

B.Tech. (Common for all Branches) 2nd Semester

F. Scheme Examination, May-2015

BASIC OF ELECTRONICS

Paper-ECE-101-F

Time allowed : 3 hours]

[Maximum marks : 100

Note : Attempt one question from each section and Question No. 1 is compulsory.

1. (a) State drift and diffusion currents.
- (b) Why LED's emit light of different colours ?
- (c) Discuss Barkhausen criteria for oscillations ?
- (d) Convert $(236)_8 = (\quad)_{16}$ 20

Section-A

2. (a) Discuss block diagram of op-amp. 10
- (b) Give characteristics of an op-amp. 10
3. (a) Explain working of SMPS. 10
- (b) Discuss voltage regulators. 10

Section-B

4. What are universal gates ? Explain. 20
5. (a) Explain Cathode Ray Oscilloscope and give its applications. 10
- (b) Differentiate combinational and sequential circuits. 10

Section-C

6. (a) Explain seven segment display with diagram. 10
(b) Discuss Dot-matrix display. 10
7. What is LCD's ? Give its different types and also give advantages and disadvantages of LCD's. 20

Section-D

8. Draw and explain frequency response curve and working of RC-coupled amplifier. 20
9. (a) What is feedback amplifier ? Discuss the effect of -ve feedback on amplifier on gain and bandwidth. 10
(b) Explain RC-phase shift oscillator. 10