Gujarat University
Question Bank
Subject - Computer Architecture and Peripherals
Branch – Computer Engineering Semester -3

1	Compare the following. 1. SIMD and MIMD 2. RICS and CISC	
2	What is register transfer language? Clear it with example.	
3	Explain the operation of three state bus buffers and show its use in design of common bus.	
4	Write a program loop using a pointer and a counter to clear the contents of hex locations 500 to 5FF with 0.	
5	Explain the following. 1.Data transfer instructions. 2.Flynn's classification of computers.	
6	What are the pipeline conflicts? Explain the hardware techniques to handle the branch instructions	
7	Considering three segment instruction pipeline, illustrate the concepts of delayed load and delayed branch with example.	
8	Show the contents of the registers E, A, Q, SC during the process of multiplication of two binary numbers 11111(multiplicand) 10101 (multiplier). The signs are not included.	
9	Explain various types of interrupts.	
10	Write a note on different addressing modes.	
11	Write the program to multiply two positive numbers. by a repeated addition method. For ex., to multiply 5 x 4 , the program evaluates the product by adding 5 four times, or 5+5+5+5.	
12	Give the basic computer instruction format and explain Memory reference, Register reference and Input-output instructions.	
13	Explain the procedure for addition and subtraction with signed-magnitude data with the help of flowchart.	
14	Draw the diagram of Micro programmed sequencer for a control memory and explain it.	
15	What is DMA? What is DMA channels? Explain DMA controller with necessary figure.	
16	Draw the space time diagram for six segment pipeline showing the time it takes to process 8 tasks.	
17	Explain Stack and evaluate the following expression using stack (3+4)*[10(2+6)+8]	
18	What do you mean by peripheral device ? List at least ten peripheral devices.	
19	Enlist the steps – sequence of operation carried out during instruction fetch cycle.	
20	Explain with block diagram ALU.	
21	Discuss I/O Processor and its organization.	
22	Differentiate between word addressable and byte addressable computer.	
23	Discuss different memory operations.	
24	Write a short note on memory hierarchy.	

25	Explain the characteristics of different memory devices.
26	Discuss the types of main memory.
27	Write a short note on magnetic tape.
28	Write a short note on optical disk.
29	Explain the different memory access method.
30	What is associative memory? Explain its hardware organization.
31	Write a short note on CRT monitor.
32	Write a short note on different types of printers.
33	Differentiate between parallel and distributed computers.
34	What is cache memory? Describe the advantages and disadvantages of using cache memory.
35	Define the following terms. 1. Cache hit 2. Cache miss 3. Hit ratio 4. Miss ratio 5. Cache hit time
36	What does mapping function mean? Discuss different techniques of mapping process.
37	Discuss following page replacement algorithm. 1. LRU 2. FIFO 3. LFU
38	Write a short note on virtual memory.
39	Differentiate between arithmetic pipeline and instruction pipeline.
40	Discuss the hardware implementation of signed magnitude addition and subtraction.