

Q.63 The current plug settings usually range from 10% to 70% in steps of _____ for earth leakage relays.

Ans ☒ A. 20%

☒ B. 15%

☒ C. 10%

☒ D. 5%

Question ID : 1034359358

Status : Answered

Q.64 For parallel circuits, _____ is the quantity analogous to reactance in series circuits.

Ans ☒ A. inductance

☒ B. impedance

☒ C. susceptance

☒ D. capacitance

Question ID : 1034359307

Status : Answered

Q.65 In induction motors, the synchronous speed is:

Ans ☒ A. directly proportional to the frequency

☒ B. inversely proportional to the frequency

☒ C. directly proportional to the square-root of the frequency

☒ D. inversely proportional to the square-root of the frequency

Question ID : 1034359320

Status : Answered

Q.66 What is the recommended level of illumination in control rooms of power houses?

- Ans ☒ A. 1500 lux
☒ B. 150 lux
☒ C. 300 lux
☒ D. 700 lux

Question ID : 1034359365

Status : Answered

Q.67 In an underground system, the volume of the conductor material required in 2-wire DC system with midpoint earthed is _____ that for a 2-wire DC system.

- Ans ☒ A. thrice
☒ B. twice
☒ C. the same as
☒ D. four times

Question ID : 1034359349

Status : Not Answered

Chosen Option : --

Q.68 Which of the following bridges is a mutual inductance bridge?

- Ans ☒ A. Owen bridge
☒ B. De-Sauty bridge
☒ C. Maxwell Wien bridge
☒ D. Heaviside-Campbell Bridge

Question ID : 1034359315

Status : Not Answered

Chosen Option : --

Q.69 State TRUE/FALSE for following statements.

1. In blocked rate tariff, the price per unit in the first block is lowest.
2. In uniform rate tariff, the price charged per unit is constant.

Ans ☒ A. 1 - FALSE, 2 - TRUE

☐ B. 1 - TRUE, 2 - TRUE

☐ C. 1 - TRUE, 2 - FALSE

☐ D. 1 - FALSE, 2 - FALSE

Question ID : 1034359350

Status : Answered

Q.70 Which of the following instruments is NOT used for fluid flow measurements?

Ans ☐ A. Hot wire anemometer

☐ B. Orifice meter

☒ C. Pyrometer

☐ D. Pitot tube

Question ID : 1034359383

Status : Answered

Q.71 Which of the following is NOT a characteristic of Permanent Split Capacitor (PSC) motors?

Ans ☐ A. High efficiency

☐ B. High pullout torque

☐ C. High power factor

☒ D. High starting torque

Question ID : 1034359331

Status : Answered

Q.72 In case of indirect arc furnaces, the power factor is approximately _____.

Ans ☒ A. 0.85 lagging

☒ B. 0.65 lagging

☒ C. 0.95 lagging

☒ D. 0.75 lagging

Question ID : 1034359371

Status : Answered

Q.73 State TRUE/FALSE for following statements.

1. In a delta-delta system, the line voltage and phase voltage are equal.

2. When a Y-connected load is supplied by voltages in abc phase sequence, the line voltages lag the corresponding phase voltages by 30° .

Ans ☒ A. 1 - FALSE, 2 - TRUE

☒ B. 1 - FALSE, 2 - FALSE

☒ C. 1 - TRUE, 2 - TRUE

☒ D. 1 - TRUE, 2 - FALSE

Question ID : 1034359309

Status : Answered

Q.74 In a single phase circuit, the apparent power is 250 VA and the reactive power is 150 VAR. Find the active power.

Ans ☒ A. 200 W

☒ B. 300 W

☒ C. 400 W

☒ D. 100 W

Question ID : 1034359313

Status : Answered

Q.75 The maximum demand on a power station is 200 MW. If the annual load factor is 50%, calculate the total energy generated in a year.

Ans ☒ A. 876×10^6 kWh

☐ B. 438×10^5 kWh

☐ C. 876×10^5 kWh

☐ D. 438×10^6 kWh

Question ID : 1034359346

Status : Answered

Q.76 In a magnetic circuit, the magnetic coil has 10 turns and the reluctance of the magnetic path is 250 AT/Wb. Find the value of self-inductance.

