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

Seat No.	

[4757]-1077

S.E. (Computer Engineering) (Second Semester) EXAMINATION, 2015

MICROPROCESSOR AND INTERFACING TECHNIQUES

(2012 Pattern)

Time : Two Hours **Maximum Marks : 50**

N.B. **:—** (*i*) Answer total *four* questions. Q. No. **1** *or* Q. No. **2**, Q. No. **3** *or* Q. No. **4**, Q. No. **5** *or* Q. No. **6**, Q. No. **7** *or* Q. No. **8**.

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

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

1. (*a*) What are different components of MS-DOS ? Explain DOS loading with the help of neat diagram. [8]

(*b*) Compare 8086, 80386 and i7 processor on the basis of architectural features. [4]

Or

2. (*a*) Draw and explain block diagram of 8259APIC. [8]

(*b*) Write the initialization instructions of 8259A PIC, to meet the following specifications : [4]

(*i*) Interrupt type 32

P.T.O.

(*ii*) Edge Triggered, single and ICW4 needed, interval of 8

(*iii*) Mask IR1 & IR3 interrupts.

3. (*a*) Draw and explain I/O of BSR mode of 8255 with appropriate control word formats. [4]

(*b*) Draw and discuss internal block diagram of 8251 USART. [6]

(*c*) Define Resolution and Offset error terms of ADC. [2]

Or

4. (*a*) Design a control word format for square wave generator with 1ms period, the input frequency for 8253 is 1 MHz. [4]

(*b*) Draw and explain the following 8279 commands : [4]

(*i*) Keyboard/Display mode set command

(*ii*) Read FIFO/Sensor RAM command.

(*c*) Explain with neat diagram sequence of DMA operation. [4]

5. (*a*) Draw and discuss the interface between 8086 and 8087. [7]

(*b*) With proper timing diagram explain Read cycle in minimum mode of 8086 microprocessor. [6]

Or

6. (*a*) With the help of neat diagram explain minimum mode configuration of 8086. [6]

(*b*) Draw and explain format of control and status word of 8087 NDP. [4]

(*c*) Explain the following 8087 instructions with *one* example each : [3]

(*i*) FSQRT

(*ii*) FLDZ

(*iii*) FADD

7. (*a*) Explain the features of 82801 IJR I/O Controller Hub. [5]

(*b*) Draw and explain block diagram of X58 Chipset. [8]

Or

8. (*a*) Draw and explain block diagram of i5 motherboard. [8]

(*b*) Write a short note on Intel's QPI Technology. [3]

(*c*) Explain ICH10 PCI Interface. [2]