

2209T118

**BACHELOR OF VOCATION**  
**Mechatronics**  
**Subject: Sensors and Transducers**  
**Subject Code: ECE-702**  
**Semester: Fifth**  
**September 2022**  
**Theory (External): 35 Marks**  
**Time: 03 hours**

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**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. What do you mean by biological sensor ?
- B. Define variable reluctance
- C. Compare synchros with resolver
- D. What do you mean by rota meter
- E. What do you mean by anemometer
- F. Explain the principle of induction potentiometer
- G. What is the principle of pirani gage?
- H. What are the advantages of optical pyrometer?
- I. Mention the features of thermistors.
- J. What is optoelectric sensor?

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**SECTION –B (ESSAY TYPE QUESTIONS)**

**(5x5=25 Marks)**

1. Differentiate sensor with transducer in details.
2. Describe the basic working principle of chemical and biological sensors.
3. Explain any two type of pressure measurement transducers.
4. Describe working and construction of digital force transducer and its applications.
5. Describe electromagnetic flow meter in details
6. Explain mechanical and resistance type temperature sensor.
7. Explain the construction and working of proximity sensor.
8. Explain the basic operation of variable resistance and inductance transducers in details.

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