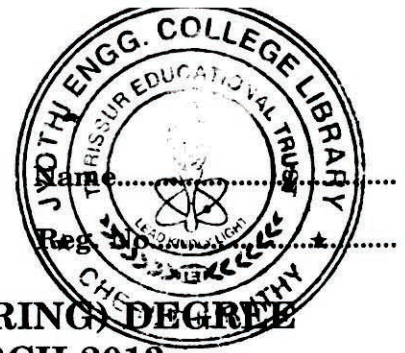


**D 34524**



**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  $80\Omega$  is placed in common emitter configuration,  $A_i$ ,  $A_v$  and  $A_p$ .
- (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)