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Name.....

Reg. No.....

COMBINED FIRST AND SECOND SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, DECEMBER 2006

EC 04-108—BASIC ELECTRONICS

([EC, BM, BT, AI, IC)

[2004 admissions]

Time : Three Hours Maximum : 100 Marks

Answer **all** *questions.*
Each correct answer carries 5 *marks.*

I. 1 What is electron ballistics ?

2 How does multimeter measure voltage ? Explain.

3 What are the characteristics of inductor ?

4 Bring out the differences in the reverse bias characteristics of ordinary junction diode and zener diode. Why do the differences exist ?

5 What is the effect of 2 point location on allowable signal swing ?

6 How is 2 point chosen ? Explain.

7 Why is transformer utility factor of half wave rectifier and center tapped full wave rectifier lesser than bridge type rectifier ?

8 What is the drawback of C filter ? How is it rectified ?

Answer **all** *questions.*
Each correct answer carries 15 *marks.*

II. 1 Explain the principle of operation of a pentode.

Or

2 What are the two focussing used in CRTs ? Explain.

III. 1 What are the different types of capacitors ? Explain their characteristics.

Or

2 Draw the two types of biased-clippers and explain their operation.

IV. 1 Analyse the operation of BJT graphically.

Or

2 What are the different compensation circuits used in BJT amplifiers ? Explain any *two.*

V. 1 Define and compare the following for a HWR and center tapped FWR :

Ripple factor, PIV, efficiency and rectification factor.

Or

2 What is a *pi*-filter ? Emphasize its importance.