Unit – III

Small Signal Amplified

3.1 A transistor is said to be in a quiescent stage when

(a) Emitter junction bias is just equal to collector junction bias.
(b) no currents are flowing
(c) no signal is applied to the input
(d) it is unbiased

3.2 A transistor in amplifier circuit is biased such that

(a) emitter junction is reverse biased and collector junction is forward biased
(b) emitter junction is forward biased and collector junction is reverse biased
(c) both junctions are forward biased
(d) Both junctions are reverse biased.

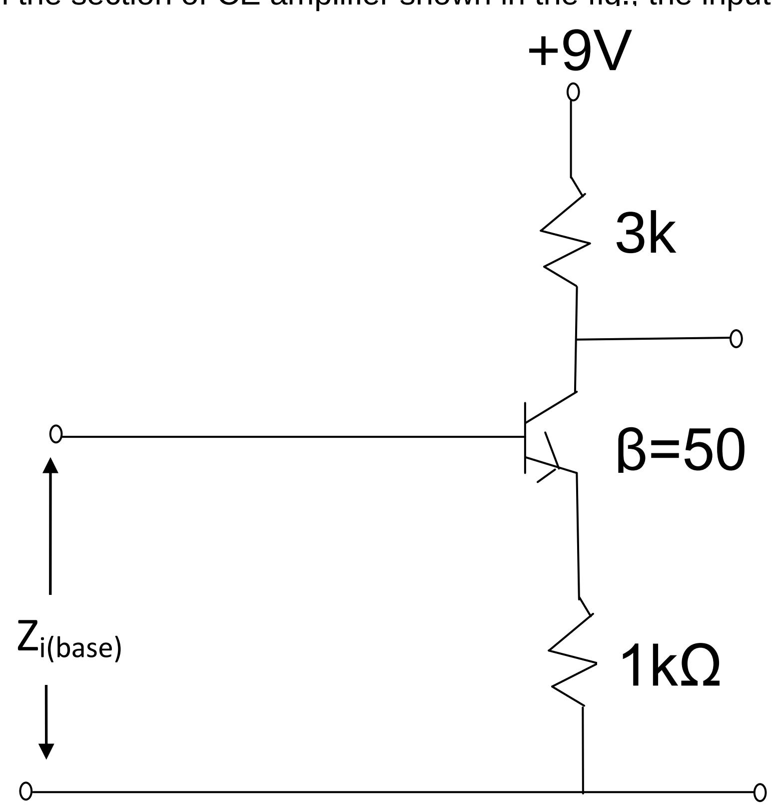
3.3 The CB amplifier has fewer applications because

(a) It exhibits poor current gain
(b) It exhibits very low input impedance.
(c) It exhibits high output impedance
(d) It exhibits poor power gain

3.4 Which of the following statements is not correct for emitter follower circuit?

(a) It raises power level.
(b) It exhibits high input impedance and low output impedance
(c) It has high current gain.
(d) It has high voltage gain

3.5 In the section of CE amplifier shown in the fig., the input impedance $Z_{i(base)}$ is



(a) 50 kΩ
(b) 1 kΩ
(c) 50 Ω
(d) 20 Ω

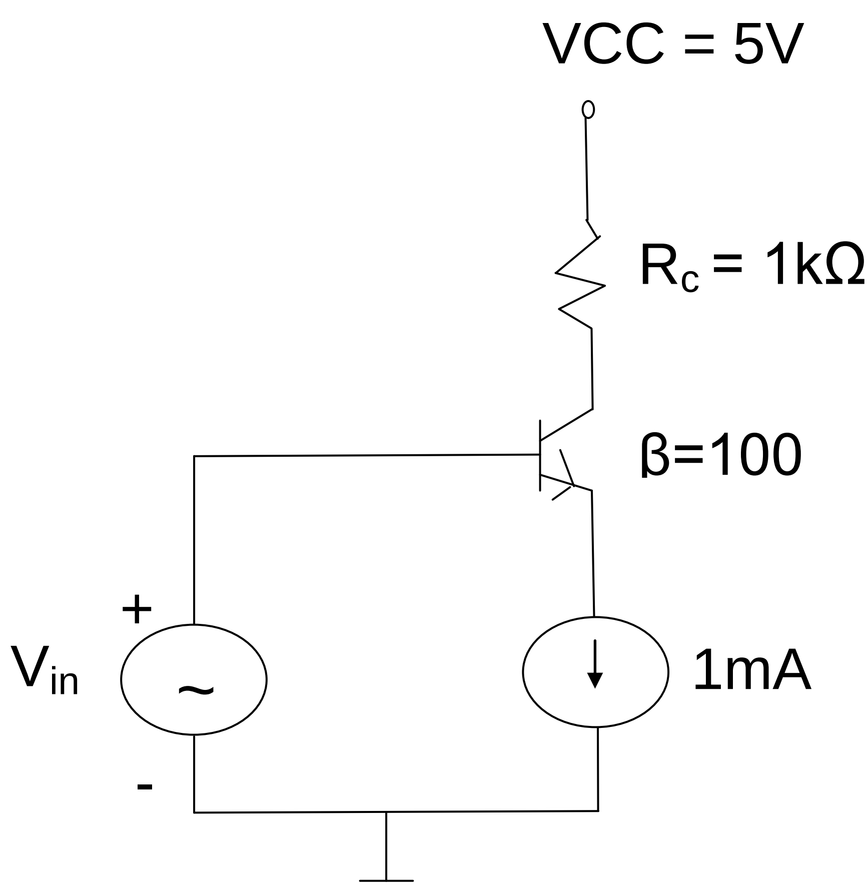
3.6 The most striking feature of CE amplifier responsible for its wide use is,

(a) It has high current gain
(b) It has high voltage gain
(c) It has a phase difference of 180^o between input and output.
(d) It shows input and output impedances of the same order.

3.7 Assuming V_{BE} = 0.7V and β= 50 for the transistor in the circuit shown in figure, the value of R_B for V_{CE} = 2V is

(a) 200 kΩ
(b) 243 kΩ
(c) 283 kΩ
(d) 300 kΩ

3.8 The common emitter amplifier shown in figure is biased using a 1mA ideal current source. The approximate base current value is,



(a) 0 μA
(b) 10 μA
(c) 100 μA
(d) 1000 μA

Answer:
3.1 (c) 3.2 (b) 3.3 (b) 3.4 (d) 3.5 (a) 3.6 (d)
3.7 (c) 3.8 (b)