

**B.TECH SEM – IV(2007 COURSE) (INF. TECH.) :
WINTER - 2017**

SUBJECT: MICROPROCESSOR ARCHITECTURE AND PROGRAMMING

Day: **Thursday**
Date: **23/11/2017**

W-2017-2423

Time: **02.30 PM TO 05.30 PM**
Max. Marks: **80**

N.B.:

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Out of the remaining attempt any **TWO** questions from each section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer book.

SECTION-I

- Q.1**
- a) Explain flag registers of 8086/88. **(05)**
 - b) What is the use of PUSH and POP instructions? **(05)**
 - c) Explain NEAR and CALL function. **(04)**
- Q.2**
- a) Draw and explain architecture of 8085 microprocessor. **(07)**
 - b) Explain addressing modes of 8086 microprocessor. **(06)**
- Q.3**
- a) Write a short note on 8259A priority interrupt controller. **(07)**
 - b) Explain in brief Synchronous and Asynchronous communication. **(06)**
- Q.4**
- a) Explain 8255A interfacing with suitable diagram. **(07)**
 - b) Distinguish between Software and Hardware interrupts. **(06)**

SECTION-II

- Q.5**
- a) Write a short note on Privilege and Protected mode. **(05)**
 - b) Give uses of BIOS and DOS calls. **(05)**
 - c) Explain the significance of INT 21H instruction. **(04)**
- Q.6**
- a) Distinguish between Closely coupled and Loosely coupled systems. **(07)**
 - b) Write a note on architecture of 8089 I/O processor. **(06)**
- Q.7**
- a) Write a short note on interrupt routines of 8086 microprocessor. **(07)**
 - b) What is the use of stack in programming of 8086? Explain with assembly code snippet. **(06)**
- Q.8**
- a) Distinguish between DOS, BIOS and TSR. **(07)**
 - b) Give the steps in POST sequence. **(06)**

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