

Total No. of Printed Pages:2

SUBJECT CODE NO:- 2172
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y (Sem-VI)
Examination March/April-2022 (To Be Held In June/July-2022)
Electronics Paper- XX (602)
A) Micro Controller – II

[Time: 1:53 Hours]

[Max. Marks: 50]

Please check whether you have got the right question paper.

N.B Attempt all questions

Q.1 Give the format of TMOD register and TCON register explain the function of each bits of their register write an ALP to generate square waves using timer 1 in mode 1 20

OR

Explain SCON register format Give the procedural steps to receive data serially. Write an ALP to receive byte of data serially with baud rate at 9600 using asynchronous mode 1 and send received data on port P1 20

Q.2 Explain the interrupts in 8051 microcontroller with their vector addresses. Give the format of IE and IP register and explain function of each bit. 20

OR

Write short note on following (any four) 20

- 1) Timer operation in mode2 and its programming
- 2) Counter configuration and ALP to count external pulses using counter in mode 2
- 3) 16 X 2 LCD connections to port 1 of 8051 and data write subroutine
- 4) Programming external hardware interrupt with suitable program
- 5) ALP to toggle port pin P1.2 using timer interrupt to generate square waves
- 6) Interfacing of LM35 sensor with 8051 using ADC 0808

Q.3 Rewrite the following by selecting correct answer from given options 10

- 1) The 8051 timer has ----- modes of operation.
a) 2 b) 4 c) 6 d) 8
- 2) ---- provides the clock to timer /counter if $C/\bar{T}=0$ in TMOD register
a) Internal clock b) external clock c) direct crystal frequency d) none
- 3) In mode 2 timer flag set to logic 1 at ----
a) Start of timer b) end of execution c) roll over d) stop of timer
- 4) Timer mode 2 reloads -----at roll over.
a) TL_X with 00H 2) TL_X with FFH 3) TL_X from TH_X d) TH_X from TL_X
- 5) ---- pins of 8051 are used in serial communication
a) TO & T1 b) $INT\phi$ & $INT1$ c) $T_X D$ & $R_X D$ d) R/W & ALE

- 6) The UART of 8051 divides internal clock pulse by ----
 - a) 12 b) 16 c) 20 d) 22
- 7) The priority of interrupt INT1 is -----
 - a) First b) second c) third d) fourth
- 8) The vector address of interrupt are located at ----
 - a) Program memory b) data memory c) PSW d) \$FR
- 9) ---- pin of 16X2 LCD is used to select command /data register
 - a) E b) RS c) R/W d) D7
- 10) In ADC0808, data is mode available on data bus by activating ---- signal
 - a) SC b) EOC c) OE d) ALE