ANALOG ELECTRONICS MOST IMPORTANT MCO PDF

Q.1 A resistor with colour bands Red, Violet, Green and Black will have a value
(A) 27 K ± 10% K (B) 2.7 M ± 20% K
(C) 270 K ± 5% K (D) 2.7 K ± 2% K
Ans: B

Q.2 In an n-type semiconductor, as temperature T increases, the Fermi level EF
(A) moves towards conduction band
(B) moves towards middle of forbidden energy gap
(C) does not vary
(D) may or may not shift depending upon the concentration of donor atoms
Ans: A

Q.3 In a BJT with b = 100, a equals
(A) 99 (B) 0.99
(C) 1.0 (D) 1.01
Ans: C

Q.4 In integrated circuits, npn construction is preferred to pnp construction because
(A) npn construction is cheaper
(B) to reduce diffusion constant, n-type collector is preferred
(C) npn construction permits higher packing of elements
(D) p-type base is preferred
Ans: B

Q.5 Pinch-off voltage VP for an FET is the drain voltage at which
(A) significant drain current starts flowing
(B) drain current becomes zero
(C) all free charges get removed from the channel
(D) avalanche break down takes place
Ans: C

Q.6 In SCR, the turn ON time
(A) is independent of Vg
(B) decreases with increase of Vg
(C) varies as Vg
(D) varies as Vg
Ans: A

Q.7 Avalanche breakdown results basically due to
(A) impact ionisation
(B) strong electric field across the junction
(C) emission of electrons
(D) rise in temperature
Ans: A

Q8 Dynamic plate resistance of pentode is of the order of
(A) 1 KW (B) 10 KW
(C) 100 KW (D) 1MW
Ans: D

Q.9 At room temperature, the current in an intrinsic semiconductor is due to
(A) holes (B) electronics
(C) ions (D) holes and electronics
Ans: D

Q.10 The varactor diode is usually
(A) Forward biased (B) reverse biased
(C) Unbiased (D) holes and electronics
Ans: B

Q.11 The diode in which impurities are heavily doped is
(A) Varactor diode (B) PIN diode
(C) Tunnel diode (D) Zener diode
Ans: C

Q.12 A transistor in common emitter mode has
(A) a high input resistance and low output resistance
(B) a medium input resistance and high output resistance
(C) a very low input resistance and a low output resistance
(D) a high input resistance and a high output resistance
Ans: B

Q.13 In an SCR the holding current is
(A) more than latching current (B) less than latching current
(C) equal to latching current (D) very small
Ans: B

Q.14 The negative potential at the control grid in a vacuum triode that causes plate current Zero is called
(A) cut off bias (B) cut in voltage
(C) reverse blocking voltage (D) forward blocking voltage
Ans: A

Q.15 A constant current source supplies a current of 300 mA to a load of 1 Kohm. When the Load is changed to 100 ohm, the load current will be
(A) 3 Amp (B) 300 mAmp
(C) 30 mAmp (D) 600 mAmp
Ans: B

Q.16 An Op-amp as a voltage follower has a voltage gain of
(A) Infinity (B) Zero
(C) Unity (D) less than unity
Ans: C

Q.17 A resistor used in colour TV has the following colour bands: yellow, violet, orange and silver. Its nominal value is
(A) 4.7 KW ± 10 % (B) 4.7 KW ± 5 %
(C) 47 KW ± 10 % (D) 470 KW ± 5 %
Ans: C

Q.18 Ratings on a capacitor are given 25μ F, 12 V. Also a plus sign is written near one of its terminals. The capacitor is
(A) mica capacitor (B) ceramic capacitor
(C) electrolytic capacitor (D) paper capacitor
Ans: C

Q.19 An ideal voltage source of 12 V provides a current of 150 mA to a load connected across it. If the load impedance is halved, the new load current will be
(A) 0.3 A (B) 0.15 A
(C) 0.6 A (D) 1.2 A
Ans: A

Q.20 An intrinsic semiconductor at the absolute zero temperature
(A) behaves like a metallic conductor
(B) behaves like an insulator
(C) has a large number of holes
(D) has a large number of electrons
Ans: B

Q.21 Which of the following diodes is operated in reverse bias mode ?
(A) P-N junction (B) Zener
(C) Tunnel (D) Schottky
Ans: B

Q.22 Compared to bipolar transistor, a JFET has
(A) lower input impedance
(B) higher voltage gain
(C) higher input impedance and high voltage gain
(D) higher input impedance and low voltage gain
Ans: D

Q.23 The minimum gate current which can turn on SCR is called
(A) trigger current (B) holding current
(C) junction (D) break over current
Ans: A

Q.24 A virtual ground
(A) is a ground for voltage
(B) is a ground for both voltage and current
(C) is ground for current
(D) is a ground for voltage but not for current
Ans: D

Q.25 Which of the following doping will produce a p-type semiconductor
(A) Germanium with phosphorus (B) Silicon with Germanium
(C) Germanium with Antimony (D) Silicon with Indium
Ans: D

Q.26 The majority charge carriers in the emitter of an NPN transistor are
(A) pentavalent atoms (B) trivalent atoms
(C) electrons (D) holes
Ans: C

Q.27 An ideal differential amplifier has CMRR equaling
(A) Unity (B) – 1 (minus unity)
(C) Infinity (D) Zero
Ans: C

Q.28 Which of the following is an active device
(A) an electric bulb (B) a diode
(C) a BJT (D) a transformer
Ans: C

Q.29 Which configuration has unity voltage gain (ideal)
(A) a Common Collector (CC) (B) a Common Emitter (CE)
(C) a Common Base (CB) (D) CE followed by CB
Ans: A

Q.30 JFET is a
(A) Current controlled device with high input resistance
(B) Voltage controlled device with high input resistance
(C) Current Controlled Current Source (CCCS)
(D) Voltage Controlled Voltage Source (VCVS)
Ans: B

Q.31 The depletion region in a Junction Diode contains
(A) only charge carriers (of minority type and majority type)
(B) no charge at all
(C) vacuum, and no atoms at all
(D) only ions i.e., immobile charges
Ans: D

Q.32 Photo-electric emission current is proportional to
(A) frequency of the incident light
(B) incident light flux
(C) work function of photo-cathode
(D) angle of incidence of radiation
Ans:A