

02:13 PM

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Answer Key

Duration: 30 Mins

Total Marks: 32

Q.ID: ITISKILL2546YL

1. 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

Answer: B) Class - A

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

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

Answer: C) 6V

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

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

Answer: C) To produce oscillation

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

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

Answer: A) Very high input impedance

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

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

Answer: B) Cascaded amplifier

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

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

Answer: B) Very high

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

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

Answer: D) Junction ruptured and short circuited

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

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

Answer: A) Plastic packaging with metal heatsinks

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

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

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

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

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

Answer: A) I_C / I_E

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

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

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

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

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

Answer: D) Less than 1

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

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

Answer: A) 1.4 V

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

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

Answer: D) Plastic packaging

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

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

Answer: D) To eliminate the transformer

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

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

Answer: B) JEDEC standard

17. How can you confirm a transistor as defective?

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

Answer: C) By ohm meter testing

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

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

Answer: B) VCE (max) in volts

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

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

Answer: A) Power Amplifier

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

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

Answer: B) Power amplifier

21. Why NPN type of transistors are 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

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

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

Answer: D) Increased temperature

23. What is the voltage gain in a transistor if the input

voltage in 40mv and the output voltage in 3.6V?

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

Answer: B) 90

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

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

Answer: D) Higher thermal stability

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

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

Answer: C) Never reach saturation

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

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

Answer: A) Higher thermal stability

27. What is the efficiency transformer coupled class A amplifier?

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

Answer: D) About 50%

28. How the negative feedback is called?

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

Answer: C) Degenerative feedback

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

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

Answer: A) Low power transistors

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

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

Answer: C) Common emitter configuration

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

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

Answer: C) Capacitive reactance

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

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

Answer: C) Silicon material used
