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.