Ans ☐ A. 0.04 H

☐ B. 2.5 H

☒ C. 0.4 H

☐ D. 0.25 H

Question ID : 1034359298

Status : Answered

Q.77 The following symbol is used for:



Ans ☒ A. Impedance

☐ B. Inductance

☐ C. Capacitance

☐ D. Resistance

Question ID : 1034359360

Status : Answered

Q.78 A typical squirrel cage induction motor will have _____ starting torque with _____ starting current, when started direct-on-line.

- Ans ☒ A. 200%; 300%
- ☒ B. 600%; 130%
- ☒ C. 300%; 200%
- ☒ D. 130%; 600%

Question ID : 1034359366

Status : Not Answered

Chosen Option : --

Q.79 _____ is the most commonly used material for insulators of overhead lines.

- Ans ☒ A. Glass
- ☒ B. Porcelain
- ☒ C. Steatite
- ☒ D. Quartz

Question ID : 1034359348

Status : Answered

Q.80 The following two tariffs are offered:

(i) ₹100 plus 15 paise per unit

(ii) A flat rate of 40 paise per unit

At what consumption is the first tariff economical?

- Ans ☒ A. Above 100 units
- ☒ B. Above 200 units
- ☒ C. Above 400 units
- ☒ D. Above 300 units

Question ID : 1034359356

Status : Answered

Q.81 A sinusoidal current is expressed as $i(t) = 75 \sin 50\pi t$. Find the frequency.

Ans ☒ A. 25 Hz

☐ B. 5 Hz

☐ C. 50 Hz

☐ D. 10 Hz

Question ID : 1034359302

Status : Answered

Q.82 In cleat wiring, cleats are fixed at regular intervals not exceeding _____.

Ans ☐ A. 0.2 m

☒ B. 0.6 m

☐ C. 0.1 m

☐ D. 1.0 m

Question ID : 1034359361

Status : Not Answered

Chosen Option : --

Q.83 In a cumulative compound DC generator, if the terminal voltage at full load is greater than that at no load, it is called _____.

Ans ☒ A. over compounded

☐ B. flat compounded

☐ C. critically compounded

☐ D. under compounded

Question ID : 1034359319

Status : Answered

Q.84 A 100-W electric heater has a resistance of 4 Ω . What will be the maximum permissible current?

- Ans
- ☐ A. 10 A
 - ☐ B. 15 A
 - ☐ C. 25 A
 - ☒ D. 5 A

Question ID : 1034359279

Status : Answered

Q.85 The phenomenon of oscillation of the rotor about its equilibrium position is called _____.

- Ans
- ☐ A. single phasing
 - ☐ B. plugging
 - ☒ C. hunting
 - ☐ D. phase locking

Question ID : 1034359339

Status : Answered

Q.86 With reference to the power cable insulation, which of the following synthetic rubber like insulating materials is a thermosetting compound?

- Ans
- ☒ A. XLPE – Cross-Linked Poly Ethylene
 - ☐ B. EPR – Ethylene Propylene Rubber
 - ☐ C. HEPR – Hard Ethylene Propylene Rubber
 - ☐ D. PE – Polyethylene

Question ID : 1034359363

Status : Answered

Q.87 Which of the following motors gives translational motion instead of rotational motion?

- Ans ☐ A. Three-phase induction motor
- ☐ B. Synchronous motor
- ☒ C. Linear induction motor
- ☐ D. DC shunt motor

Question ID : 1034359329

Status : Answered

Q.88 The voltage and current being applied to a load are sinusoidal waveforms whose amplitudes are 50 V and 10 A, respectively. The phase angle between them is 30° . Find the reactive power of the load.

