C 6073

(Pages 2)

Name.............................

Reg. No...........................

FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, JUNE 2010

EC 04 405—ELECTRONIC CIRCUIT—II

(2004 Admissions)

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

Part A

I. (a) Explain how does one define small signals.

  (b) Define slew rate and explain its significance.

  (c) Explain how low pass RC circuit is used as an integrator.

  (d) Explain about hysteresis curve.

  (e) What is monostable multivibrator ? Explain.

  (f) Explain the principles of boot strap circuits.

  (g) Explain cross-over distortion and method of eliminating it.

  (h) Explain about cascade amplifier.

(8 × 5 = 40 marks)

Part B

II. (a) Draw the circuit diagram of dual input, balanced output differential amplifier and explain differential mode operation. Derive expression for differential mode gain.

Or

  (b) (i) Obtain the small signal model for low frequency of BJT differential amplifier.

(8 marks)

   (ii) List the non-ideal characteristics of the differential amplifier.   (7 marks)

III. (a) Draw the circuit diagram of fixed biased transistorized bistable multivibrator and explain its operation.
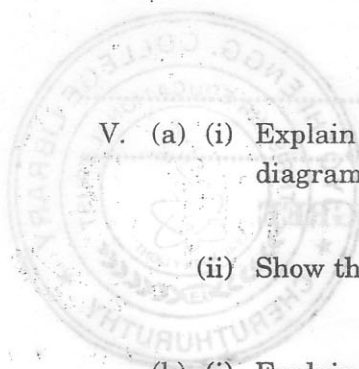
Or

  (b) With neat circuit diagram explain the operation of pulse transformer.

IV. (a) Draw the circuit diagram of emitter coupled astable multivibrator and explain its operation with neat waveforms.

Or

  (b) Draw the circuit diagram of a transistorized sweep circuit and explain its operation.

Turn over

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V. (a) (i) Explain the basic class-D amplifier using complementary symmetry switches with neat diagram.

(7 marks)

(ii) Show that the maximum efficiency of a class-B amplifier is 78.5%.

(8 marks)

Or

(b) (i) Explain what is meant by harmonic distortion.

(7 marks)

(ii) Explain the five point method of calculating the higher order harmonic distortion.

(8 marks)

[4 × 15 = 60 marks]