

Roll No.

3116

**B. Tech. 4th Semester (ME)
Examination – July, 2021**

INSTRUMENTATION AND CONTROL

Paper : PCC-ME-210-G

Time : Three Hours]

[Maximum Marks : 75

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt five questions in all, selecting one question from each Unit. Question No. 1 is compulsory. All questions carry equal marks.

1. Attempt all the six questions : $2.5 \times 6 = 15$
- (a) What do you understand by accuracy ?
 - (b) What is opto-electrical transducer ?
 - (c) Write about electrical amplifying elements.

- (d) Write working principle of Bimetallic thermometer.
- (e) Write concept of elastic transducer.
- (f) What is calibration?

UNIT - I

- 2. Write in detail about processing and conditioning. 15
- 3. What is instrument ? Explain the applications of instrument systems. 15

UNIT - II

- 4. (a) What are Analog transducers ? 8
- (b) Write about Eddy current. 7
- 5. (a) What is linear variable differential transformer ? 10
- (b) Write about photo-conductive transducers. 5

UNIT - III

- 6. (a) Explain pneumatic load cell. 8
- (b) Write about torque transducer. 7

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- 7. Write short note on the following :
 - (a) Pressure thermometer 8
 - (b) Total radiation pyrometer 7

UNIT - IV

- 8. (a) Write about basic elements of control systems. 8
- (b) Explain high pressure transducer. 7
- 9. Write about :
 - (a) Pitot-Static tube meter. 8
 - (b) Hot-wire Anemometer. 7

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