Reg. No. : | | | | | | | | | | |

Question Paper Code: 34602

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Fourth Semester

Instrumentation and Control Engineering

01UIC402 - INDUSTRIAL INSTRUMENTATION - I

(Common to Electronics and Instrumentation Engineering)

(Regulation 2013)

Duration: 1:15hrs Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. Which of the following statements is true about stroboscope?

   (a) Stroboscope is non-contact type frequency instrument

   (b) Stroboscope can measure frequency up to 5 *Hz*

   (c) Stroboscope uses electromagnetic radiations to measure frequency

   (d) All of the above

2. Pneumatic load cells use this method for measuring

   (a) temperature (b) pressure (c) force (d) torque

3. An LVDT has an output in the form of

   (a) linear displacement of core (b) pulse

   (c) rotary movement of core (d) angular movement of core

4. The atmospheric pressure is taken as one bar: 1bar =

   (a) 10.3 kg/cm^2 (b)20.6 kg/cm^2

   (c) 5.2 kg/cm^2 (d) 15.8 kg/cm^2

5. 1 *psi* is equal to

(a) 6·895 *pa* (b) 68·95 *pa* (c) 6·895 *k pa* (d) 68·95 *k pa*

6. Pirani gauge is a device that measures _____ pressure.

(a) absolute (b) relative
(c) vacuum (d) low pressure

7. Thermistor can be used to measure

(a) flow (b) level (c) temperature (d) pressure

8. Resistors with negative temperature co efficient are called as

(a) Thermocouple (b) Thermistor
(c) RTD (d) pyrometer

9. The optical pyrometer cannot be used for temperature under _____approximately.

(a) 800 ^{0} c (b) 900^0 c (c) 1000^0 c (d) 700^0 c

10. Optical pyrometer is used to measure

(a) light intensity (b) low temperature
(c) high temperature (d) light intensity and high temperature

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Explain about drag-cup type tachometer. (8)

12. Describe the working of piezo electric type accelerometer with neat diagram. (8)

13. Discuss about different types of manometer (8)

14. Describe the construction and working of 3 wires and 4 wires RTDs. (8)

15. Describe in detail about cold junction compensation techniques with neat diagram. (8)