

BACHELOR OF TECHNOLOGY (C.B.C.S.) (2020 COURSE)

B.Tech.Sem - III CS&E : : SUMMER - 2022

SUBJECT : MACHINE ORGANIZATION & MICROPROCESSOR

Day : Wednesday
Date : 01-06-2022

S-24294-2022

Time : 02:30 PM-05:30 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.
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Q.1 Draw and explain Von Neumann architecture structure of IAS machine. **(10)**

OR

Draw and explain structure of CPU.

Q.2 Assume number in using 32 – bit form which reserve 1 bit for the sign, 15 bits for the integral part and 16 bits for the fractional part No. = -45.325 is represent in above given format. **(10)**

OR

Represent fixed point representation of unsigned binary number =0110011 using 4 integer bits and 3 fractional bits.

Q.3 Define relationship between instruction and microinstruction. Also explain micro instruction format. **(10)**

OR

Describe in detail hardwired implementation of control unit.

Q.4 Describe page replacement algorithm for cache memory. **(10)**

OR

List and explain various characteristics of memory.

Q.5 Draw and explain block diagram of input output module. **(10)**

OR

Describe three techniques for input of block of data.

Q.6 Describe the concept of pipelining processing in detail. **(10)**

OR

List and explain types of pipelining hazards.

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