BACHELOR OF TECHNOLOGY (CBCS) (2021-COURSE)
B. Tech. Sem - III Computer Science & Business Systems : WINTER : 2024
SUBJECT: COMPUTER ORGANIZATION & ARCHITECTURE

Day : Thursday
Date : 05/12/2024

W-24143-2024

Time : 10:00 AM-01:00 PM
Max. Marks : 60

N.B.

1) All questions are **COMPULSORY.**
2) Figures to the **RIGHT** indicate **FULL** marks.
3) Assume suitable data **WHEREVER** necessary.
4) Draw neat diagrams **WHEREVER** necessary.

Q.1 Draw and explain architecture of 8086 Microprocessor. **(10)**

OR

Q.1 What is RTL? Explain with suitable example. **(10)**

Q.2 Explain the key differences between fixed-point and floating-point representation of numbers. **(10)**

OR

Q.2 Describe Booths Algorithm. Solve -7 x 3 by using Booths Algorithm. **(10)**

Q.3 Draw and explain hardwired control unit in detail. **(10)**

OR

Q.3 Draw and explain single bus organization of a CPU. **(10)**

Q.4 Explain memory hierarchy of a computer system in detail. **(10)**

OR

Q.4 Elaborate on cache mapping techniques. **(10)**

Q.5 Elaborate use of DMA controller in computer system. **(10)**

OR

Q.5 Draw and explain different types of I/O channels with suitable examples. **(10)**

Q.6 Explain performance evaluation factors of pipeline processors. **(10)**

OR

Q.6 What is Cache coherency? Explain MESI protocol. **(10)**

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