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.

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

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

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

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

6. Compare the performance of BJT and FET amplifiers.

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

8. Classify the various negative feedback amplifiers.

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

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

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

12. Compare the RC phase shift and wein bridge oscillators.

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

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

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