

Electronics Practice

1). Which amplifier produce a given gain with the minimum of distortion?

- (A) Small signal amplifier
- (B) Common base amplifier
- (C) R - C coupled amplifier
- (D) Voltage amplifier

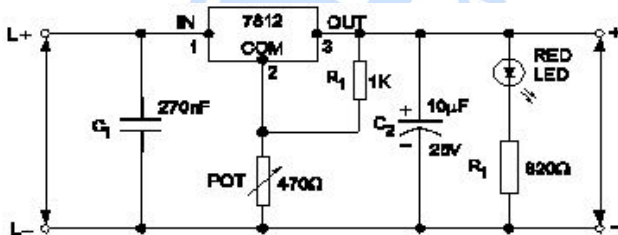
Correct Answer : D

2). What is the formula to calculate the resonance frequency in an oscillator circuit?

- (A) $f_r = 1/2\pi\sqrt{LC}$
- (B) $f_r = 1/\sqrt{2\pi LC}$
- (C) $f_r = 1/2\pi\sqrt{LC}$
- (D) $f_r = 1/LC\sqrt{2\pi}$

Correct Answer : C

3). What is the name of the regulator circuit as



shown in the figure?

- (A) Adjustable regulator
- (B) Fixed output voltage regulator
- (C) Variable output voltage regulator
- (D) Basic positive regulator

Correct Answer : C

4). Which device has very high input impedance, low noise output, good linearity and low inter electrode capacity?

- (A) NPN transistor
- (B) PNP transistor
- (C) Field effect transistor
- (D) Uni junction transistor

Correct Answer : C

5). Why most of the semi conductor devices are made by silicon compared to germanium?

- (A) High barrier voltage
- (B) High resistance range

- (C) High thermal conductivity
- (D) High current carrying capacity

Correct Answer : A

6). Which electronic circuit produces signal waves or pulses without an input?

- (A) Detector
- (B) Amplifier
- (C) Oscillator
- (D) Modulator

Correct Answer : C

7). What is the use of the voltage dependent resistor?

- (A) For the temperature compensation
- (B) For the resistance measurement
- (C) For the impedance measurement
- (D) For the over voltage protection

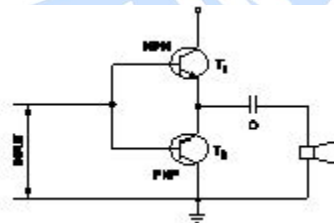
Correct Answer : D

8). What is the power gain of CE amplifier with a voltage gain of 66 and β (Beta) of the transistor is 100?

- (A) 1.5
- (B) 166
- (C) 0.66
- (D) 6600

Correct Answer : D

9). What is the name of the amplifier as shown in the circuit?



- (A) Current amplifier
- (B) Voltage amplifier
- (C) Power amplifier
- (D) Small signal amplifier

Correct Answer: C

10). What is the total turn-on time (t_{on}) while transistor makes a transition from V_{2} to V_{1} ?

- (A) $t_{on} = t_r - t_s$
- (B) $t_{on} = t_r - t_d$
- (C) $t_{on} = t_d + t_r$
- (D) $t_{on} = t_r + t_d + t_s$

Correct Answer: C

11). What is the full form of PCB?

- (A) Prevent Circuit Breaker
- (B) Printed Circuit Board
- (C) Power Circuit Breaker
- (D) Panel Control Board

Correct Answer: B

12). Which quantity can be measured by CRO?

- (A) Frequency
- (B) Inductance
- (C) Resistance
- (D) Power factor

Correct Answer: A

13). Why negative feedback is required in amplifier circuits?

- (A) To reduce the distortion
- (B) To increase the amplification factor
- (C) To increase the output voltage gain
- (D) To increase the output current gain

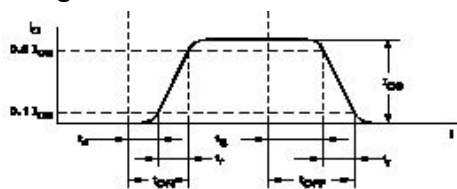
Correct Answer : A

14). Which instrument provides a visual representation of measured or tested quantities?

