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S.E. (IT) (II Semester) EXAMINATION, 2019
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.

1.　(A)　With respect to the following points explain Assembler, Linker
　　　　and Debugger : 　　　　　　　　　　　　　　　　　[6]

　　　　(1)　Types of input and output files

　　　　(2)　Command.

　　(B)　Explain non-piplined bus cycle for WRITE operation with neat
　　　　diagram. 　　　　　　　　　　　　　　　　　　　[6]

Or

2.　(A)　List any *four* addressing modes of 80386 microprocessor state
　　　　difference between : 　　　　　　　　　　　　　　　[6]

　　　　(*i*)　MOV EAX, 12345678 and MOV EAX, [12345678]

　　　　(*ii*)　MOV EAX, ECX and MOV EAX, [ECX]

　　(B)　Explain with neat diagram interprivilege level transfer using
　　　　call gates. 　　　　　　　　　　　　　　　　　　[6]

3. (A) Explain in detail Page Directory Entry (PDE) and Page Table Entry (PTE). [6]

(B) Draw and explain block diagram of 8051 Microcontroller. [6]

Or

4. (A) Explain the following pins of 8051 : [6]

(*i*) TO

(*ii*) ALE

(*iii*) $\overline{INT}_1$

(B) Draw and explain format of TSS descriptor. [6]

5. (A) List operating modes of Timer of 8051 and explain any *two* of them. [7]

(B) Find the value to be loaded in TH_1 register to obtain the following baud rate : [6]

(*i*) 1200

(*ii*) 2400

(*iii*) 9600

Assume crystal frequency = 11.0592 MHz.

Or

6. (A) Find the value to restore in TH-TL pair to timer to generate square wave of 50 Hz and 2 kHz. Assume crystal frequency = 11.0592 MHz. [6]

(B) Explain significance of IP and IF register with format. [7]

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Or

7. (A) Explain any *two* modes of operation of PPI 8255. [6]

(B) Explain ADC interfacing with 8051. Explain significance of any *two* interfacing control signals. [7]

Or

8. (A) How to configure port 1 and port 2 for two digit seven segment display ? Explain with diagram and instructions. [6]

(B) Explain External memory of size 64 kB (both program and data) interfacing with 8051. [7]