

B.Sc.(IT) Semester - 2 (CBCS) Examination
March/April- 2019 (Old Course)
COMPUTER ORGANIZATION & ARCHITECTURE
(CORE)

Time: 2:30 Hours**Marks: 70****Instructions:**

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

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- Que-1 (A) Answer following Questions [04]**
1. Define truth table.
 2. Full name of SOP.
 3. List basic types of gate.
 4. Define Flip-Flop.
- Que-1 (B) Answer Any One [02]**
1. Explain half adder.
 2. Explain Exclusive-NOR gate.
- Que-1 (C) Answer Any One [03]**
1. Explain full adder.
 2. $F(W,X,Y,Z) = \sum(4,5,6,7,9,13,15)$ draw (Using SOP)
- Que-1 (D) Answer Any One [05]**
1. Explain JK flip flop in detail.
 2. Explain Karnaugh-Map with appropriate Example.
- Que-2 (A) Answer following Questions [04]**
1. I.C stand for
 2. LSI stands for
 3. What is register?
 4. SI stands for
- Que-2 (B) Answer Any One [02]**
1. Write a Note on Multiplexer.
 2. Write a note on Encoder.
- Que-2 (C) Answer Any One [03]**
1. Explain 2×4 Decoder.
 2. What is Register? Explain their types in detail.
- Que-2 (D) Answer Any One [05]**
1. Explain Binary Counter in detail.
 2. Explain demultiplexer. (1×4) .
- Que-3 (A) Answer following Questions [04]**
1. What is Parity Bit?
 2. Rules of Binary Multiplication.
 3. $11100 + 11010 = \dots\dots\dots$
 4. $11010 \times 110 = \dots\dots\dots$
- Que-3 (B) Answer Any One [02]**
1. What is fixed Point Representation?
 2. $110101 - 010100 = ?$
- Que-3 (C) Answer Any One [03]**
1. Explain binary multiplication and binary division rules.
 2. Write short note on Error Detection Code.

- Que-3 (D) Answer Any One [05]**
1. Explain Parity Bit with an example.
2. Explain Floating Point Representation.
- Que-4 (A) Answer following Questions [04]**
1. ALU stand for
2. Stack follows method (option: LIFO,FIFO)
3. SP stands for
4. OPR code for A+B is
- Que-4 (B) Answer Any One [02]**
1. Define the following Terms:
a) Bus b) Stack
2. What is Interrupt?
- Que-4 (C) Answer Any One [03]**
1. Convert infix to prefix: $A \times 8 - [B + (D + 6)]$
2. Convert infix to postfix: $[A + B - (C \times D)] - E$
- Que-4 (D) Answer Any One [05]**
1. What is interruption? Explain their types
2. Explain ALU in detail.
- Que-5 (A) Answer following Questions [04]**
1. DMA stands for
2. What is system bus?
3. IOP stands for
4. What is bus?
- Que-5 (B) Answer Any One [02]**
1. Explain: Address bus, Instruction Bus
2. What is the Job of data bus?
- Que-5 (C) Answer Any One [03]**
1. Explain Memory Buses.
2. Explain Input Output Interface.
- Que-5 (D) Answer Any One [05]**
1. Explain DMA Transfer in detail.
2. Discuss IOP in Detail.