- (A) Voltage stabilizer
- (B) Function generator
- (C) Cathode ray oscilloscope
- (D) Radio frequency generator

Correct Answer : C

15). What is the peak voltage of 220V rms AC voltage?



(A) 310.02 V

(B) 311.12 V

(C) 312.25 V

(D) 315.20 V

Correct Answer : B

16). What is the main function of Uni Junction Transistor (UJT)?

- (A) **Relaxation oscillator**
- (B) Broadcast transmitter
- (C) Loud speaker amplifier
- (D) Microphone input device

Correct Answer : A

17). Which type of biasing is required to a NPN transistor for amplification?

- (A) Base ground, emitter and collector positive
- (B) Base negative, emitter positive and collector negative
- (C) Base positive, emitter negative and collector positive
- (D) Base positive, emitter negative and collector negative

Correct Answer : C

18). What is the reason for widened barrier in a reverse biased diode?

- (A) Minority carriers in two materials are neutralized
- (B) Electron in N material is drifted to negative terminal
- (C) Holes in P material attracted to positive terminal
- (D) Electrons and holes are attracted towards supply terminals

Correct Answer : D

19). What is the difference in the current control of MOSFET compared to JFETs?

- (A) Insulating layer instead of junction
- (B) Using N material instead of P material
- (C) Using P material instead of N material
- (D) Using N material gate instead of P material

Correct Answer : A

20). What defect will occur in the radio, if the pulsations are not removed from the input of the rectifier?

- (A) Improper tuning
 - (B) No response
 - (C) Humming sound
 - (D) Works with high volume
- Correct Answer: C

21). What is the name of the resistor as shown in the figure?



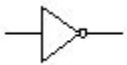
- (A) Wire wound fixed resistor
 - (B) Carbon resistor
 - (C) Trimmer resistor
 - (D) Wire wound variable resistor
- Correct Answer: D

22). Which multi vibrator produces a repetitive pulse wave form output?

- (A) Astable multi vibrator
- (B) Bistable multi vibrator
- (C) One shot multi vibrator
- (D) Monostable multi vibrator

Correct Answer: A

23). What is the input ripple frequency F_{in} of full wave rectifier?



- (A) $F_{in} = 1/2F$
 - (B) $F_{in} = F_{in}$
 - (C) $F_{in} = 2 F_{in}$
 - (D) $F_{in} = \sqrt{2} F_{in}$
- Correct Answer: C

24). What is the name of the symbol as shown in the figure?

- (A) NOR gate
- (B) OR gate
- (C) AND gate
- (D) NOT gate

Correct Answer: D

25). Why the collector region is physically made larger than emitter region in a transistor?

- (A) It has to dissipate more heat
- (B) As output is taken from collector
- (C) As base collector region is reverse biased
- (D) As input is given to collector

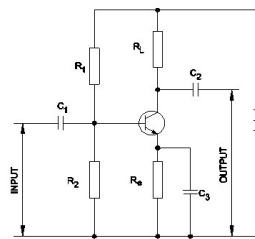
Correct Answer: A

26). What is the frequency of the displayed signal on the CRO screen covered by 5 division with a time base setting of 0.2 micro seconds?

- (A) 1.0KHz
- (B) 10.0KHz
- (C) 100.0KHz
- (D) 1000.0 KHz

Correct Answer: D

27). What is the reason for more barrier voltage in silicon diode than germanium diode?



- (A) Lower atomic number
 - (B) Resistance is very low
 - (C) Doping percentage is more
 - (D) Valance electrons are two only
- Correct Answer: A

28). What is the type of amplifier as shown in the circuit?

- (A) Push Pull Amplifier
- (B) Common Base Amplifier
- (C) Emitter Follower Amplifier
- (D) Common Emitter Amplifier

Correct Answer: D

29). What is the output DC voltage in half wave rectifier, if the input AC voltage is 24 volt?

- (A) 24 Volt
- (B) 12 Volt
- (C) 9.6 Volt

(D) 10.8 Volt
Correct Answer: D

30). Which is a passive component?
(A) Diac
(B) Diode
(C) Transistor
(D) Capacitor
Correct Answer: D

31). What is the main advantage of a class A amplifier?
(A) Minimum distortion
(B) Maximum current gain
(C) Maximum voltage gain
(D) Minimum signal to noise ratio losses
Correct Answer : A

32). Which electronic circuit generates A.C signal without input?
(A) Filter circuit
(B) Rectifier circuit
(C) Amplifier circuit
(D) Oscillator circuit
Correct Answer : D

33). What is the characteristic property of base material in a transistor?



