24U346S (Pages: 2) Name: .....

Reg.No: .....

THIRD SEMESTER B.Sc./B.C.A. DEGREE EXAMINATION, NOVEMBER 2025

(CBCSS - UG)

CC19UBCS3A12A / CC19UBCA3A12A - SENSORS AND TRANSDUCERS

(Computer Science / Computer Application - Common Course)

(2019 to 2023 Admissions - Supplementary/Improvement)

Time : 2.5 Hours Maximum : 80 Marks

Credit : 4

Part A (Short answer questions)

Answer ***all*** questions. Each question carries 2 marks.

1. What are the different parts of a transducer?
2. What is mean by primary transdcers.
3. Define Minimum Detectable Signal (MDS).
4. Identify the types of strain gauges.
5. What is capacitive transducer?
6. What is Thermal sensors? Give any two examples.
7. Define Thermocouple.
8. Define Thermostat.
9. What is Level transducer?
10. List the different types of capacitive level transducers.
11. Why Venturi meter preferred over Orifice plate.
12. List the names of Radiation sensors.
13. Define Photovoltaic effect.
14. What is sound level meter?
15. Define Hall effect and justify the applications of it.

(Ceiling: 25 Marks)

Part B (Paragraph questions)

Answer ***all*** questions. Each question carries 5 marks.

16. Differentiate Resistive transducer and Inductive transducer.
17. Explain the construction and working of RTD.

18. Define Thermistor. Discuss the working of Thermistor.

19. Discuss the working of gas filled radiation detectors.

20. Explain different types of electrical device can be used to make pressure transducers.

21. Differentiate U-tube Manometer and inclined tube manometer

22. Explain the different applications of anemometer.

23. What are the different modes of operations of a photodiode?

(Ceiling: 35 Marks)

Part C (Essay questions)

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

24. Discuss the operation of potentiometer and how to make use of it as displacement sensor.

25. Explain the working of LVDT with advantages,disadvantages and applications.

26. What is descrete level transducer? Explain the working of descrete level transducer.

27. Explain the construction and working of photoemissive cell with suitable diagram.

(2 × 10 = 20 Marks)

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