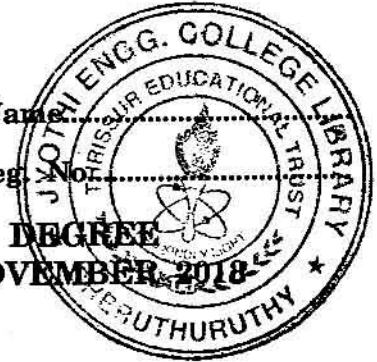


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Name:

Reg. No:



**FIFTH SEMESTER B.TECH. (ENGINEERING) DEGREE
[REGULAR/SUPPLEMENTARY] EXAMINATION, NOVEMBER 2018**

AI 09 506—TRANSDUCERS

Time : Three Hours

Maximum : 70 Marks

Part A

Answer all questions.

1. What is the need for transducers ?
2. State the principle of thermistor.
3. What are damping devices ?
4. What is an analytical balance ?
5. State the advantage of digital accelerometers over analog accelerometers.

(5 × 2 = 10 marks)

Part B

Answer any four questions.

1. Explain the classification of transducers.
2. Explain the working of an ionization transducer.
3. Explain the working of an capacitive transducer.
4. Explain a method to measure displacement of a body.
5. Explain the working of a consistency meter.
6. Explain the working of a bonded strain gauge.

(4 × 5 = 20 marks)

Part C

1. (a) Explain the working of :
 - (i) Hot wire anemometer ;
 - (ii) Resistive magnetic flux transducer.

Or

- (b) Explain the working of a :
 - (i) Strain gauge ;
 - (ii) Resistive optical radiation transducer.

Turn over

2. (a) Explain the working of a LVDT. Discuss its characteristics.

Or

- (b) (i) Discuss on Hall-effect.

- (ii) Explain the working of a piezo electric transducer.

3. (a) Explain a method to measure torque and a method to measure velocity of a body.

Or

- (b) Explain a method to measure force and a method to measure acceleration.

4. (a) Explain the working of a rotometer type viscometer.

Or

- (b) Explain the working of a digital pH meter.

(4 × 10 = 40 marks)