THIRD SEMESTER B.Sc./B.C.A. DEGREE EXAMINATION, NOVEMBER 2021

(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. Define sensor. Give an example.

2. Write down the characteristic equation of resistive transducer.

3. Define eddy current.

4. Write the parameter measured by:

   (i) LVDT   (ii) RTD   (iii) strain gauge   (iv) Manometer

5. Compare capacitive and inductive transducers.

6. What are the classifications of Thermal sensor?

7. What is Thermistor? Draw the basic symbol of a Thermistor.

8. What is mean by Seeback effect?

9. Identify the classifications of manometer.

10. What is Level transducer?

11. What is Rotameter?

12. Define LDR.What are the different categories of LDR.

13. What is photodiode?Draw the basic symbol of LDR.

14. What is photoemissive cell?

15. Define Hall effect of a conductor.

(Ceiling: 25 Marks)

Part B (Paragraph questions)
Answer *all* questions. Each question carries 5 marks.

16. What are the different classifications of transducers?

17. Explain the construction and working of RTD.

18. Explain the working of Thermostat.

19. Explain the working of gas filled radiation detectors.

20. What are the different types of electrical device used to make pressure transducers.

21. Differentiate well type manometer and inclined tube manometer.

22. Briefly discuss the working of Orifice meter as flow level transducer.

23. Briefly discuss the working of sound level transducer.

(Ceiling: 35 Marks)

Part C (Essay questions)
Answer any *two* questions. Each question carries 10 marks.

24. What is transducer? Explain the characteristics of transducer.

25. Discuss the operation of strain gauge and how to make use of it as force sensor.

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

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

(2 × 10 = 20 Marks)

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