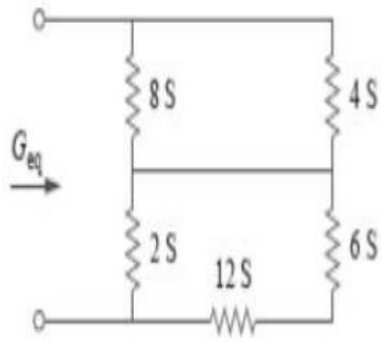
- Ans ☒ A. 125 VAr
- ☐ B. 500 VAr
- ☐ C. 250 VAr
- ☐ D. 216 VAr

Question ID : 1034359312

Status : Not Answered

Chosen Option : --

Q.89 Find G_{eq} in the following network.



Ans ☒ A. 6 S

☒ B. 4 S

☒ C. 8 S

☒ D. 10 S

Question ID : 1034359292

Status : Answered

Q.90 In a 1-phase alternator, the synchronous impedance is 0.25Ω and the armature resistance is 0.1Ω . Find the synchronous reactance.

Ans ☒ A. 0.26Ω

☒ B. 0.25Ω

☒ C. 0.23Ω

☒ D. 0.24Ω

Question ID : 1034359336

Status : Answered

Q.91 A moving-coil voltmeter has the coil with 100 turns and is 4 cm long and 3 cm wide. If it carries 25 mA of current and the flux density in the air gap is 0.06 Wb/m^2 , find the deflecting torque.

- Ans
- ☒ A. $9 \times 10^{-5} \text{ N-m}$
 - ☒ B. $18 \times 10^{-5} \text{ N-m}$
 - ☒ C. $9 \times 10^{-6} \text{ N-m}$
 - ☒ D. $18 \times 10^{-6} \text{ N-m}$

Question ID : 1034359316

Status : Not Answered

Chosen Option : --

Q.92 Ten capacitors are connected in series. If all the ten capacitors are of the same value and the equivalent capacitance is $10 \mu\text{F}$, find the capacitance of each capacitor.

- Ans
- ☒ A. $100 \mu\text{F}$
 - ☒ B. $10 \mu\text{F}$
 - ☒ C. $50 \mu\text{F}$
 - ☒ D. $20 \mu\text{F}$

Question ID : 1034359283

Status : Answered

Q.93 In an alternator, for which type of load will the armature reaction be distortional?

- Ans
- ☒ A. Power factor = 0.5
 - ☒ B. Zero power factor lagging
 - ☒ C. Unity power factor
 - ☒ D. Zero power factor leading

Question ID : 1034359335

Status : Not Answered

Chosen Option : --

Q.94 The maximum possible value of mutual inductance between two coils having self-inductances of 16 H and 25 H is:

- Ans ☒ A. 9 H
☒ B. 41 H
☒ C. 20 H
☒ D. 10 H

Question ID : 1034359299

Status : Not Answered

Chosen Option : --

Q.95 In vulcanised Indian Rubber (VIR)-type insulating material, the sulphur content is _____.

- Ans ☒ A. 3% to 5%
☒ B. 0.1% to 0.5%
☒ C. 10% to 15%
☒ D. 0.7% to 1.5%

Question ID : 1034359351

Status : Not Answered

Chosen Option : --

Q.96 A steel ring with a 15-cm^2 cross-sectional area is wound uniformly with 1000 turns of wire carrying a current of 500 mA. Find the MMF.

- Ans ☒ A. 75 AT
☒ B. 50 AT
☒ C. 750 AT
☒ D. 500 AT

Question ID : 1034359297

Status : Not Answered

Chosen Option : --

Q.97 An electric bulb consumes 720 kJ of energy in 5 hours. Find the power rating of the bulb.

- Ans ☒ A. 15 W
☒ B. 60 W
☒ C. 100 W
☒ D. 40 W

Question ID : 1034359281

Status : Not Answered

Chosen Option : --

Q.98 What will be the output frequency of a 6-pole alternator running at a speed of 1200 rpm?

- Ans ☒ A. 50 Hz
☒ B. 60 Hz
☒ C. 25 Hz
☒ D. 30 Hz

Question ID : 1034359334

Status : Answered

Q.99 For a common emitter connection of BJT, find the value of β if $\alpha = 0.995$.

