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Name.....

Reg. No.....

FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE (2K SCHEME) EXAMINATION, MARCH 2013

EC/PT 2K 404 / PTEC 2K 504 – ELECTRONIC CIRCUITS

Time : Three Hours Maximum : 100 Marks

Answer **all** *questions.*

I. (a) If a transistor with $\alpha = 0.96$ and emitter to base resistance 80Ω is placed in common emitter configuration, Ai, Av and Ap.

(b) Explain voltage divider biasing of BJT amplifier.

(c) Explain self biasing of JFET amplifier.

(d) Explain fixed biasing of depletion mode MOSFET.

(e) Explain voltage shunt and current series feedback configurations.

(f) Write notes on stability of oscillators.

(g) Explain the harmonic distortion in Class A amplifiers.

(h) Explain the harmonic distortion in Class B amplifiers.

(8 × 5 = 40 marks)

II. (a) Explain the bias compensation techniques.

Or

(b) Explain the working of CE and CB amplifiers.

III. (a) Explain the working of common source amplifier with self bias.

Or

(b) Explain the working of common gate amplifier and analyse.

IV. (a) Explain the working of Hartley oscillator and derive its frequency of operation.

Or

(b) Explain the working of Wien bridge oscillator and derive its frequency of operation.

V. (a) Explain the working of Class S amplifier and derive its efficiency.

Or

(b) Explain a technique for broadbanding of an amplifier with high frequency compensation.

(4 × 15 = 60 marks)