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**Question Paper Code: 34062**

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

Fourth Semester

Instrumentation and Control Engineering

01UIC402 - INDUSTRIAL INSTRUMENTATION - I

(Common to Electronics and Instrumentation Engineering)

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. What is meant by strobotron?
2. What are the advantages of stroboscope?
3. Define Piezo-electric effect.
4. Define density and what are its units?
5. What is calibration?
6. Define vacuum pressure.
7. List the applications of RTD.
8. What is triple point of water?
9. Give the demerits of optical pyrometer.
10. State peltier effect.

PART - B (5 x 16 = 80 Marks)

11. (a) Explain any two types of torque measurement with a neat sketch.

(16)

Or

- (b) Describe in detail about magneto elastic load cell with neat diagram. (16)
12. (a) Describe the working of piezo electric type accelerometer with neat diagram. (16)

Or

- (b) Explain the detail about LVDT and Strain gauge accelerometer. Give its merit and demerits. (16)
13. (a) With neat diagram, illustrate the operation of capacitive type pressure gauge. (16)

Or

- (b) Draw the diagram of McLeod gauge and explain in detail. (16)
14. (a) Describe the construction and working of 3 wires and 4 wires RTDs. (16)

Or

- (b) Explain in detail about the operations of bimetallic thermometer. (16)
15. (a) Describe in detail about cold junction compensation techniques with neat diagram. (16)

Or

- (b) Explain in detail about Signal conditioning circuit for thermocouple. (16)
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