

- 1) A JFET is a driven device
 - a) current
 - b) voltage
 - c) both current and voltage
 - d) none of the above

- 2) If the reverse bias on the gate of a JFET is increased, then width of the conducting channel
 - a) is decreased
 - b) is increased
 - c) remains the same
 - d) none of the above

- 3) A MOSFET can be operated with
 - a) negative gate voltage only
 - b) positive gate voltage only
 - c) positive as well as negative gate voltage
 - d) none of the above

- 4) A common base configuration of a pnp transistor is analogous to of a JFET
 - a) common source configuration
 - b) common drain configuration
 - c) common gate configuration
 - d) none of the above

- 5) has the lowest noise-level
 - a) triode
 - b) ordinary transistor
 - c) tetrode
 - d) JFET

- 6) In the common mode,
 - a) both inputs are grounded
 - b) the outputs are connected together
 - c) an identical signal appears on both the inputs
 - d) the output signals are in-phase

- 7) Of the values listed, the most realistic value for open-loop voltage gain of an OP-amp is
 - a) 1
 - b) 2000
 - c) 80 dB
 - d) 100,000

- 8) Which factor is responsible for causing slew rate?
 - a) Internal capacitor

- b) External resistor
- c) None of the mentioned
- d) Both internal and external capacitor

9) A certain noninverting amplifier has R_i of 1 k Ω and R_f of 100 k Ω . The closed-loop voltage gain is

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- a) 100,000
- b) 1000
- c) 101
- d) 100

10) The Op-amp can amplify

- a) a.c. signals only
- b) d.c. signals only
- c) both a.c. and d.c. signals
- d) neither d.c. nor a.c. signals

11) Modulation is done in

- a) Transmitter
- b) Radio receiver
- c) Between transmitter and radio receiver
- d) None of the above

12) In an AM wave useful power is carrier by

- a) Carrier
- b) Sidebands
- c) Both sidebands and carrier
- d) None of the above

13) Overmodulation (amplitude) occurs when signal amplitude is carrier amplitude

- a) Equal to
- b) Greater than
- c) Less than
- d) None of the above

14) In TV transmission, picture signal is modulated

- a) Frequency
- b) Phase
- c) Amplitude
- d) None of the above

15) Superhertodyne principle refers to

- a) Using a large number of amplifier stages
- b) Using a push-pull circuit

- c) Obtaining lower fixed intermediate frequency
- d) None of the above

16) Demodulation is done in

- a) Receiving antenna
- b) Transmitter
- c) Radio receiver
- d) Transmitting antenna

17) If level of modulation is increased power is increased

- a) Carrier
- b) Sideband
- c) Carrier as well as sideband
- d) None of the above

18) Man made noise are variations.

- a) Amplitude
- b) Frequency
- c) Phase
- d) Both phase and frequency

19) The IF is 455 kHz. If the radio receiver is tuned to 855 kHz, the local oscillator frequency is

- a) 455 kHz
- b) 1310 kHz
- c) 1500 kHz
- d) 1520 kHz

20) The output voltage of phase detector is

- a) Phase voltage
- b) Free running voltage
- c) Error voltage
- d) None of the mentioned

21) At what range the PLL can maintain the lock in the circuit?

- a) Lock in range
- b) Input range
- c) Feedback loop range
- d) None of the mentioned

22) How many voltage levels are present in a PWM signal?

- a) 0
- b) 1

- c) 2
- d) 3

23) Which pulse modulation technique is least expensive?

- a) Pulse amplitude modulation
- b) Pulse width modulation
- c) Pulse position modulation
- d) Pulse code modulation

24) A PWM signal can be generated by

- a) An astable multi vibrator
- b) A monostable multi vibrator
- c) Integrating a PPM signal
- d) Differentiating a PPM signal

25) TDM requires

- a) Constant data transmission
- b) Transmission of data samples
- c) Transmission of data at random
- d) Transmission of data of only one measured

26) Power amplifier directly amplifies _____

- a) Voltage of signal
- b) Current of the signal
- c) Power of the signal
- d) All of the mentioned

27) For a perfect power amplifier output power rating will be _____ if the output impedance is halved.

- a) Halved
- b) Squared
- c) Doubled
- d) Square rooted

28) Which of the following is true for the active region of an npn transistor?

- a) The collector current is directly proportional to the base current
- b) The potential difference between the emitter and the collector is less than 0.4 V
- c) All of the mentioned
- d) None of the mentioned

29) Which of the following is true for a pnp transistor in active region?

- a) CB junction is reversed bias and the EB junction is forward bias
- b) CB junction is forward bias and the EB junction is forward bias
- c) CB junction is forward bias and the EB junction is reverse bias
- d) CB junction is reversed bias and the EB junction is reverse bias

30) Why is the silicon mostly chosen when compared to germanium?

- a) low power consumption
- b) high efficiency
- c) greater working temperature
- d) large ICBO

31) The channel capacity according to Shannon's equation is

- a. Maximum error free communication
- b. Defined for optimum system
- c. Information transmitted
- d. All of the above

32) According to Shannon Hartley theorem,

- a) The channel capacity becomes infinite with infinite bandwidth
- b) The channel capacity does not become infinite with infinite bandwidth
- c) Has a tradeoff between bandwidth and Signal to noise ratio
- d) Both b and c are correct