

Quiz-3. (Analog circuits)

Branch - ECE, 4th sem.

Que:-1. An RC coupled amplifier has an open loop gain of 200 and lower cut-off frequency of 50Hz. If negative feedback with $\beta=0.1$ is used, the lower cut-off frequency will be

- (a) 50 Hz (b) 5 Hz (c) 2.38 Hz (d) 70.5 Hz

Que:-2. If "Q" of an LC-circuit increases, then bandwidth

- (a) Increases (b) Decreases (c) Remains same (d) None of these

Que:-3. Which of following distortion in amplifier result from the production of new frequencies in the output which are not present in input signal?

- (a) Frequency distortion (b) phase-shift distortion
(c) Non-linear distortion (d) None of these

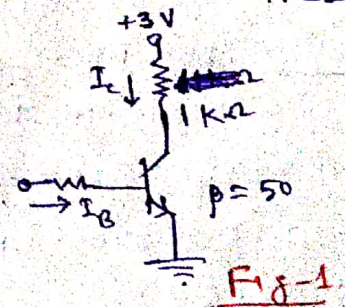
Que:-4. For approximate analysis of low-frequency transistor circuit, which of following is correct —

- (a) $h_{oe} \cdot R_L < 0.1$ (b) $h_{oe} \cdot R_L > 0.1$ (c) $h_{oe} \cdot R_L = h_{ie}$ (d) None of these

Que:-5. Assume $V_{ce} = 0.2V$, as shown in fig-1.

The minimum base current required to drive transistor into saturation is —

- (a) 56 μA (b) 140 μA (c) 60 mA (d) 3 mA

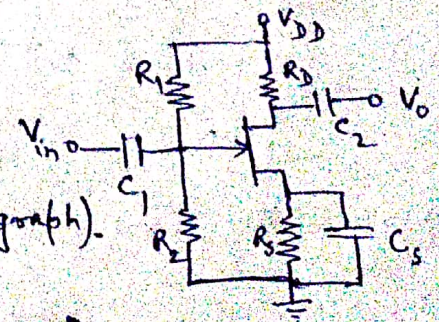


Que:-6. Draw small signal model (ckt only) for the common-source FET shown in fig-2.

Que:-7. Miller's input and Output capacitances

$C_{M_i} = \dots ?$, $C_{M_o} = \dots ?$

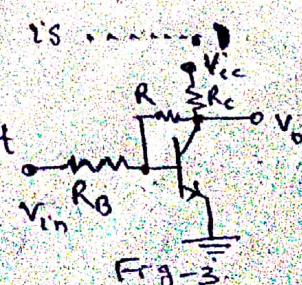
Que:-8. Draw V-I characteristic (Drain and transfer characteristic) of FET. (Only graph).



Que:-9. One dis-advantage of FET is

Que:-10. Fig-3 shows —

- (a) Voltage-series (b) Voltage-shunt
(c) Current-series (d) Current-shunt



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