Total No. of Questions—8] [Total No. of Printed Pages—2

Seat No.	

[5352]-577

S.E. (Information Technology) (II Sem.) EXAMINATION, 2018
PROCESSOR ARCHITECTURE AND INTERFACING
(2015 PATTERN)

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

N.B. :— (*i*) Answer 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.
(*iv*) Assume suitable data, if necessary.

Q.1) a) Explain any 3 addressing modes of 80386 with example [06]
b) Explain following pins of 80386 [07]
BE0-BE3 #, ADS #, NA# and Ready

OR

Q.2) a) Which are the different registers and descriptors used for logical to linear address conversion when 80386 is in Protected mode? Explain their significance and format [07]
b) Explain Control Registers CR0 to CR3 of 80386 [06]

Q.3) a) How 80386 performs Task Switching operation Explain with diagram [06]
b) Explain features of 8051 [06]

OR

Q.4) a) Explain various registers used in Paging when 80386 is operating in Protected mode [06]
b) Explain the significance of following instructions of 8051 [06]
MOV R0, #50H
MOV R0, 50H
DJNZ R1, label

Q.5) a) Write 8051 ALP (assembly language program) (with comments) to generate square wave of 2Khz using internal Timer. Explain the calculations and significance of SFRs used for the same. (Assume Crystal Frequency : 11.092MHz) [07]
b) Explain SCON of 8051 with format and any 2 operating modes of 8051 for Serial Communication? [06]

OR

Q.6) a) What are vectored interrupts? Explain vectored interrupts available in 8051 with diagram and their priority. How to change the priority of vectors explain with the help of Interrupt Priority (IP) register [07]
b) Write ALP to configure I/O ports of 8051 for following configurations using bit/byte addressable instructions [06]
1. Alternate pins of Port P1 in Input and Output mode
2. P2.0 to P2.3 to read the data from keyboard and P2.4 to P2.7 to write data to display
3. To generate square wave at P3.0

Q.7) a) Draw interfacing diagram of 8051 with LCD and explain significance of interfacing signals. [06]
b) Draw interfacing diagram of 8051 with temperature sensor and explain [06]

OR

Q.8) a) Draw interfacing diagram of 8051 with ADC and explain significance of interfacing signals. [06]
b) Explain operating modes of 8255 in detail. [06]

register

b) Write ALP to configure I/O ports of 8051 for following configurations using bit/byte addressable instructions [06]

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b) Explain operating modes of 8255 in detail. [06]