B.Tech. sem-III (2021) course. Robotics. Winter.2022

BACHELOR OF TECHNOLOGY (C.B.C.S.) (2021-COURSE)
B. Tech. Sem - III Robotics & Automation Engineering : WINTER- 2022
SUBJECT : ITC-I: EMBEDDED SYSTEMS

Day : Monday | Time : 10:00 AM-01:00 PM
Date : 19-12-2022 | W-25356-2022 | Max. Marks : 60

N.B. :
1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.

Q.1 Write a note on memory organization of 8051. **(10)**

OR

Q.1 **a)** Differentiate between Von-Neumann and Harvard architecture. **(05)**
b) Compare microprocessor and microcontroller. **(05)**

Q.2 Generate a square ware at port P2 of 8051 with time period 40msec. Use timers for generating delay show necessary calculation. **(10)**

OR

Q.2 Draw and explain interrupt structure of 8051. **(10)**

Q.3 Draw and explain interfacing of keyboard with 8051. Write an algorithm for key scanning. **(10)**

OR

Q.3 Write a program for 8051 to interface 16 x LCD and display following string on LCD. **(10)**

"HANNAH"

Q.4 Draw and explain architecture of PIC18F. **(10)**

OR

Q.4 Write a note on following features of PIC18F **(10)**

a) Oscillator options
b) Stack overflow reset
c) Watchdog Timer

Q.5 Write note on PWM generation in PIC18F. **(10)**

OR

Q.5 Write a note on programing of Timer 1 of PIC18F. **(10)**

Q.6 Elaborate COMPARE mode of PIC18F. **(10)**

OR

Q.6 Write a note on I2C protocol. Mention different acknowledgements generated. **(10)**

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