21BSC6C15ELL

Sl. No.

B.Sc. VI Semester Degree Examination, Sept./Oct. - 2024
ELECTRONICS
DSC-8 : Instrumentation and Microcontroller
(NEP)

Time : 2 Hours   Maximum Marks : 60

Note :   *Answer **all** sections.*

SECTION - A

Answer the following questions.   **10x1=10**

1. (a) Expand LVDT.

    (b) What is Transducer ?

    (c) How many timers in 8051 Microcontroller ?

    (d) What is Active Filter ?

    (e) What is ADC ?

    (f) Expand DPTR.

    (g) What is Thermistor ?

    (h) What is CMRR ?

    (i) Expand the meaning of MOVA, @ RO Instruction.

    (j) What is Good Integrator ?

SECTION - B

Answer **any four** questions.   **4x5=20**

2. Explain the working of Resistance type temperature sensor.

3. Explain the working of Integrator.

4. Write a note on Arithmetic instructions.

5. What are the salient features of Microcontroller 8051 ?

6. Explain TCON resister.

7. Explain the classification of 128 bytes of RAM.

SECTION - C

Answer **any three** questions. **3x10=30**

8. What is Optical Pyrometer ? Explain with a neat diagram principle of working.

9. Derive the expression for higher cut-off frequency of active low-pass filter.

10. With a neat block diagram of 8051 Microcontroller architecture, explain its Registers.

11. Explain the addressing modes of Microcontroller 8051.

12. Explain the logical instructions with examples.

13. Write short notes on :
    (a) Solid state sensors
    (b) PSW Register

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