BACHELOR OF TECHNOLOGY (CBCS) (2021-COURSE)

Computer Science & Engineering-AI&ML

B. Tech. Sem - III :SUMMER : 2023

SUBJECT : COMPUTER ORGANIZATION & MICROPROCESSOR

Day : Monday | Time : 02:30 PM-05:30 PM

Date : 15-05-2023 | S-23938-2023 | Max. Marks : 60

N.B.

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Use of non - programmable **CALCULATOR** is allowed.

Q.1 Explain with examples the addressing modes supported by 8086 microprocessor. **(10)**

OR

Q.1 Draw and explain the Von – Neumann Architecture of computer. **(10)**

Q.2 Draw the flowchart of Booth's algorithm and solve for $(-7)^*$ (3) using the booth' s algorithm. **(10)**

OR

Q.2 Draw the flowchart of Restoring Division algorithm and solve for (7) / (3) using Restoring algorithm. **(10)**

Q.3 What is a micro – operations? Illustrate the micro – operations for the following operation. ADD R1, Mem. **(10)**

OR

Q.3 Describe any one method of Hardwired Control Unit. **(10)**

Q.4 Describe various Cache memory mapping technique. **(10)**

OR

Q.4 Consider a direct mapped cache of sixe 32 KB with block size 512 bytes. The size of main memory is 256 KB. Find - **(10)**

a) Number of bits in tag
b) Tag directory size

Q.5 What is DMA? Explain the working of DMA. **(10)**

OR

Q.5 a) Differentiate between Memory Mapped I/O and I / O Mapped I/O. **(05)**

b) Write short note on Programmed I/O. **(05)**

Q.6 What is parallel processing? Explain the Flynn's classification of parallel computers. **(10)**

OR

Q.6 a) Explain the different pipelining hazard. **(05)**

b) Write short note on Six stage pipelining. **(05)**

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