Reg. No…….. Name…… **18U208**

B. Sc. DEGREE END SEMESTER EXAMINATION – MARCH/APRIL 2018

SEMESTER – 2: COMPUTER APPLICATION (CORE COURSE)

COURSE: 15U2CRCAP3, MICRO PROCESSORS AND COMPUTER ORGANIZATION

(Common for Regular 2017 / Supplementary - Improvement 2016 / 2015 Admission)

Time: Three Hours Max. Marks: 75

PART A

Answer all questions. Each question carries 1 mark.

1. Which are the flags in 8086?
2. What characteristic of RAM memory makes it not suitable for permanent storage?
3. Define Registers.
4. What is a control unit?
5. What is CPU clock?
6. Define System Bus.
7. What is a Memory Word?
8. A nibble is a group of 16 bits. State True or False.
9. What is an Instruction Register?
10. What is an Interrupt? (1 x 10 = 10)

PART B

Answer any eight questions. Each question carries 2 marks.

11. What is the effect of executing the instruction?
    MOV CX, [SOURCE_MEM] where SOURCE_MEM equal to 2016 is a memory location offset relative to the current data segment starting at address $1A000_{16}$
12. List down the classification of microprocessor based on the size of data bus.
13. What are the various interrupts in 8086? Explain.
14. Which interrupts are generally used for critical events?
15. What is an Address space?
16. A computer has 32 MB (megabytes) of memory. How many bits are needed to address any single byte in memory?
17. Explain the following 8086 instructions with examples (i) MUL (ii) IMUL (iii) DIV (iv) IDIV.
18. List down the function of the following pins and their use in 8086 based system. (i)NMI (ii) INTR
19. What is the function of BX and CX registers 8086 microprocessor.
20. What is the use of segment register? (2 x 8 = 16)

PART C

Answer any five questions. Each question carries 5 marks.

21. Explain Address Bus, Data Bus and Control Bus in Microprocessor? What are the differences between them?
22. Differentiate between microprocessor and microcontroller?
23. What is an instruction queue? Explain?
24. What is stack? Explain the use and operation of stack and stack pointer?
25. Differentiate between MAR and MDR
26. Explain the basic features of 80286.
27. Draw the internal architecture of 80286.
28. What are the features of Pentium? (5 x 5 = 25)

PART D

Answer any two questions. Each question carries 12 marks.

29. Explain different types of registers in 8086 microprocessor architecture.
30. Explain the various Addressing Modes in detail.
31. How is Pentium Processor different from Pentium Pro Processor regarding its basic features?
32. With a neat architectural diagram, explain the functioning of an 8086 CPU architecture.

(12 x 2 = 24)

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