TRASISTOR-BIAS-32MCQ

ITI Quiz - - -2026 03:50 PM

Q. ID: ITISKILL97568O

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Duration: 30 Mins | **Total Marks: 32** | **ID: ITISKILL97568O**

Student Name: _____ Roll No: _____

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

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

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

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

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

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

4. How can you confirm a transistor as defective?

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

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

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

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

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

7. What is the purpose of using positive feed back in amplifiers?

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

8. How the negative feedback is called?

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

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

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

10. What is the input impedence of darlington pair transistors?

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

18. What is the effeciency transformer coupled class A amplifier?

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

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

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

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

A) Increases the cut - in - voltage
B) Junction ruptured and short circuited
C) Barrier width of junction increases
D) No current flows through the junction

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

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

22. Why transistors made of silicon is preferred over the germanium semiconductor material?

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

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

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

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

A) Capacitance
B) Capacitive reactance
C) Inductive reactance
D) Inductance

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

A) IE/ IC
B) IE/ IC
C) IB/ IE
D) IC/ IE

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

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

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

A) Cascoded amplifier
B) Darlington pair amplifier
C) Cascaded amplifier
D) Complementry symmetry amplifier

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

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

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

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

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

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

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

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

32. How the maximum permissible voltage that can be applied across the collector ? Emitter junction of a transistor is indicated?

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