Code No: P21ITT02

HALL TICKET NUMBER

PACE INSTITUTE OF TECHNOLOGY & SCIENCES::ONGOLE
(AUTONOMOUS)
II B.TECH I SEMESTER END SUPPLEMENTARY EXAMINATIONS, MARCH/APRIL - 2023
COMPUTER ORGANIZATION
(Common to IT,CSE(IOTCSBT), AIDS,AIML Branches)

Time: 3 hours Max. Marks: 70

Answer all the questions from each UNIT (5X14=70M)

Q.No.		Questions	Marks	CO	KL
		UNIT-I			
1.	a)	What are the basic Functional Units of a Computer System	[4M]	1	1
	b)	Explain about Bus Structure and how the bus is connected between processor and main memory	[10M]	1	2
		OR			
2.	a)	Discuss the Single Precision Floating point Representation with an example?	[7M]	1	2
	b)	Apply Restoring Division Algorithm with an example?	[7M]	1	3
3.	a)	Design Arithmetic Logic Shift Unit with neat Diagram	[7M]	2	6
	b)	Discuss about Register Transfer language? What are Micro operations?	[7M]	2	2
		OR			
4.	a)	Explain about Input-Output Instructions with a neat table.	[7M]	2	2
	b)	Explain the hardware implementation of Shift Micro-operations.	[7M]	2	2
5.	a)	What are the different fields in the instruction format? Evaluate R = (X*Y) + (A-B) arithmetic statement using 0 address, 1 address, 2 address and 3 address instruction formats.	[7M]	3	1
	b)	Tabulate the logical and shift micro operations with its RTL notations.	[7M]	3	4
		OR			
6.	a)	What are the different types of addressing Modes? Define Register mode and Absolute Mode with examples.	[7M]	3	1
	b)	Discuss the Data Manipulation Instructions and its basic Types?	[7M]	3	2
7.	a)	Explain the operation of DMA with neat diagram and also discuss about the DMA operating modes.	[10M]	4	3
	b)	Differentiate between Programmed I/O and Interrupt-Initiated I/O of mode of transfer methods?	[4M]	4	4
		OR			
8.	a)	Discuss the various Asynchronous Data transfer Methods?	[7M]	4	2
	b)	Elaborate the Various Peripheral Devices?	[7M]	4	3
9.	a)	Discuss the inter processor arbitration in multi processors? Discuss the various techniques?	[7M]	5	3
	b)	What are multiprocessor systems? Discuss the characteristics of multiprocessors.	[7M]	5	2

		OR			
10.	a)	What is Pipelining? Explain pipeline processing with an example.	[7M]	5	2
	b)	Explain the hypercube interconnection structure of multi processors.	[7M]	5	3

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