D 90159 (Pages : 2)

Name.....

Reg. No.....

FIFTH SEMESTER B.TECH. (ENGINEERING) [09 SCHEME] DEGREE EXAMINATION, NOVEMBER 2015

AI 09 506 – TRANSDUCERS

Time : Three Hours Maximum : 70 Marks

Part A

Answer **all** *questions.*

1. What is bourdon tube?
2. Define Impulse input.
3. What is a capsule?
4. Define Stress and strain.
5. List the piezo electric co-efficients.

(5 × 2 = 10 marks)

Part B

Answer any **four** *questions.*

6. Discuss the significance of optics used in radiation transducer.
7. Explain the relation between voltage and current and magnetic field due to hall effect.
8. Discuss the operation of inductive gauging or eddy current generator.
9. Differentiate Piezoelectric and Piezoresistive transducer.
10. Describe Hooke's law.
11. Describe Heterodyne technique.

(4 × 5 = 20 marks)

Part C

Answer Section (a) **or** *Section (b) of each question.*

12. (a) Explain the operation of thermistor.

Or

(b) Describe the operation of strain gauge in measurements.

13. (a) Describe the working principle of Hall effect transducer.

Or

(b) Explain Variable distance and variable area capacitive transducer.

Turn over

14. (a) Explain Dynamometer type torque measurement.

Or

(b) Describe Induction type Accelerometer.

15. (a) Describe the operation of Saybolt viscometer.

Or

(b) Explain the operation of Glass membrane indicator for pH measurement.

(4 × 10 = 40 marks)