



Code No. : 5422/N

FACULTY OF ENGINEERING
B.E. 2/4 (EE/Inst.) II Sem. (New) (Main) Examination, May/June 2012
ELECTRONIC ENGINEERING – II

Time: 3 Hours]

[Max. Marks: 75

Note: Answer **all** questions from Part A. Answer **any five** questions from Part B.

PART – A

(25 Marks)

1. Draw a block diagram and derive a relation between A_f and A . 2½
2. What are the advantages of negative feedback ? 2½
3. What is stability w.r.t. oscillators ? 2½
4. List out the oscillators and their frequency ranges. 2½
5. For a given op-amp, CMRR is 10^5 and differential gain A_D is 10^5 . Determine the common mode gain of the op amp. 2½
6. Draw a neat sketch of a differential amplifier and discuss its significance. 2½
7. What are the advantages of a transformer coupled Class A amplifier ? 2½
8. Why is a push pull amplifier named so ? 2½
9. What is a differentiator and give its application. 2½
10. Draw a single level clipper and sketch its I/P and O/P characteristics. 2½

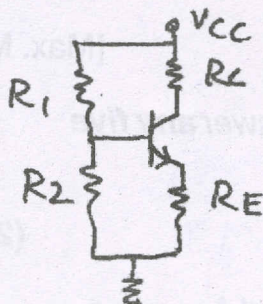
PART – B

(50 Marks)

11. a) Explain the effect of negative feedback on input impedance of a voltage series feedback amplifier. 5
- b) An amplifier has an input impedance of $1k\Omega$ and O/P impedance of $10k\Omega$ and a voltage gain of 10000. If a negative feedback β is 0.02 is applied to it, determine the I/P and O/P impedance of the amplifier. 5



12. a) Describe the effect of negative feedback on bandwidth and prove its impact. 5
b) What is the kind of negative feedback applied for the following circuit ? Justify. 5



13. a) Draw a neat diagram of a colpitts oscillator. Derive an expression for frequency of oscillations. 6
b) Draw the equivalent circuit of a crystal oscillator. Write equations for f_s and f_p . 4
14. a) Explain the working of a double ended power amplifier and give its merits over a single ended amplifier. 5
b) How are power amplifiers classified ? What is
i) dc saturation of core 5
ii) harmonic distortion.
15. a) Draw a diagram of a differential amplifier and explain its salient features. 4
b) Explain the various drift compensation techniques. 6
16. a) Draw a high pass RC circuit. Explain its response to a square wave input. 6
b) With an example, Explain about clamping. 4
17. Write short notes on :
a) RC phase shift oscillator. 5
b) Integrator. 5