

B.Sc.(IT) Semester - 2 (CBCS) Examination**March/April – 2026 (New Course)****Computer Organization and Architecture (CORE)****Time: 2:30 Hours****Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

Que.1(A)	Give Answers of following Questions.	(03)
	1. List out basic gate. 2. Truth Table of OR Gate. 3. Truth table of INVERTER Gate.	
Que.1(B)	Attempt the following (Any Two)	(06)
	1. Explain AND Gate with Truth Table. 2. Explain XOR Gate with Truth Table. 3. Explain DeMorgens Theorem. 4. Write about Boolean Expression.	
Que.1(C)	Attempt the following (Any one)	(05)
	1. Explain Block Diagram of Digital Computers. 2. Explain Sum of Product Concept.	
Que.2(A)	Give Answers of following Questions.	(03)
	1. Full form SR-Flip Flop. 2. Full form JK Flip Flop. 3. Define state table.	
Que.2(B)	Attempt the following (Any Two)	(06)
	1. Explain Master Slave Flip flop. 2. Explain T Flip Flop. 3. Explain State Diagram. 4. List sequential circuit in detail.	
Que.2(C)	Attempt the following (Any one)	(05)
	1. Explain Combinational circuit in detail. 2. Explain half adder in detail.	
Que.3(A)	Give Answers of following Questions.	(03)
	1. Full form IC. 2. Full form MSI. 3. Full form SSI.	
Que.3(B)	Attempt the following (Any Two)	(06)
	1. Explain 2 to 4 line decoder. 2. Explain encoder. 3. Explain 4 bit register. 4. Explain Concept of binary counter.	
Que.3(C)	Answer any one Question.	(05)
	1. Explain 2 to 1 line multiplexer. 2. Explain 1 to 4 line de-multiplexer.	
Que.4(A)	Give Answers of following Questions.	(03)
	1. Full form of CPU. 2. Full form ALU. 3. Full form of CU.	

- Que.4(B) Attempt the following (Any Two) (06)
1. Explain Register Stack.
 2. Explain control word.
 3. Explain Memory stack.
 4. Explain General Register organization.
- Que.4(C) Attempt the following (Any one) (05)
1. Explain Different Component of CPU.
 2. Explain Reverse polish notation.
- Que.5(A) Give Answers of following Questions. (03)
1. Full form of DMA.
 2. Full form of RAM.
 3. Full form of ROM.
- Que.5(B) Attempt the following (Any one) (06)
1. Explain concept of IOP.
 2. Explain auxiliary Memory.
 3. Explain Cache Memory.
 4. Explain Main Memory.
- Que.5(C) Attempt the following (Any one) (05)
1. Write note DMA Controller.
 2. Explain Block Diagram of computer with I/O Process.
- *****