Oct.-Nov.-2015
204-Digital Computer Organization
BCA Sem-2

Total Marks: 70   Code : 2917   **Time: 2.5 Hours**

Q – 1 Answer the following
(A) What is Gate? Explain any three gates with truth table, Graphical symbol and   07
Boolean function
(B) Which gate is known as Universal Gate? Explain Universal Gates in detail   07

OR

Q – 1 Answer the following
(A) Explain De Morgan's Theorem in detail   07
(B) Obtain Simplify Expression and Draw Circuit : $F(A,B.C) = \Sigma (0,1,2.3,7)$ 07

Q – 2 Answer the following
(A) What is Combinational Circuit? Explain 8 * 3 Encoder.   07
(B) Explain 6 bit Comparator.   07

OR

Q – 2 Answer the following
(A) What is IC Chip? Explain types of IC chip in detail.   07
(B) What is the use of Multiplexer? Explain 1 bit – 4 line multiplexer.   07

Q – 3 Answer the following
(A) What is Arithmetic Circuit? Explain Half Adder in detail   07
(B) Explain Shift Left and Shift Right operation using 1 bit shifter   07

OR

Q – 3 Answer the following
(A) What is Subtractor? Explain Full Subtractor in detail.   07
(B) Explain 4 bit Binary Adder in detail   07

Q – 4 Answer the following
(A) Explain type of RAM and ROM. Differentiate Volatile and Non Volatile   07
Memory
(B) Define Sequential Circuit. Explain Clocked RS Flip Flop   07

OR

Q – 4 Answer the following
(A) Explain D and JK Flip Flop   07
(B) Explain Shift Register in detail.   07

Q – 5 Answer the following
(A) Explain General Microprocessor Chip   07
(B) Explain Bus Clicking in detail   07

OR

Q – 5 Answer the following
(A) Explain Bus Arbitration in detail   07
(B) Explain ISA and USB Bus.   07