**Swami Vivekanand Mahavidyalaya, Udgir**

**Dept. of Computer Science**

**Pre Semester Exam Winter 2016**

**Class: BCSFY(I-sem) Subject: Fund. Of Digital Logic(S1.3)**

**Date: 22/10/2016 Marks: 75 Time: 3 hrs**

**Q.1] Attempt any FIVE of the followings. [5 \*3= 15]**

a) Digital Signals

 b) Binary Number System.

 c) 1-Bit Memory Cell

 d) IO Buses

 e) Register

 f) T-type Flip Flop

 e) SOP

**Q.2] Attempt any TWO of the following. [2 \*5= 10]**

 a) Explain AND Gate

 b) Explain Ex-OR Gate

 c) De-Morgan’s theorems

**Q.3] Attempt any TWO of the followings. [2 \*5= 10]**

 a) Explain Excess-3 Code

 b) Do the followings: 1) (234)**10**=(?)**2** 2) (10101)**2**=(?)**8** 3) (ABC)**16**=(?)**2**

 4) (777)**8**=(?)**2**  5) (2AD)**16**=(?)**10**

 c) Explain error detecting and correcting codes

**Q.4] Attempt any TWO of the followings. [2 \*5= 10]**

 a) Explain K-map.

 b) Explain Multiplexer.

 c) Express the function in POS form: F=AB+CA

**Q.5] Attempt any TWO of the followings. [2 \*5= 10]**

 a) Explain clocked S-R Flip Flop.

 b) Explain J-K Flip Flop.

 c) Explain D-type Flip Flop.

**Q.6] Attempt any TWO of the followings. [2 \*5= 10]**

 a) What is Register? Explain Shift Register.

 b) Ripple Counter.

 c) Parallel Counter.

**Q.7] Attempt any TWO of the followings. [2 \*5= 10]**

 a) DAC

 b) Block Diagram of Microprocessor.

 c) ADC