

Duration: 30 Mins

Total Marks: 25

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Student Name: _____ Roll No: _____

1. How the negative feedback is called?

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

2. What is the name of the circuit that shifts the original signal in a vertical downward direction?

- | | |
|------------------------------|--------------------------------|
| A) Positive clamping circuit | B) Negative clamping circuit |
| C) Peak clipper circuit | D) Combination clipper circuit |

3. What is the name of the circuit that shifts the original signal in a vertical upward direction?

- | | |
|------------------------------|--------------------------------|
| A) Peak clipper circuit | B) Positive clamping circuit |
| C) Negative clamping circuit | D) Combination clipper circuit |

4. What is the use of clamper in electronic circuits?

- | | |
|-------------------------------|---------------------------------|
| A) For slicing both peaks | B) For DC component restoration |
| C) For positive peak clipping | D) For negative peak clipping |

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

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

6. What is the name of the circuit that shifts the waveform upward or downward without disturbing its shape?

- | | |
|--------------------------------|---------------------------|
| A) Combination clipper circuit | B) Biased clipper circuit |
| C) Clamper circuit | D) Clipper circuit |

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

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

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

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

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

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

10. What should be the time constant $t = RC$ for a good clamper circuit with reference to time period of the input signal?

- | | |
|---|---|
| A) RC values should be at least ten times | B) Five times the time period of signal |
| C) Double the time of signal frequency | D) Half the time period of signal |

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

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

12. What are the basic components required for a clipping circuit?

- | | |
|------------------------|---------------------------|
| A) Diode and capacitor | B) Capacitor and resistor |
| C) Diode and resistor | D) Transistor and diode |

13. When does the biased negative clipper removes the portion of input signal?

- | | |
|---|---|
| A) Signal voltage equals the bias battery voltage | B) Signal voltage is lesser than bias battery voltage |
| C) During the positive half cycle of input | D) Signal voltage becomes greater than bias battery voltage |

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

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

15. 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

16. Which type of clipper is that a small portion of the negative half cycle of signal is removed?

- A) Biased negative clipper
- B) Positive clamper
- C) Biased positive clipper
- D) Combination clipper

17. 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

18. Which application the clamper circuit is used in electronics?

- A) Radio receivers
- B) Radars
- C) Power supplies
- D) Storage counters

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

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

20. What is the function of clipper circuit?

- A) Amplification
- B) Wave shaping

C) Regulation

D) Rectification

21. Which circuit is used to clip portion of both positive and negative half cycle of input signal voltage?

- A) Unbiased clipper circuit
- B) Combination clipper circuit
- C) Biased positive clipper circuit
- D) Biased negative clipper circuit

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

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

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

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

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

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

25. When does the biased positive clipper removes the portion of input signal?

- A) During the negative half cycle of input
- B) Signal voltage is lesser than bias battery
- C) Signal voltage becomes greater than bias battery voltage
- D) Signal voltage equals the bias battery voltage