Subject code: PC222EC Semester: 1st

Subject name: Analog Electronics ACY: 2020-2021

**Assignment Questions**

1. Explain the operation of a clipper circuit with an example. [CO1]

2. Explain the operation of a Clamping circuit with an example. [CO1]

3. Explain the application of a diode in half-wave rectifier circuit. [CO1]

4. Explain the construction, biasing, operation and characteristics of JFET. [CO2]

5. Derive the expressions for current gain, input impedance, voltage gain and output impedance   
 using h parameters of BJT. [CO2]

6. Compare the performance of BJT and FET amplifiers. [CO2]

7. List out the merits and demerits of negative feedback on amplifier performance. [CO3]

8. Classify the various negative feedback amplifiers. [CO3]

9. Show that for a current series feedback amplifier the input and output resistances are   
 increased by a factor if (1+Aβ) with feedback. [CO3]

10. With necessary diagrams explain the working of class A transformer coupled amplifier and   
 obtain the maximum overall efficiency. [CO4]

11. With a neat circuit diagram explain the operation of Colpitt’s oscillator using BJT. [CO4]

12. Compare the RC phase shift and wein bridge oscillators. [CO4]

13. Compare the characteristics of ideal Op-Amps and practical Op-Amps. [CO5]

14. Draw the circuit of an inverting amplifier and obtain the expression for its closed loop gain.   
 [CO5]

15. With necessary diagrams explain the operation of OP-Amp square wave generator. [CO5]