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SUBJECT CODE NO:- 2177
FACULTY OF SICNECE AND TECHNOLOGY

B.Sc. S.Y. (Sem- IV)

Examination March/April-2022 (To Be Held In June/July-2022)

Electronics Paper- XII

A) 8086 Microprocessor Interfacing

[Time: 1:53 Hours]

[Max. Marks: 50]

Please check whether you have got the right question paper.

N.B

- i) Attempt all questions.
- ii) Illustrate your answer with suitable labelled diagram.

Q. 1 Draw the pin diagram of PIO 8255 and explain the functions of the following pins. 20

- 1) Data bus (D_0-D_7)
- 2) Port A (PA_0-PA_7)
- 3) Port B (PB_0-PB_7)
- 4) Port C (PC_0-PC_7)
- 5) Address Line (A_1-A_0)

OR

Explain Asynchronous mode format of 8251 with suitable diagram. 20

Q. 2 Draw the functional block diagram of 8253 and explain the function of each block. 20

OR

Write short notes on any four of the following 20

- 1) Static RAM Interfacing
- 2) Synchronous mode word format of 8251
- 3) Control word of 8253
- 4) Features of 8251
- 5) Mode 0 for 8255
- 6) Control word for 8251

Q. 3 Attempt following multiple choice question 10

- 1) The 8253 consists of ____ counters.
 - a) Two
 - b) Three
 - c) Four
 - d) one
- 2) Control word register is accessed when line A_0 and A_1 are at logic
 - a) 1
 - b) 0
 - c) 0 or 1
 - d) All of these.
- 3) The IC 8253 has ____ pins
 - a) 12
 - b) 16

- c) 24
- d) 40
- 4) IC 8251 is ____ receiver and transmitter compatible with processor
 - a) Synchronous
 - b) Asynchronous
 - c) Synchronous & Asynchronous
 - d) None of the above
- 5) When data may be transfer between two trans receivers then this mode is
 - a) Simplex
 - b) Duplex
 - c) Half duplex
 - d) triplex
- 6) In BSR mode the 8-bits of Part C can be set or Reset depending on ____ of the control word.
 - a) A₀
 - b) B₀
 - c) C₀
 - d) B₁
- 7) The two groups of I/O pins are named as ____ group
 - a) C
 - b) D
 - c) C and D
 - d) A and B
- 8) The stepper motors have been designed to work with
 - a) Digital circuit
 - b) Analogue circuit
 - c) Both a and b
 - d) None of these
- 9) The semiconductor RAM's are classified as ____
 - a) Static RAM
 - b) Dynamic RAM
 - c) Dynamic ROM
 - d) Both a and b
- 10) If memory has thirteen address lines then its capacity is written as –
 - a) 2k
 - b) 4k
 - c) 8k
 - d) 16k