UNIT - IV

4 (a) Explain how input resistance of an emitter follower can be increased by using darlington circuit. What is the biasing problem associated with this circuit ?

8

(b) A multistage amplifier consists of three stages; the voltage gains of the stages are 30, 50 and 60. Calculate the overall gain in db.

4

(c) Explain Miller's theorem.

4

OR

4 (a) Discuss the frequency response curve of R-C coupled amplifier by deriving suitable derivation for low and high frequency.

8

(b) Explain bootstrapped darlington circuit.

8

UNIT - V

5 (a) Prove that is a negative feedback amplifier

$$\left|\frac{dA_f}{A_f}\right| = \frac{1}{|1+\beta A|}\left|\frac{dA}{A}\right|$$

where A_f = gain with feedback

A = transfer gain

β = feedback factor

7