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C14-EC-504

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**BOARD DIPLOMA EXAMINATION, (C-14)
OCTOBER/NOVEMBER-2018
DECE - FIFTH SEMESTER EXAMINATION**

MICROCONTROLLER APPLICATIONS

Time : 3 Hours]

[Total Marks: 80

PART-A

3X10=30

- Instructions :**
1. Answer **All** questions.
 2. Each question carries **three** marks.
 3. Answer should be brief and straight to the point and shall not exceed five simple sentences.

1. List various types of temperature sensors.
2. Give formula for determining clock frequency of ADC 0804.
- * 3. Compare between SRAM, DRAM.
4. Interpret the memory capacity of any three memory IC's.
5. Give 8255 control word format (I/O) mode.
6. List the applications of memory mapped I/O
7. List any six popular RTC IC's.
8. Mention the features of DSI2887.
9. Compare optocoupler and optoisolator.
10. What is relay? Write its principle of working.

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PART-B

10X5=50

Instructions :

1. Answer any **Five** questions.
2. Each question carries **ten** marks.
3. Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer

11. Explain the clock source for ADC 0804 with the help of a circuit diagram.
12. Explain the interfacing of large external memory (256KB)
13. (a) Explain memory address decoding 74LS138 3 x 8 decoder.
(b) Explain about data memory space of 8051.
14. Explain the interfacing of LCD with 8051 using 8255.
15. Explain interfacing of 8255 to 8051 with the help of a circuit diagram.
16. Explain with the help of a circuit diagram the interfacing of DS12887 to 8051
17. (a) Explain address map of DS12887 IC.
(b) Give pin configuration of DS12887 IC.
18. Explain the concept of interfacing stepping motor to 8051 with the help of a circuit diagram.
