

Time: One Hour

Max. Marks: 25

Instructions

Solve any 25 questions from Q.1 to Q.30

- 1 A P-n junction diode can be used as ____
 (A) Rectifier (B) Modulator (C) amplifier (D) Demodulator
- 2 The barrier potential at a silicon diode at room temperature is ____
 (A) 0.3 V (B) 0.7 V (C) 1 V (D) 2 mv
- 3 The part of transistor which heavily doped to produce a large number of majority is called
 (A) Emitter (B) base (C) collector (D) source
- 4 If two resistance $R_1=3\Omega$ and $R_2=4\Omega$ are connected in parallel then equivalent resistance is ____
 (A) $6/5\Omega$ (B) 7Ω (C) $7/2\Omega$ (D) $12/7\Omega$
- 5 Which is the passive element ____
 (A) Switches (B) transistor (C) resistor (D) relay
- 6 Which is the following unit of electric charge ____
 (A) Coulomb/volt (B) ampere (C) coulomb (D) ohm
- 7 What is state of an ideal diode in region of non-conduction
 (A) An open circuit (B) a short circuit (C) unpredictable (D) undefined
- 8 When forward bias voltage of a diode is changed from 0.6 volt to 0.7 volt, the current changes from 5mA to 15mA. The forward bias resistance is ____
 (A) 0.01Ω (B) 0.1Ω (C) 10Ω (D) 100Ω
- 9 A zener diode is operated in the ____
 (A) Breakdown region (B) forward region (C) both (a) & (b) (D) None of the above
- 10 A MOSFET has how many terminals
 (A) 2 (B) 3 (C) 5 (D) None of the above
- 11 Relay is an ____
 (A) Operated switch (B) controlled switch (C) Electronically operated switch (D) variable switch
- 12 There are two charges self and $6\mu\text{f}$ are connected in series then equivalent capacitance are ____
 (A) $11\mu\text{f}$ (B) $30/11\mu\text{f}$ (C) $11/30\mu\text{f}$ (D) $5/6\mu\text{f}$
- 13 A dielectric is essentially a /an ____
 (A) Insulator (B) semiconductor (C) conductor (D) resistor
- 14 The area of the junction of p-type and n-type material that has lost its majority carrier is called ____
 (A) Barrier Potential (B) N-region (C) Depletion region (D) None of the above
- 15 A zener diode used as a ____
 (A) Rectifier (B) filter (C) voltage regulator (D) None of the above
- 16 In a transistor collector current is controlled by ____
 (A) Collector resistance (B) Base current (C) collector voltage (D) None of the above
- 17 The maximum efficiency of a full wave rectifier is ____
 (A) 40% (B) 100% (C) 120% (D) 81.2%
- 18 How many terminals does a diode have ____
 (A) 1 (B) 2 (C) 3 (D) 4
- 19 A current ratio I_C/I_E is usually less than one and is called ____
 (A) Beta (B) Theta (C) Alpha (D) Omega
- 20 The transformer used in power supply for
 (A) Increasing AC voltage (B) Decrease value of AC Voltage (C) Decreasing DC voltage (D) Decreasing AC voltage
- 21 The Thevenin theorem replaces complicated circuits across the load by an ____
 (A) Ideal voltage source and parallel resistance (B) Ideal voltage source and series resistance (C) Ideal current source and series resistance (D) Ideal current source and parallel resistance
- 22 The super position theorem is applicable to ____
 (A) Voltage only (B) current only (C) Both current and voltage (D) current, voltage and power
- 23 A closed path made by several branches of the network is known as ____
 (A) Branch (B) Loop (C) Circuit (D) Junction
- 24 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
- 25 Which of the following is non-linear circuit parameter?
 (A) Inductance (B) condenser (C) Transistor (D) None of the above

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26 A capacitor is generally a _____

- (A) Bilateral and active component (B) Active, passive, linear and non-linear component (C) Linear and bilateral component (D) None of the above

27 Which is active elements?

- (A) Transistor (B) Resistor (C) Switches (D) None

28 A fuse interrupts _____

- (A) Excessive voltage (B) Excessive current (C) Low current (D) None of the above

29 Which is the most common circuit?

- (A) Base (B) emitter (C) collector (D) none of the above

30 A current ratio I_C/I_B is called _____

- (A) Alpha (B) Theta (C) Beta (D) Omega