2101272

# BACHELOR OF VOCATION
## Automotive Mechatronics
## Subject: Sensors and Transducers
## Subject Code: ABME-201
## Semester: Third
## January 2021
## Theory (External): 35 Marks
## Time: 03 Hours

**Instructions to the Students**

1. This Question paper consists of two Sections. All sections are compulsory.
2. Section A comprises 10 questions of objective type in nature. All questions are compulsory. Each question carries 1 mark.
3. Section B comprises 8 essay type questions out of which students need to do any 5. Each question carries 5 marks.
4. Read the questions carefully and write the answers in the answer sheets provided.
5. Do not write anything on the question paper.
6. Wherever necessary, the diagram drawn should be neat and properly labelled

**Roll Number**

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## SECTION –A (SHORT/OBJECTIVE TYPE QUESTIONS)
## (10x1=10 Marks)

A. What do you mean by sensor reliability?

B. Define instrumental error.

C. Compare synchros with resolver

D. What do you mean by absorption type dynamometer?

E. What do you mean by anemometer?

F. Explain the principle of induction potentiometer

G. What is the principle of capacitive transducer?

H. What are the advantages of resistive thermometers (RTD)?

I. Mention the features of thermistors.

J. What is conductive cell?

## SECTION –B (ESSAY TYPE QUESTIONS)
## (5x5=25 Marks)

1. Differentiate sensor with transducer in details.
2. Describe the basic working principle of magnetic and biological sensors.
3. Explain any two type of Force measurement transducers.
4. Describe working and construction of LVDT transducer and its applications.
5. Describe electromagnetic flow meter in details
6. Explain the construction and working of thermocouple and thermistor.
7. Explain the construction and working of photo voltaic with sketch.
8. Explain the basic operation of variable resistance and inductance transducers in details.

*****END OF PAPER*****