

21U335

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Name:

Reg.No:

THIRD SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

(CBCSS - UG)

(Regular/Supplementary/Improvement)

CC19U BCS3 A12 A / CC19U BCA3 A12 A - SENSORS AND TRANSDUCERS

(Computer Science / Computer Application - Common Course)

(2019 Admission onwards)

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 inverse transducer? Give an example.
3. Define non-linearity.
4. What is self induction of a coil?
5. List the advantages of Capacitive transducer.
6. What is RTD? List the advantages of RTD.
7. What is Thermistor? Draw the basic symbol of a Thermistor.
8. Differentiate Thermostat and Thermocouple.
9. What is manometer? List the different types of manometer.
10. List the different types of Level transducers.
11. Define Bernoulli's theorem .
12. List the names of Radiation sensors.
13. What is photodiode? Draw the basic symbol of LDR.
14. List the characteristics of microphone
15. Define Hall effect of a conductor.

(Ceiling: 25 Marks)

Part B (Paragraph questions)

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

16. Define LVDT? What are the advantages and disadvantages of LVDT?

17. Discuss the different classifications of thermal sensors.
18. Explain the construction and working of Thermocouple.
19. Explain the working of gas filled radiation detectors.
20. Distinguish between well type manometer and inclined tube manometer.
21. Discuss the working of Discrete level transducers with the help of suitable diagram.
22. Explain the working of anemometer.
23. Briefly discuss the working of Photoemissive cell.

(Ceiling: 35 Marks)

Part C (Essay questions)

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

24. Define Resistive Transducer. Explain any two applications of Resistive transducer with suitable diagram.
25. Discuss the operation of strain gauge and how to make use of it as force sensor.
26. Explain the different types of capacitive level transducers.
27. Explain the construction and working of photovoltaic cell with suitable diagram.

(2 × 10 = 20 Marks)
