

B.C.A Semester - 2 (CBCS) Examination
March/April - 2024 (As Per Syllabus Year-2016)
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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- Que.1(A) Answer the following: (04)
- (1) What is the second name of NOT gate?
 - (2) Give the full form of JK, SR, D and T Flip-flop?
 - (3) What is the output of OR gate if both input is Low?
 - (4) What is the Output of EX-NOR gate if both inputs are high?
- Que.1(B) Answer the following: (Any One) (02)
- (1) List out Basic gates.
 - (2) Explain Meaning of Computer Architecture.
- Que.1(C) Answer the following: (Any One) (03)
- (1) Define the term: Clock Pulse.
 - (2) Define the term: Boolean Algebra.
- Que.1(D) Answer the following: (Any One) (05)
- (1) Explain Flip-flops in detail.
 - (2) Explain Universality of NAND gate.
- Que.2(A) Answer the following: (04)
- (1) IC stands for_____.
 - (2) Binary to Octal decoder is also called _____.
 - (3) In Multiplexer_____inputs will generate one output.
 - (4) In Demultiplexer one input will generate_____output.
- Que.2(B) Answer the following: (Any One) (02)
- (1) Explain Parallel in Parallel Out Register.
 - (2) What is the meaning of Serial in Serial out register?
- Que.2(C) Answer the following: (Any One) (03)
- (1) Explain Ripple Counter.
 - (2) Explain 2*4 Decoder in detail.
- Que.2(D) Answer the following: (Any One) (05)
- (1) Explain 3*8 Decoder in detail.
 - (2) Explain Bi-Directional Register.
- Que.3(A) Answer the following: (04)
- (1) Radix[BASE] of Binary is _____.
 - (2) Radix[BASE] of Decimal is_____.
 - (3) In _____number system the radix is 16.
 - (4) In 123.88 _____is the Fractional part of that number.
- Que.3(B) Answer the following: (Any One) (02)
- (1) What is Mantissa?
 - (2) What is Exponent?
- Que.3(C) Answer the following: (Any One) (03)
- (1) Division: 11100.10/ 110
 - (2) Explain Floating Point Representation.

- Que.3(D) Answer the following: (Any One) (05)
- (1) Explain Error Detection Code with parity bit?
 - (2) Multi: 111×101
- Que.4(A) Answer the following: (04)
- (1) Full form of CPU.
 - (2) How many bits are used in Control Word.
 - (3) In _____ notation operands are first.
 - (4) In _____ notation operators are first.
- Que.4(B) Answer the following: (Any One) (02)
- (1) Explain Control word in detail.
 - (2) Make Polish and Reverse polish Notion
 $\rightarrow (A+B)*C$
 $\rightarrow (A+B)/(C+D)$
- Que.4(C) Answer the following: (Any One) (03)
- (1) Explain Accumulator Register.
 - (2) Explain Stack representation using Reverse polish notations.
- Que.4(D) Answer the following: (Any One) (05)
- (1) Explain General Register Organization.
 - (2) Explain block diagram of ALU.
- Que.5(A) Answer the following: (04)
- (1) Full form of IOP_____.
 - (2) Full form of BR.
 - (3) BG stands for_____.
 - (4) Full form of RS.
- Que.5(B) Answer the following: (Any One) (02)
- (1) Explain Memory Bus.
 - (2) Explain I/O bus.
- Que.5(C) Answer the following: (Any One) (03)
- (1) Explain Working of DMA.
 - (2) Explain IOP in detail.
- Que.5(D) Answer the following: (Any One) (05)
- (1) Explain DMA transfer in detail.
 - (2) Explain DMA controller in detail.
