

Shri Shivaji Maratha Society's

Samaj Bhushan Baburao Alias Appasaheb Jedhe Art's Commerce & Science College, Pune - 02

**B.Sc. (Computer Science) Internal Examination, Sept, 2016**

**Electronics II- Principles of Digital Electronics**

Date: 22/09/2016

Class: F.Y.B.Sc

Time: 01:30-02.30pm

Marks: 20

=====

**Q.1 Attempt the following:**

**[1×5=5]**

- Convert the decimal number into octal number system (246).
- State the applications of EX-OR gate.
- Write the name of Universal gates.
- Define the OR & AND gate.
- What is the full form of BCD & ASCII code.

**Q.2 Attempt Any Three of the following:**

**[5×3=15]**

a) Solve using 2's Complement Method:

1)  $(1100)_2 - (0110)_2 = (?)$       2)  $(0011)_2 - (0111)_2 = (?)$

b) State & prove De Morgan's Theorems.

c) Convert the Gray code to Binary number:

1) (1001)      2) (10111)

d) Using K-Map obtains simplified logic circuit for:

$$Y = \overline{A} \overline{B} \overline{C} \overline{D} + \overline{A} \overline{B} \overline{C} D + \overline{A} \overline{B} C \overline{D} + \overline{A} \overline{B} C D + \overline{A} B \overline{C} \overline{D} + \overline{A} B \overline{C} D + \overline{A} B C \overline{D} + \overline{A} B C D$$

=====

**Best of Luck**

=====