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

Question Paper Code: 59476

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

Open elective

Civil Engineering

15UEC976 SENSORS AND ACTUATORS

(Common to CSE, EEE, EIE, Mechanical, IT, Chemical,Agri)

(Regulation 2015)

Duration: 1.15 hrs Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. Application of displacement sensor? CO1- R

   (a) Travel Range (b) Flix Density

   (c) Rheostat (d) SONAR

2. Hall effect sensor is used to detect CO1- R

   (a) magnetic field (b) photoelectric sensor

   (c) electromagneticfield (d) fluxdensity

3. A nested capsule pressure gauge_____ CO2- U

   (a) two convex diaphragms (b) two convex diaphragms

   (c) a concave and concave diaphragam (d) none of these

4. _____ sensors are used to detect non-magnetic but conductive materials CO2- U

   (a) pneumatic proximity (b) Capacitive Proximity

   (c) Eddy current proximity (d) inductive proximity

5. orifice plate sensor works on _____ CO3- R

   (a) Doppler effect (b) Gauss law

   (c) Strain fluctuations (d) pressure flucations

6. _____ is used measure the speed of motor CO3- R

(a) resistive sensor (b) tachogenerator

(c) rotometer (d) galvanometer

7. _____are used in street lights to control when the light should turn on and turn off CO4- R

(a) Thermistor (b) photoconductor (c) photodiode (d) photo resistor

8. _____unit of thermal conductivity CO4- R

(a) watts (b) watts per kelvin (c) joules (d) kelvin

9. _____ is the phenomenon is used to recover original size when it is heated CO5- R

(a) pseudo effect (b) inverse pizeo effect (C) magnetic (d) shape memory

10. _____ sensor can be used for monitoring for fermentation products and estimation of various ion CO5- R

(a) resistive sensor (b) biosensor (c) chemical sensor (d) microsensor

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11.	Explain about photo electric sensor	CO1-U	(8)
12.	Explain about Tactile Sensor with neat diagram	CO2 -U	(8)
13.	Describe with neat diagram and working of tachogenerator	CO3- U	(8)
14.	Explain about accelerometer and vibrometer	CO4-U	(8)
15.	Explain about acceleration Sensor	CO5- U	(8)