e-Yantra Practice Test-1

Email: walchand.elesa@gmail.com Website: www.elesa.co.in

Name:

Class:

1. Mark the wrong about Multivibrator?
   A) Bistable has two state.
   B) Monostable has two stable state.
   C) Astable multivibrator will always be in stable state.
   D) All options are wrong.

2. Which resistive component is designed to be temperature sensitive?
   A) Thermistor
   B) Rheostat
   C) Potentiometer
   D) Photoconductive cell

3. What is approximate peak to peak voltage of 0.5Vrms Sine wave?
   A) 0.7 Vpp
   B) ½ Vpp
   C) 1.4 Vpp
   D) 4 Vpp

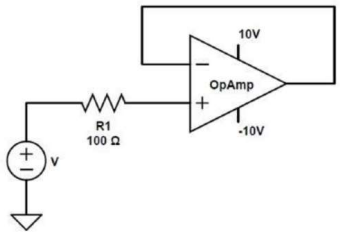
4. Which of the following is not valid characteristic of an Ideal Opamp?
   A) Zero output impedence
   B) Infinite input offset voltage
   C) Infinite input impedence
   D) Infinite bandwidth

5. Dual slope converter is?
   A) DC Converter
   B) D/A Converter
   C) A/D Converter
   D) AC Converter

6. A 65 W Lamp in series with a room heater is connected across the mains. Which of the following will increase the heaters output?
   A) Change 65W bulb with 120W bulb.
   B) Change 65W bulb with 20W bulb.
   C) Connect a bulb of 65 W in parallel.
   D) Heater output will remain consant.

7. When two input of J-K flip flop are connected together it becomes_____ flip flop?
   A) T
   B) C
   C) S-R
   D) D
8. A Boolean Function f of two variable X and Y is defined as follows: f(0, 0) = f(1, 1) = 1; f(0, 1) = 0
   Assuming components of X and Y are not available, a minimum cost solution for realizing using only NOR gate and OR gate (Each having Unit cost) would have total cost of?
   A) 4
   B) 1
   C) 2
   D) 3

9. What will be the gain of following Opamp?



   A) 0
   B) 1
   C) 10
   D) 100

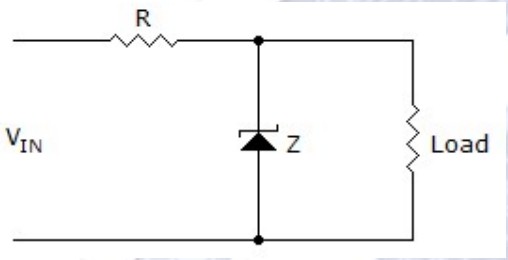
10. If the doping level of a crystal diode is increased, the breakdown voltage…….
    A) remains the same
    B) is increased
    C) is decreased
    D) none of the above

Email: walchand.elesa@gmail.com Website: www.elesa.co.in

Name:

Class:

1. Refer to this figure. If the load current increases, IR will _____ and IZ will _____.



A) remain the same, increase
B) decrease, remain the same
C) increase, remain the same
D) remain the same, decrease

2. An S-R flip flop can be converted into T Flip flop by by connecting _____ to Qbar and _____ to Q?
A) S , R
B) R, S
C) R, Logic 1
D) None of the above

3. A transistor connected in Common base configuration has
A) High input resistance and low output resistance.
B) Low input resistance and High Output resistance
C) A low input resistance and low output reistance
D) High input resistace and high output resistance

4. An ideal voltage source should have
A) large value of e.m.f.
B) small value of e.m.f.
C) zero source resistance
D) infinite source resistance

5. When transistors are used in digital circuits they usually operate in the:
A) saturation and cutoff regions
B) linear region
C) active region
D) breakdown region

6. Op-amps used as high- and low-pass filter circuits employ which configuration?
    A) Noninverting
    B) Comparator
    C) open-loop
    D) inverting

7. A(A + B) = ?
    A) AB
    B) 1
    C) (1 + AB)
    D) A

8. What is the instantaneous peak voltage at 250° on a 6 V peak sine wave?
    A) +5.64 V
    B) –5.64 V
    C) +26.13 V
    D) –26.13 V

9. If the reactive power of a circuit is 50 mW while the apparent power is 64 mW, then what is the true power of the circuit?
    A) 14 mW
    B) 36 mW
    C) 40 mW
    D) 114 mW

10. What is true about the breakdown voltage in a Zener diode?
    A) It decreases when current increases.
    B) It destroys the diode.
    C) It equals the current times the resistance.
    D) It is approximately constant.