



**MBH-003-1042003** Seat No. \_\_\_\_\_

**B. Sc. (I.T) (Sem. II) (CBCS) (W.I.F. 2016) Examination**

**March / April - 2018**

**CS - 09 : Computer Organization & Architecture**  
*(Information Technology) (New Course)*

**Faculty Code : 003**

**Subject Code : 1042003**

Time :  $2\frac{1}{2}$  Hours]

[Total Marks : 70

- 1 (A) Answer the following : 4
- (1) What is logic gate?
  - (2) What is boolean function?
  - (3) List the name of universal gate.
  - (4) Explain digital computer.
- (B) Answer in brief : (Any **One**) 2
- (1) Explain Combinational Circuit.
  - (2) Explain Half Subtractor.
- (C) Answer in brief : (Any **One**) 3
- (1) Explain min term.
  - (2) Explain flip flop.
- (D) Answer in brief: (Any **One**) 5
- (1) What is logic Gate? Explain in detail.
  - (2) Explain K'map in detail.
- 2 (A) Answer the following : 4
- (1) What is IC?
  - (2) Decoder means \_\_\_\_\_
  - (3) Multiplexer is also called \_\_\_\_\_
  - (4) De'mux means \_\_\_\_\_

- (B) Answer in brief : (Any **One**) **2**  
 (1) Explain 3\*8 line decoder  
 (2) Explain encoder
- (C) Answer in brief : (Any **One**) **3**  
 (1) Explain mux in detail  
 (2) Explain counter in detail.
- (D) Answer in brief : (Any **One**) **5**  
 (1) Explain binary register in detail.  
 (2) Explain de-mux in detail.
- 3** (A) Answer the following : **4**  
 (1) 101010 Perform 1'S complement.  
 (2) 101011 Perform 1'S complement.  
 (3) 111110 Perform 2'S complement.  
 (4) 1010 Perform 2'S complement.
- (B) Answer in brief : (Any **One**) **2**  
 (1) Explain floating point representation  
 (2)  $01010 * 00111$
- (C) Answer in brief : (Any **One**) **3**  
 (1) Explain parity bit.  
 (2) Explain fixed point representation
- (D) Answer in brief : (Any **One**) **5**  
 (1) Explain Mantissa and Exponent.  
 (2) Explain Number System
- 4** (A) Answer the following : **4**  
 (1) ALU means \_\_\_\_\_  
 (2) Sel A Control \_\_\_\_\_  
 (3) Sel B Control \_\_\_\_\_  
 (4) How many types of control signal are available in DMA ?

- (B) Answer in brief : (Any **One**) **2**  
(1) Explain ALU  
(2) Explain CPU.
- (C) Answer in brief : (Any **One**) **3**  
(1) Explain a register.  
(2) Explain memory stack.
- (D) Answer in brief : (Any **One**) **5**  
(1) Explain general register org.  
(2) Explain interrupt.
- 5** (A) Answer the following : **4**  
(1) Data bus means \_\_\_\_\_  
(2) What is input output interface ?  
(3) Explain system bus.  
(4) Explain internal bus.
- (B) Answer in brief : (Any **One**) **2**  
(1) Explain memory bus.  
(2) Explain input output bus.
- (C) Answer in brief : (Any **One**) **3**  
(1) Explain I.O.P.  
(2) Explain DMA transfer.
- (D) Answer in brief : (Any **One**) **5**  
(1) What is DMA? Explain working of DMA  
(2) Explain DMA controller.
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