

BACHELOR OF TECHNOLOGY (C.B.C.S.) (2020 COURSE)
B.Tech.Sem - III R&A R&A :SUMMER- 2022
SUBJECT : ITC-I: EMBEDDED SYSTEMS

Day : Friday
Date : 3/6/2022

S-24781-2022

Time : 02:30 PM-05:30 PM
Max. Marks : 60

N.B.:

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw neat and labeled diagrams **WHEREVER** necessary.
 - 4) Assume suitable data if necessary.
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Q.1 Describe the architecture of 8051 with the help of neat internal block schematic diagram. **[10]**

OR

Q.1 a) What is the difference between Harvard and Von Neumann architecture? **[05]**

b) What are the contents of PSW register of 8051? **[05]**

Q.2 Write a note on interrupt structure of 8051 with neat diagram. **[10]**

OR

Q.2 Write a program to transmit a string serially using 8051. **[10]**

Q.3 Draw and explain interfacing of stepper motor with 8051. **[10]**

OR

Q.3 Draw and explain interfacing of ADC with 8051. **[10]**

Q.4 Compare features of different PIC microcontroller series. **[10]**

OR

Q.4 List features of PIC18FXX microcontroller series. **[10]**

Q.5 Draw explain interfacing of seven segment display with PIC microcontroller. **[10]**

OR

Q.5 Draw explain interfacing of keyboard with PIC microcontroller. Write an algorithm for key scanning. **[10]**

Q.6 Write a note on CAPTURE mode of PIC with neat diagram. **[10]**

OR

Q.6 Write a note on I2C protocol and SPI protocol. **[10]**

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