

(DCS / DIT 212)

B. Tech. DEGREE EXAMINATION, MAY - 2015

(Examination at the end of Second Year)

COMPUTER SCIENCE & IT

Paper - II : Basic Electronics

Time : 3 Hours

Maximum Marks : 75

Answer question No.1 compulsory

(15)

Answer ONE question from each unit

(4 × 15 = 60)

- 1) a) What are intrinsic and extrinsic semiconductors. (2)
- b) Define ripple factor and regulation of a rectifier. (2)
- c) Give applications of LED. (2)
- d) Define Barkhausen criteria. (2)
- e) Draw op amp as a summer. (2)
- f) What is a clipper? (1)
- g) What are h-parameters? (2)
- h) What is the need of feed back. (2)

UNIT - I

- 2) a) Draw a self bias circuit and derive an expression for the stability factor.
- b) Explain the working of a half wave rectifier.

OR

- 3) a) Draw neat figures and explain the function of a clipper.
- b) Draw input and output characteristics of a BJT in CE configuration and explain.

UNIT - II

- 4) a) Explain the working of a Depletion type MOSFET.
b) Draw a neat figure and explain the principle of CRT.

OR

- 5) a) Draw the VI characteristics and explain the function of a UJT.
b) Explain the principle of operation of LCD.

UNIT - III

- 6) a) Explain the operation of a class C amplifier.
b) Draw the input and output waveforms and explain Hartely oscillator operation.

OR

- 7) a) Explain the operation of wein bridge oscillator.
b) Explain the class B amplifier operation with neat waveforms.

UNIT - IV

- 8) a) Explain how op amp can be used as an integrator.
b) Discuss the features of IC voltage regulator.

OR

- 9) a) Draw a Differentiator using op amps and explain its operation.
b) List the ideal characteristics of an op amp.

