

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 its 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.