

## EE AND ECE IMPORTANT MCQ PDF- ANALOG ELECTRONICS 1

1. Which of the following amplifier is considered linear?
  - Class A
  - Class B
  - Class C
  - **Either A or B**
2. The voltage gain of a common collector configuration is
  - **Unity**
  - Zero
  - Very high
  - Moderate
3. A two-transistor class B power amplifier is commonly called
  - **Push-pull amplifier**
  - Dual amplifier
  - Symmetrical amplifier
  - Differential amplifier
4. If a transistor is operated in such a way that output current flows for 160 degrees of the input signal, then it is \_\_\_\_\_ operation.
  - Class A
  - **Class C**
  - Class B
  - Class AB
5. Which coupling has the best frequency response?
  - **Direct**
  - RC
  - Transformer
  - Transistor
6. A transistor amplifier has high output impedance because
  - Emitter is heavily doped
  - Collector is wider than emitter or base
  - **Collector has reverse bias**
  - Emitter has forward bias
7. Which of the following is considered an amplifier figure of merit?

- **Gain-bandwidth product**

- Beta ( $\beta$ )
- Alpha ( $\alpha$ )
- Temperature

8. What piece of equipment in an oscilloscope is used to indicate pulse condition in a digital logic circuit?

- Probe
- Test prods
- Connector
- **Logic probe**

9. What linear circuit compares two input signals and provides a digital level output depending on the relationship of the input signals?

- **Comaparator**
- Controller
- Compressor
- Switch

10. What type of coupling is generally used in power amplifiers?

- **Transformer**
- Direct
- RC
- Inductive

11. Which amplifier whose output current flows for the entire cycle?

- **Class A**
- Class B
- Class C
- Class AB

12. The coupling capacitor  $C_c$  must be large enough to \_\_\_\_\_ in an RC coupling scheme.

- Pass dc between the stages
- Dissipate high power
- **Prevent attenuation of low frequency**
- Prevent attenuation of high frequency

13. What is the point of intersection of dc and ac load lines called?

- **Operating point**

- Cut off point
- Saturation point
- Breakdown

14. An oscillator produces \_\_\_\_\_ oscillations.

- Damped
- Modulated
- **Undamped**
- Sinusoidal

15. What is the operating point in the characteristic curve called?

- **Quiescent point**
- Load point
- Biasing point
- Saturation point

16. Oscillators operate on the principle of

- **Positive feedback**
- Negative feedback
- Signal feedthrough
- Attenuation

17. In a class A amplifier, the output signal is

- Distorted
- **The same as the input**
- Clipped
- Smaller in amplitude than the input

18. What happens if the input capacitor of a transistor amplifier is short-circuited?

- **Biasing conditions will change**
- Transistor will be destroyed
- Signal will not reach the base
- Biasing will stabilize

19. Which is used to establish a fixed level of current or voltage in a transistor?

- **Biasing**
- Loading
- Load line
- Coupling

20. Which power amplifier has the highest collector efficiency?

- Class A
- **Class C**
- Class B
- Class AB

21. What is a non-linear type of amplifier?

- **Class C**
- Class AB
- Class B
- Class A

22. An AF transformer is shielded to

- Keep the amplifier cool
- **Prevent the induction due to stray magnetic fields**
- Protect from rusting
- Prevent electric shock

23. Amplitude distortion is otherwise known as \_\_\_\_\_ distortion.

- Intermodulation
- **Harmonic**
- Phase
- Resonant

24. What represents common-emitter small signal input resistance?

- **hie**
- hfe
- hib
- hoe

25. The ear is not sensitive to \_\_\_\_\_ distortion.

- **Frequency**
- Amplitude
- Harmonic
- Phase

26. Class C is an amplifier whose output current flows for

- **Less than one-half the entire input cycle**
- The entire input cycle

- Twice the entire input cycle
- Greater than one-half the entire input cycle

27. If gain without feedback and feedback factor are  $A$  and  $\beta$  respectively, then gain with negative feedback is given by

- $A / 1 - A \beta$
- **$A / 1 + A \beta$**
- $1 + A \beta / A$
- $(1 + A \beta) A$

28. The collector current in an common base configuration is equal to

- **Alpha times emitter current plus leakage current**
- Alpha times base current plus leakage current
- Beta times emitter current plus leakage current
- Beta times collector current plus leakage current

29. Which is not a basic BJT amplifier configuration?

- **Common-drain**
- Common-base
- Common-emitter
- Common-collector

30. The value of collector load resistance in a transistor amplifier is \_\_\_\_\_ the output impedance of the transistor.

- Equal to
- More than
- **Less than**
- Not related

31. What is the purpose of RC or transformer coupling?

- To block ac
- **To separate bias of one stage from another**
- To increase thermal stability
- To block dc

32. The bandwidth of a single stage amplifier is \_\_\_\_\_ that of multistage amplifier.

- Equal to
- Less than
- **More than**
- Independent

33. What is the time taken by the electrons or holes to pass from the emitter to the collector?

- **Transit time**
- Recombination
- Transient time
- Duty cycle

34. To obtain good gain stability in a negative feedback amplifier, AB is

- Equal to 1
- **Very much greater than 1**
- Less than 1
- Zero

35. The basic concept of the electric wave filter was originated by

- **Campbell and Wagner**
- Norton
- Foster
- Bode and Darlington

36. Which configuration has the lowest current gain?

- **Common-base**
- Common-collector
- Common-emitter
- Emitter follower

37. Which transistor configuration offers no phase reversal at the output?

- Common-base
- Common-collector
- Common-emitter
- **Both A and B**

38. The number of stages that can be directly coupled is limited because

- **Change in temperature can cause thermal instability**
- Circuit becomes heavily and costly
- It becomes difficult to bias the circuit
- Circuits' resistance becomes too large

39. The input capacitor in an amplifier is called \_\_\_\_\_ capacitor.

- **Coupling**
- Stray

- Bypass
- Electrolytic

40. AC load line has a/an \_\_\_\_\_ slope compared to that of dc load line.

- Zero B. Smaller
- Smaller
- **Bigger**
- Infinite

41. A multistage amplifier uses at least how many transistors?

- One
- Three
- Four
- **Two**

42. RC coupling is used for \_\_\_\_\_ amplification.

- **Voltage**
- Current
- Signal
- Power

43. An ammeter's ideal resistance should be

- **Zero**
- Unity
- Infinite
- The same with the circuits resistance

44. What circuit increases the peak –to-peak voltage, current or power of a signal?

- Power supply
- Attenuator
- **Amplifier**
- Filter

45. When the non-linear distortion in an amplifier is  $D$  without feedback, with negative voltage feedback it will be

- **$D / 1 + A \beta$**
- $1 + A \beta / D$
- $D (1 + A \beta)$
- $D (1 - A \beta)$

46. A tuned amplifier uses what load?

- Resistive
- Capacitive
- **LC tank**
- Inductive

47. The voltage gain over mid- frequency range in an RC coupled amplifier

- Changes instantly with frequency
- **Is constant**
- Is independent of the coupling
- Is maximum

48. The input impedance of an amplifier \_\_\_\_\_ when negative voltage feedback is applied.

- Decreases
- Becomes zero
- **Increases**
- Is unchanged

49. The input impedance of an amplifier \_\_\_\_\_ when negative current feedback is applied.

- Remains unchanged
- **Decreases**
- Increases
- Becomes zero

50. To obtain the frequency response curve of an amplifier \_\_\_\_\_ is kept constant.

- **Generator output level**
- Amplifier output
- Generator frequency
- Amplifier frequency