- Ans ☒ A. 199
☒ B. 19
☒ C. 9
☒ D. 99

Question ID : 1034359380

Status : Not Answered

Chosen Option : --

Q.100 For a full-wave bridge rectifier, the supply voltage $v(t) = 100 \sin \omega t$. Find the PIV of the diode.

Ans ☒ A. 100 V

☐ B. 200 V

☐ C. 50 V

☐ D. 141 V

Question ID : 1034359377

Status : Not Answered

Chosen Option : --

Q.101 For a 3-phase induction motor, the synchronous speed is 3000 rpm. Find the actual rotor speed if the slip is 3%.

Ans ☐ A. 2970 rpm

☒ B. 2910 rpm

☐ C. 2730 rpm

☐ D. 2820 rpm

Question ID : 1034359323

Status : Answered

Q.102 Which of the following is NOT a characteristic of hydroelectric power plants?

Ans ☐ A. Robust construction and longer life

☐ B. No fuel required

☐ C. No smoke or ash production

☒ D. Very high maintenance cost

Question ID : 1034359343

Status : Answered

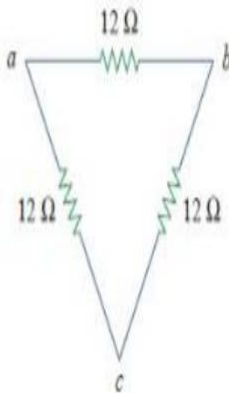
Q.103 For synchronous motors, inverted V-curves are the plots of power factor versus _____.

- Ans
- ☒ A. output frequency
 - ☒ B. armature current
 - ☒ C. field current
 - ☒ D. supply voltage

Question ID : 1034359338

Status : Answered

Q.104 Transform the following circuit into star network.



- Ans
- ☒ A. $R_1 = R_2 = R_3 = 12 \Omega$
 - ☒ B. $R_1 = R_2 = R_3 = 18 \Omega$
 - ☒ C. $R_1 = R_2 = R_3 = 36 \Omega$
 - ☒ D. $R_1 = R_2 = R_3 = 4 \Omega$

Question ID : 1034359287

Status : Not Answered

Chosen Option : --

Q.105 Which of the following expenses is NOT covered under overhead charges?

- Ans ☒ A. Office rent
- ☒ B. Loss due to flood
- ☒ C. Rate of lighting and heating
- ☒ D. Depreciation of office equipment

Question ID : 1034359362

Status : Not Answered

Chosen Option : --

Q.106 In CRO, _____ is NOT a part of the vertical deflection system.

- Ans ☒ A. time base generator
- ☒ B. main amplifier
- ☒ C. preamplifier
- ☒ D. delay line

Question ID : 1034359310

Status : Not Answered

Chosen Option : --

Q.107 Which of the following is NOT a valid advantage of static capacitors being used for power factor improvement?

- Ans ☒ A. Less maintenance
- ☒ B. Long service life – more than 15 years
- ☒ C. Low losses
- ☒ D. No rotating parts

Question ID : 1034359355

Status : Answered

Q.108 For a synchronous motor, the AC electrical power input to stator is the algebraic sum of the gross mechanical power developed in armature and the _____.

- Ans
- ☒ A. friction losses
 - ☒ B. iron losses
 - ☒ C. excitation losses
 - ☒ D. armature copper losses

Question ID : 1034359337

Status : Answered

Q.109 The peak amplitude of a sinusoidal voltage is 120 V. Find the peak-to-peak voltage.

- Ans
- ☒ A. 240 V
 - ☒ B. 120 V
 - ☒ C. 170 V
 - ☒ D. 340 V

Question ID : 1034359303

Status : Answered

Q.110 A generating station has an installed capacity of 50 MW and delivers 250×10^6 units per annum. If the annual fixed charges are ₹160 per kW installed capacity and running charges are 4 paise per kWh, find the cost per unit generated.

- Ans
- ☒ A. 7.2 paise
 - ☒ B. 7.4 paise
 - ☒ C. 7.6 paise
 - ☒ D. 7.8 paise

Question ID : 1034359354

Status : Not Answered

Chosen Option : --