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(Pages: 2)

Name: .....

Reg.No: .....

**THIRD SEMESTER B.Sc./B.C.A. DEGREE EXAMINATION, NOVEMBER 2024**

(CBCSS - UG)

(Regular/Supplementary/Improvement)

**CC19U BCS3 A12A / CC19U BCA3 A12A - 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. List the static characteristics of transducer.
3. What is gauge factor of strain gauge?
4. What is mean by eddy current?
5. Distinguish between capacitive and inductive transducers.
6. What are the classifications of Thermal sensor?
7. Estimate the advantages and disadvantages of Thermistor.
8. Identify the materials used for constructing thermocouples.
9. What is Resistive pressure transducer?
10. What is Level transducer?
11. What is Bernoulli's theorem and where it is applicable?
12. Discuss the advantages and disadvantages of Rotameter.
13. What are the classifications of photodiode based on its construction?
14. List any four applications of photoemissive cell.
15. Define Photovoltaic effect.

**(Ceiling: 25 Marks)**

**Part B** (Paragraph questions)

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

16. Define Resistive transducer .Explain any one application of Resistive transducer.
17. Explain how RTD it is used to measure temperature.

18. Explain how does a thermostat works.
19. Discuss the working of gas filled radiation detectors.
20. Distinguish between U-tube Manometer and inclined tube manometer.
21. Discuss the working of Discrete level transucers with the help of suitable diagram.
22. Explain the characteristics of microphone.
23. Define Hall effect transucer.Discuss the characteristic equation to find the hall effect voltge.

**(Ceiling: 35 Marks)**

**Part C (Essay questions)**

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

24. Define transducer.What are the different classifications of transducer.
25. Discuss in detail the construction and working of RVDT.
26. Explain the different types of manometer and its working.
27. Discuss the different types and working of LDR.

**(2 × 10 = 20 Marks)**

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