

Roll No. 

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 02

Total No. of Questions : 09

**B.Tech.(AE) (2012 to 2017) (Sem.-5)**  
**MEASUREMENTS AND INSTRUMENTATION**  
Subject Code : BTAE-505  
M.Code : 70488

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

**SECTION-A****1. Answer briefly :**

- a) Define Standard deviation.
- b) Define Accuracy and precision of the instrument.
- c) What is a transducer?
- d) What is a ramp input signal?
- e) What is meant by dynamic error of measurement?
- f) Write the function of transducer.
- g) What do you mean by sensitivity of an instrument?
- h) State the law of intermediate metals in context of thermos couples.
- i) For what purpose pyrometer is used?
- j) What is liquid in glass thermometer?

### SECTION-B

2. Discuss the different types of standards of measurement.
3. What is data acquisition system? Give the block diagram arrangement of a data acquisition system and describe the function of each component.
4. Explain construction and working of pitot static tube meter.
5. What do you understand by zero, ramp and sinusoidal input signals?
6. Explain functional elements of a measuring system.

### SECTION-C

7. What is the selection criterion for the transducer? Explain the working principle of LVDT with neat sketch. Give advantages, disadvantages and applications of LVDT.
8. Discuss various electrical methods to measure the temperature.
9. Explain the basic principles of operation of electronic flow meter and electromagnetic flowmeter along with their merits and demerits.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**