24004

B. Tech. 2nd Semester F. Scheme Examination,
May–2014

BASIC ELECTRONICS

Paper–ECE–101-F

Common for all branches

Time allowed : 3 hours] *[Maximum marks : 100*

Note : ***Q. No. 1 is compulsory,*** *students have to attempt* ***five*** *questions in total by taking* ***one*** *question from each section.*

1. (a) What is zener breakdown ? 5×4

(b) What is Barkhausen criteria for sustained oscillations ?

(c) Convert

$(2476)_8 = (?)_{16}$

(d) Give advantages of LED display.

Section–A

2. (a) Discuss characteristics of PN Junction diodes and compare it with an ideal diode characteristics. 10

(b) Discuss drift and diffusion current. 10

3. (a) Explain frequency response of RC coupled amplifier. 10

(b) What is the effect of positive feedback on amplifier gain ? 10

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Section–B

4. (a) Explain Wein Bridge Oscillator. 10

   (b) Give characteristics of an Ideal Op-amp. 10

5. (a) Explain series voltage regulator. 10

   (b) Discuss SMPS. 10

Section–C

6. What are universal gates and how you can make AND, OR, and NOT gates using NAND and NOR gates ? 20

7. Write short notes on – 20

   (a) CRO

   (b) Multimeter

Section–D

8. Explain LCD with it types and also give advantages and disadvantages of LCD. 20

9. Write short notes on : 20

   (a) Dot matrix display

   (b) J–K flip-flop.

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