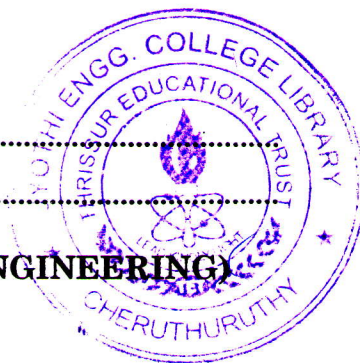


C 57528

(Pages 2)

Name.....

Reg. No.....



COMBINED FIRST AND SECOND SEMESTER B.TECH (ENGINEERING)

DEGREE EXAMINATION, JUNE 2009

Engineering

EC 04 108—BASIC ELECTRONICS

(EC, BM, BT, AI, IC)

[2004 admissions]

Time : Three Hours

Maximum : 100 Marks

- I. (a) Define and explain cyclotron angular frequency.
(b) Explain the characteristics and applications of Triode.
(c) What are the Trimmers ? Explain their characteristics and applications.
(d) Differentiate JFET from BJT.
(e) What is the need for biasing ? Explain in detail.
(f) Define stability factor. Derive an expression for stability factor.
(g) Explain the principle of operation of Half wave rectifier with a neat diagram.
(h) Define and explain :
(i) PIV.
(ii) Reverse breakdown voltage.

(8 × 5 = 40 marks)

- II. (a) Draw the blockdiagram of CRO and explain its construction and principle of operation in detail. Also explain the potential applications of CRO.

Or

- (b) Explain the principle of measurement of voltage and current with neat diagrams.

- III. (a) Explain in detail the characteristics of fixed and variable capacitors. Also explain their applications in detail.

Or

- (b) Explain the construction and principle of operation of JFET with neat sketches. Also explain its V I characteristics.

Turn over

- IV. (a) Explain the need for biasing. Explain in detail the potential divider biasing technique with a neat sketch.

Or

- (b) (i) Discuss the effect of Q - point location on allowable signal swing in detail.

(7 marks)

- (ii) Give an account on Bias Compensation.

(8 marks)

- V. (a) Draw a diode centre tapped full wave rectifier and explain its principle of operation. Obtain its efficiency.

Or

- (b) Explain the design aspects and working principle of series voltage regulator with a neat diagram.

(4 × 15 = 60 marks)