

UNIT III**PART –A**

1. What is an amplifier?
2. Write the expression for basic current equation in MOSFET.
3. Why FET is called as a voltage controlled device?
4. Draw the equivalent circuit of MOSFET.
5. State atleast two reasons why a hybrid parameter model is used in small signal analysis.
6. Sketch the simple common source amplifier circuit of MOSFET.
7. What are the basic circuit configurations used in MOSFET?
8. Sketch the simple common gate amplifier circuit of MOSFET.
9. Compare the characteristics of small signal and large signal amplifiers.
10. Compare the AC circuit characteristics of the CS, CG and CD.
11. State the general advantages of using JFET rather than BJT.
12. Draw the small signal equivalent circuit of JFET.
13. How does the body effect change the small signal equivalent circuit of MOSFET?
14. Write the applications of MOSFET.

PART – B

1. Draw the small signal hybrid model of common drain MOSFET amplifier and derive the expression for A_i, A_v, R_i, R_v
2. Briefly explain about the small signal analysis of CS amplifier MOSFET?
3. With the neat sketch explain the principle of operation of cascode amplifier and also derive an expression for its performance measures?
4. Write short notes on voltage swing limitations.
5. Briefly explain about the small signal analysis of JFET?
6. Draw the small signal hybrid model of common drain MOSFET amplifier and derive the expression for A_i, A_v, R_i, R_v
7. Briefly explain about the small signal analysis of CS amplifier MOSFET?
8. With the neat sketch explain the principle of operation of cascode amplifier and also derive an expression for its performance measures?
9. Write short notes on voltage swing limitations.
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12. Briefly explain about the small signal analysis of CS amplifier MOSFET?
13. With the neat sketch explain the principle of operation of cascode amplifier and also derive an expression for its performance measures?
14. Write short notes on voltage swing limitations.