

Code: 20IT3402

**II B.Tech - II Semester – Regular / Supplementary Examinations  
MAY - 2023**

**COMPUTER ORGANIZATION  
(INFORMATION TECHNOLOGY)**

Duration: 3 hours

Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.  
2. All parts of Question must be answered in one place.

			BL	CO	Max. Marks
<b>UNIT-I</b>					
1	a)	Explain the process of bus construction with multiplexers.	L2	CO1	7 M
	b)	Discuss different Micro Operations with suitable examples.	L2	CO2	7 M
<b>OR</b>					
2	a)	Discuss about register transfer, bus and memory transfer.	L2	CO1	7 M
	b)	The following transfer statements specify a memory. Explain the memory operation in each case i) $R2 \leftarrow M[AR]$ ii) $M[AR] \leftarrow R3$ iii) $R5 \leftarrow M[R5]$	L2	CO2	7 M

<b>UNIT-II</b>					
3	a)	Explain about the Instruction Cycle.	L2	CO1	7 M
	b)	Draw a flowchart for interrupt cycle and explain with an example.	L3	CO2	7 M
<b>OR</b>					
4	a)	Discuss about various Basic Instruction Formats with example.	L2	CO1	7 M
	b)	Illustrate the input-output configuration with interrupts.	L3	CO2	7 M
<b>UNIT-III</b>					
5		Illustrate various Addressing Modes with suitable example.	L3	CO2	14 M
<b>OR</b>					
6	a)	Illustrate the Program interrupt with suitable example.	L3	CO2	7 M
	b)	Interpret an arithmetic statement using three and two Addressing Instructions with your own.	L3	CO3	7 M
<b>UNIT-IV</b>					
7	a)	Illustrate the Booth Multiplication Algorithm with suitable example.	L2	CO2	10 M
	b)	Analyze how Cache memory is faster in computing comparing with other memories .	L4	CO4	4 M
<b>OR</b>					

8	a)	Explain about Addition Algorithm with suitable example.	L2	CO3	7 M
	b)	Explain about Auxiliary memory and Main Memory .	L4	CO4	7 M
<b>UNIT-V</b>					
9	a)	Explain asynchronous data transfer with Handshaking method .	L4	CO4	7 M
	b)	Explain in detail about the Pros and Cons of Parallel Processing.	L4	CO4	7 M
<b>OR</b>					
10	a)	Explain in detail about Direct Memory Access with neat Sketch.	L4	CO4	7 M
	b)	What is pipelining? Explain about Instruction Pipeline.	L4	CO4	7 M