

End Semester Examinations - 2015-16 Even Semester - May 2016

13EC101 Basic Electronics Engineering

Set B

Time : 3 hrs
Total Marks: 100

1.
 - a. Explain the formation of P-type semiconductor through its covalent bond structure. (10)
 - b. Draw the colour coding table and find the value of resistance for the given colour code. (10)
 - a. Red, Red, Black, Gold
 - b. Green, Red, Black, Silver

OR

2.
 - a. Explain about the various types of an inductor. (10)
 - b. Explain about the carbon film resistors and trimmer with suitable diagrams. (10)
3.
 - a. Explain the input and output characteristics of common emitter configuration of a BJT(14).
 - b. Draw the circuit diagram for a half wave rectifier. (6)

OR

4.
 - a. Explain the working principle and V-I characteristics of JFET. (14)
 - b. Draw the circuit diagram for Zener voltage regulator. (6)
5.
 - a. Simplify using 4-variable K-map. (6)
 $\Sigma m(5,6,7,8,9,10,11)$
 - b. Explain the working principle of 4x1 multiplexer and 1x4 demultiplexer (14)

OR

6.
 - a. Prove the following: (6)
 $A+A'B = A+B$; (ii) $AB + A'C + BC = AB + A'C$; (iii) $A+AB = A$
 - b. Implement the basic logic gate functions using universal gates (14)

7.
 - a. Explain the working of FM transmitter with a block diagram. (10)
 - b. Explain the block diagram of communication system. (10)

OR

8.
 - a. Derive the expression for frequency modulation. (14)
 - b. State the advantages of FM over AM. (6)
9.
 - a. Explain the working of Satellite communication system with the help of block diagrams of uplink model, transponder and downlink model (20)

Wishing you All the Best
