

# **INTRODUCTORY ELECTRONICS - 2012**

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**Note :** All questions are compulsory. Attempt any two parts from each questions carry equal marks.

## **UNIT - 1**

1. Explain the working of NPN transistor in CE and CB configuration.

**OR**

- (a) What is meant by Switching characteristics of transistor ?
- (b) Explain the working of TTL circuit.

## **UNIT - 2**

2. What are different types of Integrated Circuit Technology ? Write down its advantages and limitations.

**OR**

Explain in detail about basic monolithic integrated circuit technology.

## **UNIT - 3**

3. What is Hexadecimal System ? How a hexadecimal number can be converted into equivalent decimal number and describe arithmetic operations of two hexadecimal numbers.

**OR**

What is ASCII code ? How decimal numbers are converted in ASCII code ?

## **UNIT - 4**

4. What is K-Map ? Write a short notes on its applications.

**OR**

What do you mean by Universal Gates ? How can you prepare AND, OR, EX-OR and NOT gates from both the type of universal gates ? Explain by Gate diagram and Boolean function.

## **UNIT - 5**

5. Explain the working principle of J-K flip-flop. How will you convert a J-K flip-flop into T and D flip-flop ?

**OR**

Write short notes on any two of the following :

- (i) Combinational and sequential circuit
- (ii) Decoder
- (iii) RAM