

- 1 In the low frequency region of RC coupled amplifier the effect of capacitance is such that
 - (A) The series capacitors and shunt capacitors are opened
 - (B) The series capacitors and shunt capacitors are shorted
 - (C) The series capacitors are shorted
 - (D) Shunt capacitors are opened

- 2 The half power frequency is also known as
 - (A) Break frequency
 - (B) All of these
 - (C) Cut off frequency
 - (D) Corner frequency

- 3 What is the phase difference between input voltage and output voltage in a common emitter amplifier ?
 - (A) 0
 - (B) 90°
 - (C) 180°
 - (D) -180°

- 4 For proper operation of transistor as an amplifier, (CE configuration) base emitter junction should be _____ and collector emitter junction should be _____.
 - (A) (forward biased, forward biased)
 - (B) (reverse biased, reverse biased)
 - (C) (reverse biased, forward biased)
 - (D) (forward biased, reverse biased)

- 5 What is the main advantage of CE amplifier over CB amplifier as far as biasing is concerned ?
- (A) Less voltage gain
 - (B) None of these
 - (C) Single battery operation
 - (D) Small input resistance
- 6 Which circuit is the best biasing circuit ?
- (A) Collector to base bias circuit
 - (B) Voltage divider bias with emitter bias
 - (C) Fixed bias circuit
 - (D) Emitter bias circuit
- 7 Input resistance for CB amplifier is
- (A) Equal to h_{ib}
 - (B) Greater than h_{ie}
 - (C) Greater than h_{ib}
 - (D) Less than h_{ib}
- 8 Power gain is always
- (A) Zero
 - (B) All these
 - (C) A positive number
 - (D) A negative number

- 9 Input resistance for CC amplifier is
- (A) Zero
 - (B) None of these
 - (C) High
 - (D) Low
- 10 The function of a transistor is to do _____.
- (A) Filtering
 - (B) Regulation
 - (C) Rectification
 - (D) Amplification
- 11 Stabilization means making _____ independent of temperature variations or variations of transistor parameters.
- (A) Input Current
 - (B) Collector Current
 - (C) Operating Point
 - (D) Supply Voltage
- 12 Which circuit has highest stability factor ?
- (A) Collector to base bias circuit
 - (B) Voltage divider bias with emitter bias
 - (C) Fixed bias circuit
 - (D) Emitter bias circuit

- 13 Select the correct relation for CE configuration
- (A) $V_c = h_{ie}I_c + h_{re}V_c$, $I_c = h_{fe}I_b + h_{oe}V_c$
- (B) $V_c = h_{ie}I_b - h_{re}V_c$, $I_b = h_{fe}I_c - h_{oe}V_c$
- (C) $V_b = h_{ie}I_b + h_{re}V_c$, $I_c = h_{fe}I_b + h_{oe}V_c$
- (D) $I_b = h_{ie}I_b + h_{re}V_c$, $V_c = h_{fe}I_b + h_{oe}V_c$
- 14 h_{fe} is
- (A) Zero
- (B) All of these
- (C) A positive number
- (D) A negative number
- 15 What is the general equation for voltage gain of an amplifier with feedback?
- (A) $A(1 - A\beta)$
- (B) $A(1 + A\beta)$
- (C) $A/(1 - A\beta)$
- (D) $A/(1 + A\beta)$
- 16 An amplifier has a voltage gain of 40. Calculate feedback in dB if a 10% negative feedback is introduced ?
- (A) 1.4 dB
- (B) -1.4 dB
- (C) 14 dB
- (D) -14 dB
- 17 An amplifier has a voltage gain of 100. What will be the voltage gain if 10% negative feedback is given ?
- (A) 90.0
- (B) 0.909
- (C) 9.09
- (D) 90%

- 18 An amplifier has a voltage gain of 40 and 200 kHz bandwidth. Calculate the bandwidth with feedback if a 10% negative feedback is introduced in series with input.
- (A) 1000 kHz
 - (B) 500 kHz
 - (C) 100 kHz
 - (D) 10 kHz
- 19 Example of voltage series negative feedback amplifier is
- (A) CC amplifier
 - (B) CB amplifier
 - (C) CE amplifier with bypass capacitor
 - (D) CE amplifier without bypass capacitor
- 20 The circuit which exhibits 100% negative feedback
- (A) Collector to base biasing circuit
 - (B) Emitter follower
 - (C) CE amplifier with bypass capacitor
 - (D) CE amplifier without bypass capacitor
- 21 For voltage shunt feedback amplifier input resistance
- (A) Becomes zero
 - (B) None
 - (C) Increases
 - (D) Decreases
- 22 Voltage shunt feedback amplifier is a
- (A) Transconductance amplifier
 - (B) Transresistance amplifier
 - (C) Pure voltage amplifier
 - (D) Pure current amplifier

- 23 With negative feedback the bandwidth _____ and the noise _____.
- (A) decreases, increases
- (B) decreases, decreases
- (C) increases, increases
- (D) increases, decreases
- 24 If an amplifier has a bandwidth of 200 kHz and voltage gain of 50, what will be new bandwidth and gain if 5% negative feedback is introduced?
- (A) 70 kHz, 14.28
- (B) 700 Hz, 1.428
- (C) 0.7 MHz, 14.28
- (D) 7 kHz, 142.8
- 25 Design a voltage divider bias circuit for the following specifications
 $V_{cc} = 20 \text{ v}$, $I_c = 10 \text{ mA}$, $V_{CE} = 8 \text{ V}$, $\beta = 80$
- (A) $R_E = 200\text{m}\Omega$, $R_C = 10 \text{ k}\Omega$, $R_2 = 16\Omega$, $R_1 = 1\text{k}\Omega$
- (B) $R_E = 20 \mu\Omega$, $R_C = 1 \text{ m}\Omega$, $R_2 = 1600\text{M}\Omega$, $R_1 = 10\text{k}\Omega$
- (C) $R_E = 200 \Omega$, $R_C = 1 \text{ k}\Omega$, $R_2 = 1600\Omega$, $R_1 = 10\text{k}\Omega$
- (D) $R_E = 200\text{k}\Omega$, $R_C = 1 \Omega$, $R_2 = 160 \Omega$, $R_1 = 1\text{k}\Omega$

- 26 The frequency range of an audio amplifier is
- (A) Few kHz to 100 MHz
 - (B) All of these
 - (C) 0 to few Hz
 - (D) 20 Hz to 20 kHz
- 27 In class B amplifier the Q – point is located
- (A) Near the cut off region
 - (B) Below the cut off region
 - (C) At the centre of the active region
 - (D) Near the saturation region
- 28 An ideal current amplifier must have
- (A) Zero input resistance and infinite output resistance
 - (B) Infinite input resistance and infinite output resistance
 - (C) Infinite input resistance and zero output resistance
 - (D) Zero input resistance and zero output resistance