(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 Barkhaussen 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.

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