17. Distinguish the following static characteristic of transducer
- (i) Resolution Vs Thershold
  - (ii) Range Vs Span
  - (iii) Sensitivity Vs Zero drift
  - (iv) Accuracy Vs Precision. (10)
18. Explain the constructional details and principle of operation of RTD with necessary diagram. Also give its advantages and disadvantages. (10)
19. Explain the construction and working megnetostriuctive transducer. (10)
20. Describe the operation and construction and application of vibration sensor. (10)