



NBH-003-003207

Seat No. _____

B. C. A. (Sem. II) (CBCS) Examination

April/May - 2017

CS-09 : Comp. Organization & Architecture

(Old Course)

Faculty Code : 003

Subject Code : 003207

Time : 2 ½ Hours]

[Total Marks : 70

1 Attempt the following : 20

- (1) An inverter is also called a _____ gate.
- (2) The memory bus is made up of two parts _____ and _____.
- (3) In Half Adder the output X-OR gate is _____.
- (4) Full form of SISO.
- (5) DMA stands for _____
- (6) A flip-flop is a binary cell capable of storing information of _____ bit.
- (7) A Three input NOR gate gives logic high output only when _____.
- (8) Which bus is Bi-Directional?
- (9) Stack means _____
- (10) The control and ALU sections are called _____
- (11) Multiplication of $1101 * 111$ is _____
- (12) Find 1's complement.
 $11101 =$ _____
- (13) List out types of interrupt.
- (14) Full Form of CPU.
- (15) In Reverse Polish notation, expression $A*B+C*D$ is written as _____

- (16) Floating point representation is used to store _____
- (17) The circuit used to store one bit of data is known as _____
- (18) The average time required to reach a storage location in memory and obtain its content is called _____
- (19) One byte = _____ bits.
- (20) Full form of VLSI.

- 2** (a) Attempt any **three** out of six : **6**
- (1) Explain SR Flip-Flop.
 - (2) Difference between Combinational Circuit and Sequential Circuit.
 - (3) What is Logic Gates? Explain AND, OR, NOT Gate with example.
 - (4) Explain don't care condition.
 - (5) Write a note on Encoder.
 - (6) What is K-MAP? Explain with example.
- (b) Attempt any **three** out of six : **9**
- (1) Explain Floating Point Representation.
 - (2) Explain Binary Counter.
 - (3) Write note on Control word.
 - (4) Explain Input Output Processor.
 - (5) Explain Shift Register.
 - (6) What is Interrupt? Explain software interrupt.
- (c) Attempt any **two** out of five : **10**
- (1) Explain 4*1 Multiplexer.
 - (2) Explain Bi-Directional shift register.
 - (3) Explain NAND Gate as Universal Gate.
 - (4) Explain Master-Slave Flip-Flop.
 - (5) Explain Stack organization.

- 3** (a) Attempt any **three** out of six : **6**
- (1) Define : Address Bus, Data Bus.
 - (2) Explain LSI, MSI, VLSI.
 - (3) Perform Multiplication of following Binary Numbers
 - (1) $11010 * 101$
 - (2) $111011 * 1001$
 - (4) Obtain 1's & 2's Complement
 - (1) 1110101
 - (2) 0011111110
 - (5) What is Parity Bit?
 - (6) What is Interruption.
- (b) Attempt any **three** out of six : **9**
- (1) Explain IOP.
 - (2) Explain types of Register.
 - (3) Explain Memory Bus.
 - (4) Explain De-Morgan's Theorems with truth table.
 - (5) Explain Fixed Point Representation.
 - (6) Explain ALU with block diagram.
- (c) Attempt any **two** out of five : **10**
- (1) Explain DMA Controller.
 - (2) What is Flip-Flop? Explain with types.
 - (3) Explain Asynchronous 4 bit Binary Counter.
 - (4) Explain Error Detecting Codes.
 - (5) Explain Full Adder with it circuit and truth table.
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