

Student: Prathveesh Honna Ager

Score: 12/25 (48.00%)

Code: 8469

1. What is the current gain of common collector amplifier?

- A) Low
 B) High
 C) Medium (Incorrect)
D) Very high

A) Complex design

B) Higher thermal stability

- C) Requires complicated bias arrangement
 D) Silicon transistor needs low cut-in-voltage (Incorrect)

2. What is the current gain of a common emitter base amplifier?

- A) Unity
 B) Infinity (Incorrect)
 C) Greater than 1
D) Less than 1

10. Why NPN type of transistors are preferred over the PNP type transistors?

- A) NPN has lower switching speed (Incorrect)
 B) NPN has good bias stability
C) NPN has higher switching speed
 D) Low operating voltage

3. What is the meaning of first letter indicated in the transistor code number BC 107?

- A) Germanium material used
B) Silicon material used (Correct)
 C) Antimony material used
 D) Indium material used

11. Which type of transistors are required to amplify signals from the microphone /transducer?

- A) Low power transistors (Correct)**
 B) Medium power transistors
 C) High power transistors
 D) Epitaxial power transistors

4. What is the formula used to calculate the current gain (alpha) of common base amplifier?

- A) I_C / I_E (Correct)**
 B) I_E / I_C
 C) I_B / I_E
 D) I_E / I_C

12. What type of packaging is generally used to transistors utilized for low power amplification?

- A) Metal packaging
B) Plastic packaging (Correct)
 C) Ceramic packaging
 D) Plastic packaging with metal heatsinks

5. What is the name of multi-stage amplifiers?

- A) Cascoded amplifier (Incorrect)
B) Cascaded amplifier
 C) Complementary symmetry amplifier
 D) Darlington pair amplifier

13. Which type of packaging is used to transistors utilized for medium power amplification?

- A) Plastic packaging with metal heatsinks**
 B) Ceramic packaging
 C) Plastic packaging (Incorrect)
 D) Metal packaging

6. What is the maximum emitter to base voltage V_{EB} (max) for the transistor BC 147?

- A) 4V
 B) 5V
C) 6V (Correct)
 D) 8V

14. Which type of amplifier is used to operate the loud speaker?

- A) IF amplifier
 B) RF amplifier
C) Power amplifier
 D) Voltage amplifier (Incorrect)

7. How the maximum permissible voltage that can be applied across the collector-emitter junction of a transistor is indicated?

- A) V_{CE} (max) in volts**
 B) V_{BE} (max) in volts
 C) V_{CB} (max) in volts
 D) V_{CC} in volts (Incorrect)

8. Which configuration of transistor amplifier is most commonly used in electronic circuits?

- A) Common base configuration
B) Common emitter configuration (Correct)
 C) Common collector configuration
 D) Common drain amplifier configuration

15. What is the voltage gain in a transistor if the input voltage is 40mV and the output voltage is 3.6V?

- A) 45
 B) **90 (Correct)**
 C) 180
 D) 270

9. Why are transistors made of silicon preferred over the germanium semiconductor material?

16. What is the input impedance of darlington pair transistors?

A) Very low input impedance
B) Very high input impedance

C) Medium input impedance (Incorrect)
D) Uniter

17. What is the advantage of using bias in transistor circuits?

A) Provides positive feedback (Incorrect)
B) Never reach saturation

C) Easily sets saturated
D) Gives maximum distortion

18. Which class of amplifier uses fixed bias because of its impement advantage of transistor will never go to saturation?

A) Class - A
B) Class - B

C) Class - AB (Incorrect)
D) Class - C

19. How does the values of bias resistors selected for collector current in class -B amplifiers?

A) Q point set slightly below cut-off
B) Quiescent current at mid point

C) Quiescent current beyond the cut-off point (Incorrect)
D) Quiescent current over the cut-off value

20. Which parameter of passive component can be calculated using the formula ?

A) Capacitance
B) Inductance

C) Capacitive reactance (Correct)
D) Inductive reactance

21. What will happen when the forward bias voltage across the PN junction is increased excessively?

A) Increases the cut - in - voltage
B) Barrier width of junction increases

C) Junction ruptured and short circuited (Correct)
D) No current flows through the junction

22. What is the overall base emitter voltage required to turn the darlington pair?

A) 0.2 V
B) 0.3 V

C) 0.7 V
D) 1.4 V (Correct)

23. How can you confirm a transistor as defective?

A) By circuit testing
B) By ohm meter testing (Correct)

C) By physical testing
D) By voltage measurements

24. Where does the depletion region exists in a bipolar transistor?

A) Between emitter - base electrodes (Incorrect)
B) Between collector - base electrodes

C) Between collector and emitter electrodes
D) Between E-B and B-C electrodes

25. In which quantity affects the Q point of a transistor amplifier?

A) Decreased temperature
B) Increased temperature (Correct)

C) Proper biasing methods
D) Mismatching signals