Total	No.	of	Questions	:	12]	
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Total No. of Questions: 12

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SEAT No. :		
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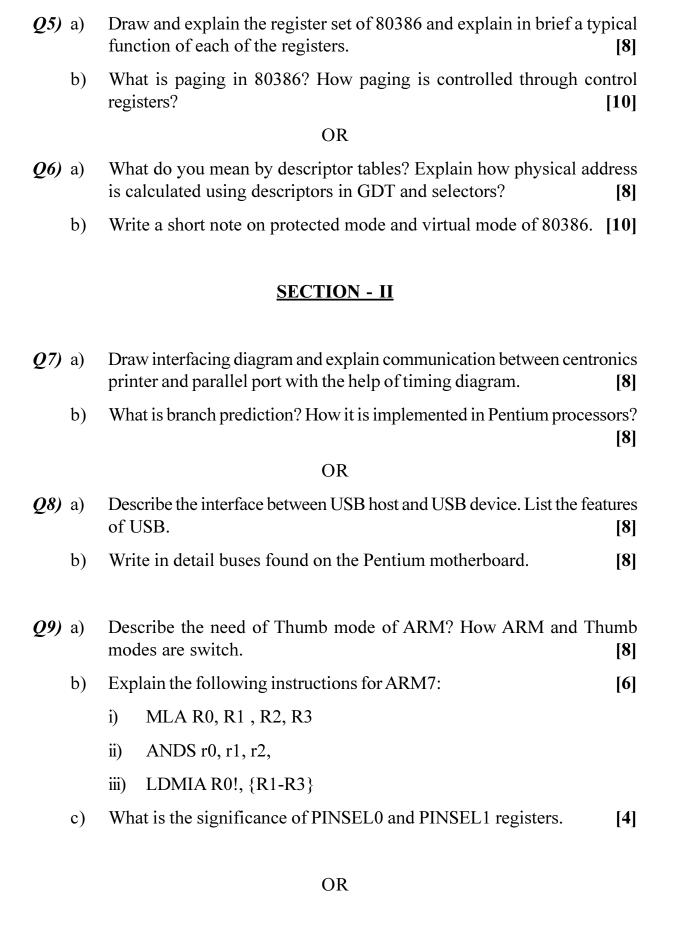
T.E. (Electronics Engineering)

MICROCOMPUTER BASED SYSTEM

(2008 Course) (Semester - II) (304209)

Time: 3 Hours] [Max. Marks: 100] Instructions to the candidates: Answers the Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8, Q.9 or Q.10, Q.11 or 2) Answer any three questions in each section. Neat diagrams must be drawn wherever necessary. 4) Figures to the right side indicate full marks. Use of Calculator is allowed. 5) Assume suitable data, if necessary. **SECTION - I** Draw and explain 8086 processors architecture in detail. **Q1)** a) [8] Explain different addressing modes in 8086 processors. [8] b) OR Draw and explain with suitable interface diagram, the maximum mode **Q2**) a) operation of 8086 system. [8] Draw a flag structure of 8086 processor and explain operation of each b) flag. [8] **Q3**) a) Explain following instructions with example [8] **CBW** i) **AAD** ii) iii) **IDIV JCXZ** iv) b) Write a 8086 program to find out given string is palindrome or not? [8] OR Write a 8086 program to search a number in given string of 40 bytes at **Q4**) a) 8000H location. [8] State difference between software and hardware interrupts. Explain the b)

action taken by processor to service these interrupts with example. [8]



- **Q10)**a) Draw and explain ARM Programmers model in detail.
 - b) What are privileged and non-privileged modes of operation of ARM processor? [6]

[8]

c) What is significance of special purpose registers r13, r14, r15? [4]

*Q11)*Design 16 channel data Acquisition system using 8086 with following specifications [16]

- a) Sensors temperature PT 100.
- b) LCD Display.
- c) Limits Programmable using 4 × 4 keypad.

Draw complete interfacing diagram and flow chart. Explain important design steps required.

OR

Q12) Design an electronic weighing bridge system using 8086 processor: [16]

- a) Design signal conditioning circuit.
- b) Show complete interfacing diagram.
- c) Write flowchart for the same.

