Roll No. .....

24004

B. Tech. Ist Sem.

Examination – December, 2015

BASICS OF ELECTRONICS

Paper : ECE - 101-F

Time : Three Hours] *[Maximum Marks : 100*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any ***five*** questions. Q. No. 1 which is ***compulsory***. All questions carry equal marks.

1. (a) Define bandwidth of an amplifier. 3

(b) Write down Ideal diode equations. 2

(c) Difference between combination circuits and sequential circuits. 3

(d) Write down De-Morgans theorem. 3

(e) Why LED's emit light of different colours ? 3

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(f) Write down erent type of break down occuring in P ction diode. 3

(g) Define concej edback in amplifier. 3

2. (a) Differentiate een intrinsic and extrinsic semiconducto 8

(b) Discuss the v g of P-N Junction diode. Also explain chara ics of P-N Junction diode. 12

3. (a) Discuss the cl ation of an amplifiers. 8

(b) Explain wor of RC-coupled amplifier and also explain f icy response curve. 12

4. (a) Write down c it type of oscillators. 5

(b) Explain the v ig of Wein Bridge oscillators. Also explain two transistors are used in Wein Bridge o or. 15

5. (a) Write down c eristics of an ideal Op-Amp. 8

(b) Why we requ ltage regulators ? Explain how zener works a age regulator. 12

6. (a) Convert the following : 10

(i) $(536E)_{16}$ into decimal

(ii) $(4500)_{10}$ into octal

(iii) $(1092.25)_{10}$ into hexadecimal

(iv) $(0.1100101)_2$ into decimal

(b) Realize all basic gates using NOR gate. 10

7. Write short notes on : 10 × 2

(a) Signal/Function generator.

(b) Cathode Ray Oscilloscope (CRO)

8. (a) What is display ? Differentiate between seven segment, fourteen segment and Dot matrix display. 15

(b) List out advantage of LEDs in electronic display. 5

9. What is LCD ? Discuss the different types of LCD and write down advantages and disadvantages of them. 20

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