Total No. of Questions—8]   [Total No. of Printed Pages—3

Seat
No.

[5252]-168

S.E. (Computer Engineering) (Second Semester)

EXAMINATION, 2017

MICROPROCESSORS AND INTERFACING TECHNIQUES

(2012 PATTERN)

Time : 2 Hours   **Maximum Marks : 50**

N.B. :— (*i*)   Answer total question Nos. **1** *or* **2**, **3** *or* **4**, **5** *or* **6**,

   7 *or* **8**.

   (*ii*)   Neat diagrams must be drawn whenever necessary.

   (*iii*) Figures to the right indicate full marks.

1.   (*a*)   What do you mean by Bus Sizing ? Draw the Memory Read.
             Write cycle timing diagrams for 16 or 32 bit microprocessor.

                                                                    [8]

   (*b*)   What do you mean by Directive ? Give directive which is related
             to allocation of storage for one or more values ?
             (minimum 6 directives)   [4]

Or

2.   (*a*)   What is DOS ? Explain any *two* internal and *two* external
             DOS commands.   [4]

   (*b*)   Compare .COM and .EXE File.   [4]

   (*c*)   Explain the concept of TSR with figure.   [4]

                                                                P.T.O.

3. (*a*) Give difference between synchronous and asynchronous communication. [4]

(*b*) Draw block diagram for 8251A (VSART) and explain. [5]

(*c*) Define sensors and transducer. Give *one* example of each. [3]

Or

4. (*a*) Explain any *two* operating modes of 8253/8254. [6]

(*b*) Why DMA controlled data transfer are preferred over interrupt driven or program controlled and explain the use of HRQ and EOP signals ? [3]

(*c*) What is the difference between *n* key rollover and 2 key lock out in 8279 ? [3]

5. (*a*) Explain and discuss interface between 8086 and 8087. [6]

(*b*) Draw and explain timing diagram for read operation of 8086 in minimum mode. [7]

Or

6. (*a*) Explain the instruction related to 8087 : [6]

(*i*) FSTP

(*ii*) FICON

(*iii*) FLDZ

(*iv*) FIST.

(*b*) Define the following terms : [3]

(*i*) Accuracy

(*ii*) Monotonocity

(*iii*) Offset error.

(*c*) Explain use of 8282 and 8284. [4]

7. (*a*) List and explain the features of Intel X58 chipset.   [7]

  (*b*) What is the purpose of 82801JR I/O controller Hub ? List of features of same.   [4]

  (*c*) Draw basic blocks of Intel X58 chipset.   [2]

Or

8. (*a*) Explain the basic components of *i*5 processor with block diagram.   [7]

  (*b*) Explain the following components of 82801 JR I/O controller Hub :   [6]

  (*i*) Direct Media Interface

  (*ii*) Serial peripheral Interface

  (*iii*) Quiet System Technology.