

Total No. of Printed Pages: 02

**SUBJECT CODE NO: - Y-2172**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**B.Sc. T.Y (Sem-VI)**  
**Examination March / April - 2023**  
**Electronics Paper- XX (602) Micro Controller - II**

[Time: 1:30Hours]

[Max. Marks: 50]

Please check whether you have got the right question paper.

N. B

1) Attempt all questions.

- Q.1 Give the format of TCON register and explain its each bit in detail. Explain the correct 20  
 eristic and operation of timer in mode 1. Explain with diagram the clock generation for  
 timer register in mode 1 from crystal oscillator. Write an ALP to generate square waves  
 of 50% duty cycle on port p1.5 using timer 1 in mode 1.

**OR**

Explain the concept of serial and parallel data transfer. Give details of half, half duplex  
 and full duplex data communication Explain data framing in asynchronous serial  
 communication. Enlist the signals on DB-9 connector.

- Q.2 Explain in detail the special function register used for interrupt in 8051 microcontroller. 20  
 Explain six interrupts with their vector addresses.

**OR**

Write short notes. ( any four )

1. Interfacing of DAC 0808 with 8051 microcontroller
2.  $16 \times 2$  LCD connections to port 1 of 8051 and commend write subroutine
3. Pin diagram and pin description of ADC0808
4. ALP to count external pules using counter 2 in mode 2
5. SCON register format
6. ALP to generate square waves on port P1.3 using timer 2 interrupt.

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

1. Timer 1 register is of \_\_\_\_\_ bits.  
 a. 4                      b. 8                      c. 16                      d. 32
2. To stop running of timer 1 \_\_\_\_\_ instruction can be used  
 a. SETB TF1              b. SETB TR1              c. CCR TF1              d. CCR TR1
3. \_\_\_\_\_ of timer is auto reload mode.  
 a. Mode 0                      b. Mode 1                      c. Mode 2                      d. Mode 3
4. 8051 transmits data serially on pin \_\_\_\_\_  
 a. T x D                      b. R x D                      c. T0                      d. T1
5. SCON is \_\_\_\_\_ bit register.  
 a. 4                      b. 8                      c. 16                      d. 32

6. The baud rate of serial communication in 8051 is set by \_\_\_\_\_
  - a. Timer 0 mode 0
  - b. Timer 1 mode 1
  - c. Timer 1 , mode 2
  - d. timer 0 mode 2
7. Lowest priority interrupt is \_\_\_\_\_
  - a. RI
  - b. TFO
  - c. INTO
  - d. TF1
8. MOV IE , #88H instructions will enable \_\_\_\_\_ interrupt
  - a. RI
  - b. TFO
  - c. INTO
  - d. TF1
9. These are \_\_\_\_\_ analog inputs in ADC0808
  - a. 2
  - b. 4
  - c. 8
  - d. 16
10. \_\_\_\_\_ pin of 16×2 LCD is used to select command / Data register.
  - a. R/W
  - b. RS
  - c. DO
  - d. L