

March 2026

Sri Mahalingeswara ITI

Answer Key

Duration: 30 Mins

Total Marks: 32

Q.ID: ITISKILL975680

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

- A) Provides positive feedback
- B) Gives maximum distortion
- C) Easily sets saturated
- D) Never reach saturation

Answer: D) Never reach saturation

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

- A) Very high input impedance
- B) Uniter
- C) Very low input impedance
- D) Medium input impedance

Answer: A) Very high input impedance

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

- A) Quiescent current at mid point
- B) Quiescent current beyond the cut-off point
- C) Q point set slightly below cut-off
- D) Quiescent current over the cut-off value

Answer: D) Quiescent current over the cut-off value

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

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

Answer: B) Common emitter configuration

5. What is the advantage of silicon over germanium for transistor fabrication?

- A) Higher thermal stability
- B) Lower operating voltage
- C) Higher amplification factor
- D) Lower thermal stability

Answer: A) Higher thermal stability

6. 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) No current flows through the junction
- D) Junction ruptured and short circuited

Answer: D) Junction ruptured and short circuited

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

- A) Capacitive reactance
- B) Inductive reactance

- C) Inductance
- D) Capacitance

Answer: A) Capacitive reactance

8. How can you confirm a transistor as defective?

- A) By ohm meter testing
- B) By circuit testing
- C) By voltage measurements
- D) By physical testing

Answer: A) By ohm meter testing

9. Which type of amplifier in used to operate the loud speaker?

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

Answer: B) Power amplifier

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

- A) RF Amplifier
- B) Voltage Amplifier
- C) IF Amplifier
- D) Power Amplifier

Answer: D) Power Amplifier

11. What in the current gain of a common ? base amplifier?

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

Answer: A) Less than 1

12. Why the complementary - symmetry amplifier is preferred over the other types of amplifier configurations?

- A) To minimize the gain
- B) To get more voltage gain
- C) To get less distortion
- D) To eliminate the transformer

Answer: D) To eliminate the transformer

13. What is the maximum emitter to base voltage VEB (max) for the transistor BC 147?

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

Answer: B) 6V

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

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

Answer: D) Cascaded amplifier

15. Where does the depletion region exist in a bipolar transistor?

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

Answer: D) Between E-B and B-C electrodes

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

- A) Low power transistors
- B) Epitaxial versus watt transistors
- C) Medium power transistors
- D) High power transistors

Answer: A) Low power transistors

17. What is the efficiency of a transformer coupled class A amplifier?

- A) About 50%
- B) Less than 20%
- C) Unity
- D) More than 60%

Answer: A) About 50%

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

- A) Silicon transistor needs low cut-in-voltage
- B) Higher thermal stability
- C) Requires complicated bias arrangement
- D) Complex design

Answer: B) Higher thermal stability

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

- A) Class - C
- B) Class - B
- C) Class - AB
- D) Class - A

Answer: D) Class - A

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

- A) VCB (max) in volts
- B) VBE (max) in volts
- C) VCC in volts
- D) VCE (max) in volts

Answer: D) VCE (max) in volts

21. What is the purpose of using positive feedback in amplifiers?

- A) To produce demodulation
- B) To produce oscillation
- C) To produce modulation
- D) To produce multiplexion

Answer: B) To produce oscillation

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

- A) I_B / I_E
- B) I_C / I_E
- C) I_E / I_C
- D) I_E / I_C

Answer: B) I_C / I_E

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

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

Answer: A) Plastic packaging with metal heatsinks

24. In which quantity does the Q point of a transistor amplifier?

- A) Mismatching signals
- B) Proper biasing methods
- C) Decreased temperature
- D) Increased temperature

Answer: D) Increased temperature

25. What is the overall base-emitter voltage required to turn on the darlington pair?

- A) 1.4 V
- B) 0.7 V
- C) 0.2 V
- D) 0.3 V

Answer: A) 1.4 V

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

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

Answer: C) Plastic packaging

27. Why are NPN type transistors preferred over the PNP type transistors?

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

Answer: D) NPN has higher switching speed

28. What is the current gain of a common collector amplifier?

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

Answer: A) Very high

29. How is negative feedback called?

- A) Regenerative feedback
- B) Voltage controlled feedback
- C) Current controlled feedback
- D) Degenerative feedback

Answer: D) Degenerative feedback

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

- A) 270
- B) 45
- C) 180
- D) 90

Answer: D) 90

31. Which coding system for transistor type numbering system is followed by American standard?

- A) PRO-ELECTRON standard
- B) Home codes
- C) JEDEC standard
- D) JIS standard

Answer: C) JEDEC standard

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

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

Answer: A) Silicon material used
