D 130933 **(Pages : 2)** **Name.....**

Reg. No.....

THIRD SEMESTER B.VOC. DEGREE EXAMINATION
NOVEMBER 2025

Common Course

A12—GENERAL COURSE II : SENSORS AND TRANSDUCERS

(2021 Admissions)

Time : Two Hours and a Half Maximum : 80 Marks

Section A

Answer the following questions (1-15).
Each question carries 2 *marks.*

1. What is Transduction ?
2. What is a secondary transducer ? Give an example.
3. Differentiate between the accuracy and precision of a transducer.
4. What is the basic principle of thermocouple ?
5. What are the applications of capacitance transducers ?
6. What is an RTD ?
7. How does LDR work as a sensor ?
8. What are the components of a capacitive level gauge ?
9. Explain Hall effect.
10. How does sound level meter work ?
11. State and explain Bernoullis principle.
12. How do you maintain an anemometer for accurate reading ?
13. Explain the isolation in transducers ?
14. What is the effect of the temperature coefficient of resistance in strain gauge measurement ?
15. Explain the principle of operation of photodiode.

(Ceiling : 25 marks)

Turn over

Section B

Answer the following questions (16 - 23).
Each question carries 5 *marks.*

16. Explain the working principle and applications of potentiometer as transducers.
17. Compare active and passive transducers.
18. Explain the principle of operation of IR radiation sensors. What are their applications ?
19. Explain the advantages and disadvantages of discrete level measurement.
20. Explain the working principle of the electromagnetic flowmeter.
21. Explain the principle of operation of Hall Effect transducers.
22. Explain the working of a venturi tube.
23. Explain the working of a microphone.

(Ceiling : 35 marks)

Section C

Answer any **two** *questions.*
Each question carries 10 *marks.*

24. Explain the working and principle of operation of LVDT in detail with necessary diagrams.
25. Explain the construction, working principle, and applications of thermocouples.
26. Explain the working of the U-tube manometer and compare it with well - type manometer.
27. Explain the construction, working and principle of operation of the photo emissive cell.

(2 × 10 = 20 marks)