

B.Tech II Year II Semester (R13) Supplementary Examinations December/January 2015/2016

ANALOG ELECTRONIC CIRCUITS

(Electrical and Electronics Engineering)

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) Write any two basic differences between BJT RC coupled and FET RC coupled amplifiers.
 - (b) Give the significance of gain bandwidth product.
 - (c) Draw current shunt feedback amplifier.
 - (d) Write any two characteristics of negative feedback.
 - (e) Write any two main applications of crystal oscillator.
 - (f) Give the balancing equation of Wein bridge oscillator.
 - (g) What is the significance of heat sinks in power amplifiers?
 - (h) What is the efficiency of class A amplifier?
 - (i) Define clipper and give its applications.
 - (j) What is Schmitt trigger?

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

- 2 Explain the working principle of BJT RC coupled amplifier.
- OR**
- 3 Draw cascade amplifier circuit and derive expression for gain.

UNIT – II

- 4 (a) Write the characteristics of negative feedback in amplifiers.
(b) Explain about voltage series feedback amplifiers.
- OR**
- 5 Write short notes on current feedback amplifiers.

UNIT – III

- 6 (a) Explain RC phase shift principle.
(b) Explain RC phase shift oscillator with a neat circuit diagram.
- OR**
- 7 (a) Explain the principle of tuned oscillators.
(b) Write an expression for frequency of tuned oscillators and explain.

UNIT – IV

- 8 Explain the principle of operation of complementary symmetry and give its drawbacks.
- OR**
- 9 Explain principle of class A amplifier and derive expression for efficiency.

UNIT – V

- 10 (a) Explain high pass RC circuit.
(b) Explain diode clamper circuit with suitable wave forms.
- OR**
- 11 Explain Monostable Multivibrator principle with a neat sketch.
