

**BACHELOR OF VOCATION****Robotics and Automation****Subject: Sensors Applications in Manufacturing****Subject Code: ECE-602****Semester: Third****December 2021****Theory (External): 35 Marks****Time: 03 hours**

6. Evaluate the importance, performance and applications of various sensors in Automobile industries.
7. Explain five types of position sensors and its application
8. Explain in brief RFID Technology.

==END OF PAPER==

**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 (OBJECTIVE TYPE QUESTIONS)**  
(10x1=10 Marks)

- A. The sensors are classified on the basis of
- Functions
  - Performance
  - Output
  - All of the above
- B. Which of the following is not covered under Mechanical energy domain?
- Distance
  - Latent heat
  - Force.
  - Size
- C. The ability to give same output reading when same input value is applied repeatedly is known as
- Stability
  - Sensitivity
  - Repeatability
  - Accuracy
- D. Following is not an example of transducer.
- Analogue voltmeter
  - Thermocouple
  - Photo electric cell
  - Pneumatic cylinder
- E. Define transducer and give an example
- F. What are dynamic characteristics?
- G. Define hysteresis

H. What is optical encoder

I. What is RFID

- J. Following acts as detector in Optical sensor
- Light emitting diode
  - Photo diode
  - Transistor
  - All of the above

**SECTION -B (ESSAY TYPE QUESTIONS)**  
(5x5=25 Marks)

- Differentiate between passive and active transducers. Give an example of each.
- Identify the factors to be considered for selection of transducer for a particular application.
- Compare and explain static and dynamic characteristics of transducers / measurement system.
- Explain the classification of transducers in detail.
- Compare translational and rotary encoders with necessary sketches.