

Extra: 14

V. P. & R. P. T. P. Science College
Vallabh Vidyanagar

Internal Examination B.Sc. Semester-6

Subject: Instrumentation and Sensors **Code: US06CPHY06**
Date: 17-03-2018 Saturday **Time: 11.00 to 12.30 pm** **Marks: 25**

Q. 1 Answer with correct option: (Each 1 Mark) (3)

1. In LVDT the transformer core is generally made up of
(a) hard iron core (b) soft iron core (c) high permeability steel (d) steel
2. In ionization transducer the electric field is generated by..... generator.
(a) RF (b) Microwave (c) UHF (d) Ultrasonic.
3. Which of the followings exhibits negative temperature coefficient of resistance?
(a) Nickel (b) Platinum (c) thermistor (d) copper

Q.2 Answer any Two in Short: (Each 2 Mark) (4)

1. Explain principle of measurements of Capacitive transducers.
2. Discuss thermal conductivity gage for pressure measurements.
3. What is a thermocouple? Explain its construction and principle.

Q. 3 Draw labeled diagram of Cathode Ray Oscilloscope. Show that in a Cathode ray tube of a CRO, path of an electron reaching the screen is parabolic. (6)

OR

Q. 3 Explain non-self generating type inductive transducers. (6)

Q. 4 State various types of pressures. Explain pressure measurements using McLeod gage. (6)

OR

Q. 4 Write a note on Opto-Electrical transducers. (6)

Q. 5 State various methods of temperature measurements. Explain principle and working of Solid Rod Thermometers. (6)

OR

Q. 5 Write a note on total radiation pyrometer. (6)