(A) Lightly doped and very thin
(B) Heavily doped and very thin
(C) Lightly doped and very larger
(D) Heavily doped and very larger
Correct Answer : A

34). What is the name of the symbol as shown in the figure?
(A) Two input OR gate
(B) Two input AND gate
(C) Two input NOR gate
(D) Two input NAND gate
Correct Answer : D

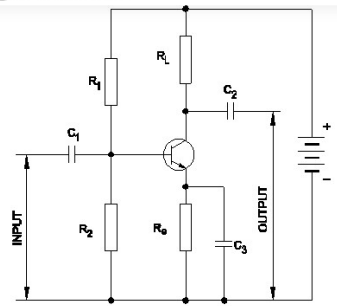
35). How does the depletion region behave?

(A) As resistor
(B) As insulator
(C) As conductor
(D) As inductor
Correct Answer : B

36). What is the effect, if SCR is latched into conduction and gate current is removed?
(A) SCR gets cut off
(B) Current through SCR OFF
(C) Output voltage will be reduced
(D) Gate loses control over conduction
Correct Answer : D

37). Which circuit is essential to maintain oscillations or waves in an oscillator circuit?
(A) Rectifier with filter
(B) Voltage multiplier
(C) Negative feed back
(D) Positive feed back
Correct Answer : D

38). What is the minimum and maximum value of resistor with four colour bands of red, violet, orange and gold respectively?



(A) $23750\Omega - 26250\Omega$
(B) $24700\Omega - 27300\Omega$
(C) $25650\Omega - 28350\Omega$
(D) $22400\Omega - 33600\Omega$
Correct Answer : C

39). Which resistor determines the voltage gain in a common emitter amplifier as shown in the circuit?
(A) R1
(B) R2
(C) RL
(D) Re

Correct Answer : C

40). Which is a active component?

- (A) Inductor
- (B) Resistor
- (C) Capacitor
- (D) Transistor

Correct Answer : D

41). Which diode is used to regulate the voltage in the power supply unit?

- (A) Crystal diode
- (B) Zener diode
- (C) Tunnel diode
- (D) Light emitting diode

Correct Answer : B

42). Which is the advanced version of power electronic component used in the output stage in drives?

- (A) FET
- (B) UJT
- (C) SCR
- (D) IGBT

Correct Answer : D

43). Which doping material is used to make P-type semi conductor?

- (A) Boron
- (B) Arsenic
- (C) Antimony
- (D) Phosphorous

Correct Answer : A

44). What is the output voltage if the centre tap of the transformer is open circuited in a full wave rectifier circuit?



- (A) Zero voltage
- (B) Full rated output
- (C) Half of the rated output
- (D) One fourth of rated output

Correct Answer : A

45). What is the name of the device symbol as shown in the figure?

- (A) SCR
- (B) IGBT
- (C) DIAC
- (D) TRIAC

Correct Answer : C

46). Which letter indicates the compound material cadmium supplied?

- (A) 'A'
- (B) 'B'
- (C) 'C'
- (D) 'R'

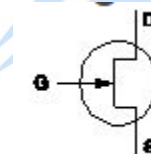
Correct Answer : D

47). How the gate terminal of N channel JFET biased?

- (A) Gates are reverse biased
- (B) Gates are forward biased
- (C) Gates are forward biased with drain
- (D) Gates are reverse biased with source

Correct Answer : D

48). How many characters are in hexadecimal number system?



- (A) 6
- (B) 8
- (C) 12
- (D) 16

Correct Answer : D

49). What is the name of the symbol as shown in the figure?

- (A) P channel FET
- (B) N channel FET
- (C) Triac
- (D) Diac

Correct Answer : B

50). Which logic gate refers the truth table as given below?

A	B	$\overline{A+B}$
0	0	1
0	1	0
1	0	0
1	1	0

- (A) AND
- (B) NOT
- (C) NOR
- (D) NAND

Correct Answer : C

