Questions

Unit-1 (Submission Date: 09.06.2022)

1. Draw the common emitter BJT configuration circuit with emitter resistance. Derive Z_i, Z_o and A_v using small signal model. Write its characteristics.
2. With a neat circuit diagram, explain the operation of Darlington emitter follower amplifier. Also, Derive Z_i, Z_o A_v and A_i using small signal model. Write its characteristics.

Unit-2 (Submission Date: 10.06.2022)

3. Draw the enhancement MOSFET common source configuration circuit with source resistance. Derive Z_i, Z_o and A_v using small signal model. Write its characteristics.
4. With a neat circuit diagram, explain the operation of Bi-FET amplifier. Also, Derive Z_i, Z_o and A_v using small signal model. Write its characteristics.

Unit-3 (Submission Date: 11.06.2022)

5. Mention the types of feedback connections. Draw their block diagrams indicating input and output signal. List the general characteristics of a negative feedback amplifier and write its advantages.
6. Explain the working of RC oscillators.

Unit-4 (Submission Date: 14.05.2022)

7. With a neat circuit diagram, explain the operation of transformer coupled class A Power amplifier. Derive the expression for maximum collector efficiency.
8. With a neat circuit diagram, explain the operation of class AB complementary symmetry Power amplifier. Derive the expression for maximum collector efficiency.

Unit-5 (Submission Date: 18.06.2012)

9. Draw the circuit diagram of common emitter amplifier with active load and derive an expression for voltage gain.
10. Draw the circuit diagram of differential amplifier with active load. Derive expression for differential mode gain, common mode gain and CMRR.