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SUBJECT CODE NO:- B-2208
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y (Sem-VI) Examination OCT/NOV 2019
Electronics Paper- XX (602)
A) Micro Controller - II

[Time: 1:30 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

N.B

i. Attempt all questions.

Q.1 Give the format of TCON register and explain function of each bit. Write an ALP to generate square wave on port pin P1.2 using timer 0 in mode 2. 20

OR

What is difference between serial and parallel data communication? Explain the procedural steps to transfer data (send data) serially. Write an ALP to send letter "N" serially at 4800 baud rate continuously using asynchronous mode 1.

Q.2 Explain the IE and IP registers with their formats. Give the vector addresses of interrupts with their priorities. Give an example to change the priority of interrupts. 20

OR

Write notes on following: (any four)

- 1) ALP to count external pulses using counter 1 in mode 1
- 2) Programming of timer in mode 2
- 3) 16×2 LCD connections to port 1 of 8051 and command write subroutine.
- 4) Interfacing of LM35 with 8051 microcontroller using ADC 0808 and its initialization instructions.
- 5) Pin out of MAX 232 and its connection to 8051 & DB9 connector
- 6) ALP to generate square wave on P1.3 using timer 1 interrupt

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

- 1) In asynchronous mode 1 serial communication, data is framed with -----
 - a) One start bit
 - b) One stop bit
 - c) One start bit and one stop bit
 - d) Only two stop bits
- 2) The baud rate is set with timer 1 in

a) Mode 0	b) Mode 1
c) Mode 2	d) Mode 3

- 3) The vector address of TF \emptyset interrupt is -----

a) 0000H	b) 0003H
c) 000 BH	d) 0013 H

- 4) In mode 2, timer roll over at -----

a) 05 H	b) 7FH
c) F \emptyset H	d) FfH

- 5) ----- register is bit addressable

a) TL \emptyset	b) TH \emptyset
c) TCON	d) TMOD

- 6) The vector address of RESET is -----

a) 0000 H	b) 0003 H
c) 000BH	d) 001BH

- 7) ----- pin of 16 \times 2 LCD is used to latch command/ data.

a) Do	b) E
c) RS	d) R/W

- 8) No of analog inputs in ADC 0808 are _____.

a) 1	b) 2
c) 4	d) 8

- 9) The EOC signal of ADC0808 changes from _____ at the end of data conversion.

a) Logic 1 to logic 0	b) Logic 0 to logic 1
c) Logic 0 to logic 0	d) Logic 1 to logic 1

- 10) The temperature sensor LM35 provides ----- mv for each degree Celsius.

a) 2	b) 5
c) 10	d) 12

OR

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B.Sc. T.Y (Sem-VI) Examination OCT/NOV 2019
Electronics Paper- XX (602)
B) 8085 Interfacing-II

[Time: 1:30 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

N.B

- i. Attempt all questions.
- ii. Illustrate yours answer with suitable labeled diagram.

- Q.1 Write the different modes of operation of 8253/8254. 20
OR
 Explain the programmable DMA controller 8257. 20
- Q.2 Explain with schematic diagram of programmable interrupt controller 8259. 20
OR
 a) Explain the rotating priority bit of 8257 DMA controller. 10
 b) Write the priority modes of other features of the 8259 programmable interrupt controller. 10
- Q.3 Attempt the following multiple choice questions. 10
- 1) The 8254 can operate in any one of the ----- different modes
 - a) Two b) Three
 - c) Five d) Six
 - 2) A control word register accepts the ----- control word written by the microprocessor & stores it for controlling the complete operation.
 - a) 8 bit b) 16 bit
 - c) 32 bit d) 62 bits
 - 3) In ----- the 8254 can be used as a square wave rate generator.
 - a) MODE 0 b) MODE 1
 - c) MODE 2 d) MODE 3
 - 4) The ----- input has a higher priority than the INTR or NMI
 - a) HOLD b) HLDA
 - c) RESET pin d) SET pin
 - 5) When EOI command is sent the 8259 it resets the highest priority.
 - a) ISR bit b) IMR bit
 - c) Can instruction d) MPU

- 6) The DMA request line are
- a) DRQ₁ - DRQ₂
 - b) DRQ₀ - DRQ₃
 - c) DRQ₁ - DRQ₃
 - d) None of these
- 7) The lower order 4-bit of this register contain the terminal count status for the ----- individual channel.
- a) Three
 - b) Four
 - c) Two
 - d) None of these
- 8) An interrupt which is masked by software is not recognized and serviced even it. The corresponding bit is set is the
- a) IRR
 - b) IMR
 - c) ISR
 - d) None of these
- 9) INT as an output and ----- as an input.
- a) INT
 - b) ISR
 - c) IMR
 - d) INTA
- 10) 8253 uses ----- technology where as 8254 uses
- a) PMOS
 - b) DMA
 - c) NMOS
 - d) Both a & b