



## **ANALOG ELECTRONICS CIRCUITS**

### **UNIT I**

#### **SMALL SIGNAL AMPLIFIERS**

1. What is the difference between single stage and multistage amplifiers in terms of voltage gain?
2. Why gain falls at low frequencies and high frequencies as well?
3. What do you mean by maximum signal handling capacity of an amplifier?
4. If the signal applied is more than the signal handling capacity output is distorted. Why?
5. Where the Q point is selected for small signal amplifiers? Why?
6. What are applications of voltage amplifiers? Where do you use them?
7. List the type of distortions which occur in amplifiers? Explain one of them?
8. Why distortion is considered harmful in amplifiers?
9. State miller's Theorem.
10. How does the amplifier acts at low, high and mid frequencies?

### **UNIT II**

#### **FEEDBACK AMPLIFIERS**

1. When an amplifier acts as a feedback amplifier?
2. How many types of feedbacks are possible?
3. Classify feedback amplifiers?
4. What is  $A$  and  $A_f$  ? give the relation for feedback amplifier?
5. What are the advantages of negative feedback amplifiers?
6. What do you mean by sampling and mixing?
7. What is loop gain?
8. What is the effect of negative feedback on voltage gain and Bandwidth?
9. What is loading effect? How can you eliminate it?
10. What are the application of feedback amplifiers?

### **UNIT III**

#### **OSCILLATORS & REGULATORS**

1. What is the difference between an oscillator and feedback amplifier?
2. When does the amplifier behaves as an oscillator?
3. Which type of feedback is applied in an oscillator?
4. Classify oscillators?
5. How do you get  $360^\circ$  or  $0^\circ$  phase shift in oscillators?
6. What are barkhausen criterions for sustained oscillations?
7. What is the frequency range of oscillations in RC phase shift oscillator?
8. Why LC oscillators are impractical at audio frequencies?
9. What is crystal oscillator?
10. What are the applications of oscillators?

### **UNIT IV**

#### **LARGE SIGNAL AMPLIFIERS**

1. What is the difference between voltage amplifier and power amplifier?
2. How do you classify power amplifiers?
3. How much efficiency you can obtain using class A power amplifiers?
4. How much efficiency you can obtain using class B power amplifiers?
5. How much efficiency you can obtain using class AB power amplifiers?
6. How much efficiency you can obtain using class C power amplifiers?
7. How much efficiency you can obtain using class D power amplifiers?
8. What is the advantage of class B power amplifier over class A power amplifier?
9. How can you eliminate the crossover distortion?
10. Where do you use power amplifiers?

## UNIT V

### R.F. VOLTAGE AMPLIFIERS

1. What do you mean by tuned amplifiers?
2. What are the various types of tuned amplifiers?
3. Define Q factor of resonant circuit.
4. What are single tuned amplifiers?
5. What are double tuned amplifiers?
6. What are stagger tuned amplifiers?
7. List the advantages and disadvantages of tuned amplifiers.
8. What are the advantages of double tuned amplifier over single tuned amplifier?
9. What are the advantages of stagger tuned amplifier?
10. What is Neutralization?