



Reg.No. \_\_\_\_\_

## End Semester Examination – Nov/Dec - 2016

Code : **13EC101**  
Sub. Name : **Basic Electronics Engineering**

Semester : **2016-17 ODD**  
Duration : **3 hrs**  
Max. marks : **100**

Q. No.	Questions	Marks
<b>PART-A(10X1=10 MARKS)</b>		
1.	Resistor resists the flow of _____.	(1)
2.	A resistor with the following color bands sequence: Gray-Brown-Orange-Gold denotes _____ $\Omega$ with _____ % tolerance.	(1)
3.	Define Zener Breakdown.	(1)
4.	What are the types of BJT transistor configurations?	(1)
5.	Convert $(110111)_2$ to decimal?	(1)
6.	Which of the following is not true? a. $0 + A = A$ b. $1 + A = 1$ c. $A + A = A$ d. $1 \cdot A = 1$	(1)
7.	Define modulation.	(1)
8.	What is the modulation index for AM?	(1)
9.	In TV transmission, sound signal is _____ modulated.	(1)
10.	What is RADAR?	(1)

<b>PART B(5 X 3= 15 MARKS)</b>		
11	What are the types of Inductors?	(3)
12	Compare BJT, FET and MOSFET.	(3)
13	What are universal gates? Why are they called so?	(3)
14	What is the need for modulation?	(3)
15	List out the features of ISDN?	(3)

<b>PART C (5 X 15= 75 MARKS)</b>		
16.	Explain in detail, the various types of capacitors with a neat diagram.	(15)
(OR)		
17.	Discuss the formation of P-type and N-type semiconductor with neat diagram	(15)
18.	Discuss the operation of pn junction diode under forward and reverse bias condition with relevant diagram.	(15)
(OR)		
19.	Describe the constructional details and characteristics of UJT.	(15)
20.	Simplify the Boolean Expression using 4 variable Karnaugh Map and draw the logic circuit for the reduced expression $F(A, B, C, D) = (1,2,4,5,6,9,12,14,15)$ .	(15)
(OR)		
21.	Define De-multiplexer. With the help of truth table explain the principle of operation of 1-to-4 De-multiplexer.	(15)
22.	Draw the basic block diagram of communication system and explain.	(15)
(OR)		
23.	With a neat block diagram, explain the working principle and operation of Super heterodyne receivers.	(15)
24.	Explain in detail about different types of the satellite orbits. Also discuss in brief the basic components of satellite communication system.	(15)

(OR)

25.	With block diagram, explain the transmission of optical signals in an optical fiber link.	(15)
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