Seat No.

Nov – 2017

[5252]-168

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

MICROPROCESSORS AND INTERFACING TECHNIQUES

EXAMINATION, 2017

(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]

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. [6]

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 i5 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.