

B.C.A Semester - 2 (CBCS) Examination**June/July-2022 [OLD COURSE]****CS-09 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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- Q.1(A) Answer following questions. (04)
1. Define Flip-Flop.
 2. Full name of POS.
 3. List Universal types of gate.
 4. Define Minterm.
- Q.1(B) Answer any one. (02)
1. Give three Differences between SOP and POS.
 2. Explain Exclusive gate.
- Q.1(C) Answer any one. (03)
1. Explain full adder.
 2. Explain Don't Care condition with following example.
 $F(P,Q,R,S) = S(4,5,6,8,9,12,13)+D(3,7,10,11,14,15)$
- Q.1(D) Answer any one. (05)
1. Explain SR flip flop in detail.
 2. Explain K-Map with appropriate Example.
- Q.2(A) Answer following questions. (04)
1. VLSI stands for
 2. MSI stands for
 3. What is register?
 4. Octal to Binary Encoder means.....
- Q.2(B) Answer any one. (02)
1. Write a Note on Multiplexer.
 2. Write a note on Encoder.
- Q.2(C) Answer any one. (03)
1. Explain 2×4 Decoder.
 2. What is Register? Explain their types in detail.
- Q.2(D) Answer any one. (05)
1. Explain Binary counter in detail.
 2. Explain DE multiplexer. (1×4)
- Q.3(A) Answer following questions. (04)
1. $11010 \times 110 = \dots\dots\dots$
 2. Rules of Binary Multiplication.
 3. $11100 + 11010 = \dots\dots\dots$
 4. What is Parity Bit?
- Q.3(B) Answer any one. (02)
1. What is fixed point representation?
 2. $110101 - 010100 = ?$
- Q.3(C) Answer any one. (03)
1. Explain binary multiplication and binary division rules.
 2. Write short note on Error Detection Code.
- Q.3(D) Answer any one. (05)
1. Explain Parity Bit with an example.
 2. Explain Floating Point Representation.

- Q.4(A) Answer following questions. (04)
1. AR stands for
 2. RPN stands for
 3. SP stands for
 4. OPR code for $A+B$ is
- Q.4(B) Answer any one. (02)
1. What is Control word?
 2. What is Interrupt?
- Q.4(C) Answer any one. (03)
1. Convert infix to prefix: $A+B * C/D$
 2. Convert infix to postfix: $A+B * C/D$
- Q.4(D) Answer any one. (05)
1. What is interruption? Explain their types.
 2. Explain ALU in detail.
- Q.5(A) Answer following questions. (04)
1. DMA stands for
 2. What is system bus?
 3. What is a Control line?
 4. What is bus?
- Q.5(B) Answer any one. (02)
1. Explain: Address bus, Instruction Bus.
 2. What is the Job of data bus?
- Q.5(C) Answer any one. (03)
1. Explain Memory Buses.
 2. Explain input Output interface.
- Q.5(D) Answer any one. (05)
1. Explain DMA controller in detail.
 2. Discuss IOP in detail.
