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Score: 20/32 (62.50%)

Code: 9107

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

- | | |
|--------------------------|--|
| A) JIS standard | B) Home codes |
| C) JEDEC standard | <u>D) PRO-ELECTRON standard</u>
(Incorrect) |

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

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

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

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

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

- | | |
|---|---------------------------------|
| A) Germanium material used | B) Silicon material used |
| <u>C) Antimony material used</u>
(Incorrect) | D) Indium material used |

5. 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 |

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

- | | |
|------------------------------------|--|
| A) Cascoded amplifier | B) Cascaded amplifier (Correct) |
| C) Complementry symmetry amplifier | D) Darlington pair amplifier |

7. 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 |

8. How the negative feedback is called?

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

9. 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 (Correct) | B) $V_{BE} (max)$ in volts |
| C) $V_{CB} (max)$ in volts | D) V_{CC} in volts |

10. 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 |

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

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

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

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

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

- | | |
|---|-------------------------------------|
| A) Low power transistors | B) Medium power transistors |
| <u>C) High power transistors</u>
(Incorrect) | D) Epitaxial versa watt transistors |

14. 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 |

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

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

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

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

17. 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

18. 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

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

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

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

- A) **Class - A (Correct)**
B) Class - B
C) Class - AB
D) Class - C

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

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

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

- A) Capacitance
B) Inductance
C) **Capacitive reactance**
D) Inductive reactance (Incorrect)

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

- A) IF Amplifier
B) RF Amplifier
C) **Power Amplifier (Correct)**
D) Voltage Amplifier

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

- A) Lower thermal stability
B) **Higher thermal stability (Correct)**

C) Lower operating voltage
D) Higher amplification factor

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

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

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

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

27. 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

28. 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)**

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

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

30. How can you confirm a transistor as defective?

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

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

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

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

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