

B.C.A Semester - 2 (CBCS) Examination
March/April– 2019 (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.
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- Que-1 (A) Answer following Questions** **[03]**
1. List out Basic gates.
 2. Draw Symbol of exclusive-NOR gate.
 3. NOT gate is also known as
- Que-1 (B) Answer Any Two** **[06]**
1. Explain AND Gate with truth table.
 2. Draw the Logic circuit: $AB + A'B$
 3. Define terms: (a) Truth table (b) Maxterm
 4. Explain Don't Care Condition with example.
- Que-1 (C) Answer Any One** **[05]**
1. Explain logic gates with truth table.
 2. Explain Sum of product and product of Sum with Example.
- Que-2 (A) Answer following Questions** **[03]**
1. Full form of JK – FF.
 2. Definition: Full adder
 3. Definition: Flip-Flop.
- Que-2 (B) Answer Any Two** **[06]**
1. Explain T Flip-flop.
 2. Explain JK FLIP-FLOP with its excitation table.
 3. Difference between Sequential Circuit and Combinational Circuit.
 4. Difference between SOP and POS.
- Que-2 (C) Answer Any One** **[05]**
1. Explain Full Adder in detail
 2. Explain state Diagram in detail.
- Que-3 (A) Answer following Questions** **[03]**
1. Write full form of I.C.
 2. Multiplexer is sometime called.....
 3. Give full form of VLSI
- Que-3 (B) Answer Any Two** **[06]**
1. Explain MUX.
 2. Short note on Decoder expansion.
 3. Explain De-Multiplexer: 1 to 4 lines.
 4. Explain Octal to Binary encoder.
- Que-3 (C) Answer Any One** **[05]**
1. Explain 2*4 line decoder
 2. Write a short note on right shift Register.

- Que-4 (A) Answer following Questions [03]**
1. Write full form of AR.
 2. Define term: POP and Push.
 3. List out Types of different notation.
- Que-4 (B) Answer Any Two [06]**
1. Convert into RPN: $(A+B)/(C-D)$.
 2. Explain following term: i) Stack Pointer, ii) Stack operation.
 3. Explain Register Stack.
 4. Explain accumulator register.
- Que-4 (C) Answer Any One [05]**
1. Explain Reverse Polish Notation in detail.
 2. Explain general Register Organization.
- Que-5 (A) Answer following Questions [03]**
1. Full form of DMAC.
 2. Define term: System Bus.
 3. Full form of ROM.
- Que-5 (B) Answer Any Two [06]**
1. Give introduction of DMA
 2. Explain following data transfer method of DMA.
a) Burst transfer b) Cycle stealing
 3. Explain Auxiliary Memory, cache Memory, Main Memory in brief.
 4. Explain ROM chip block Diagram.
- Que-5 (C) Answer Any One [05]**
1. Write a note on Input Output Processor.
 2. Explain DMA controller.
