CSPHCL JE

Previous Year Paper

Electrical 5 Jan 2022

CHHATTISGARH STATE POWER HOLDING COMPANY LIMITED
(A Government of Chhattisgarh Undertaking)
CIN No. : U65992CT2008SGC020995
O/o GM (HR), C.S. Power Holding Co.Ltd., Raipur

Participant ID	
Participant Name	
Test Center Name	
Test Date	05/01/2022
Test Time	9:00 AM - 11:00 AM
Subject	Junior Engineer Trainee - Electrical

Section : **General Awareness & Reasoning**

Q.1 **The allowance paid to its employees by the Government of India in order to curb the impact of inflation is called _____.**

Ans
✗ 1. debit allowance
✓ 2. dearness allowance
✗ 3. daily allowance
✗ 4. hike allowance

Question ID : **7532297489**
Status : **Answered**
Chosen Option : **2**

Q.2 **Which of the following is also known as the Indian Independence Act?**

Ans
✗ 1. Cabinet Mission
✓ 2. Mountbatten Plan
✗ 3. Cripps Mission Plan
✗ 4. Wavell Plan

Question ID : **7532297486**
Status : **Answered**
Chosen Option : **2**

Q.3 **NITI Aayog was formed replacing the Planning commission of India in the year _____.**

Ans
✗ 1. 2010
✗ 2. 2020
✓ 3. 2015
✗ 4. 2021

Question ID : **7532297492**
Status : **Answered**
Chosen Option : **3**

Q.4 As per 'Reforms in Urban Planning Capacity in India' report 2021, United Nations in 2019 estimated that India will surpass China to become the most populous country by the year _____.

Ans
✔ 1. 2027
✘ 2. 2032
✘ 3. 2043
✘ 4. 2040

Question ID : **7532297484**
Status : **Not Answered**
Chosen Option : --

Q.5 Which of the following banks does NOT exist as of year 2021 in India?

Ans
✘ 1. Bank of Maharashtra
✘ 2. Punjab National Bank
✔ 3. State Bank of Patiala
✘ 4. Bank of Baroda

Question ID : **7532297488**
Status : **Answered**
Chosen Option : **3**

Q.6 Which of the following Articles of the Constitution of India relates to the president of India for Financial emergency?

Ans
✘ 1. Article 252
✘ 2. Article 142
✘ 3. Article 456
✔ 4. Article 360

Question ID : **7532297493**
Status : **Answered**
Chosen Option : **4**

Q.7 The Dhyan Chand Award for Lifetime Achievement in Boxing for the year 2020 was awarded to:

Ans
✘ 1. Vijender Singh
✘ 2. Lovlina Borgohain
✘ 3. Merry Com
✔ 4. Lakha Singh

Question ID : **7532297485**
Status : **Answered**
Chosen Option : **4**

Q.8 **Who among the following is credited for the architectural planning of the beautiful city Chandigarh?**

Ans
✔ 1. Le Corbusier
✘ 2. Arthur George Walker
✘ 3. Philip Tilden
✘ 4. Jayne Mansfield

Question ID : **7532297487**
Status : **Answered**
Chosen Option : **1**

Q.9 **The itai-itai disease in humans is caused by the poisoning of _____.**

Ans
✔ 1. Cd
✘ 2. Hg
✘ 3. As
✘ 4. Se

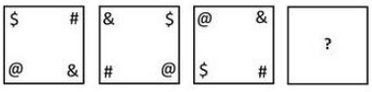
Question ID : **7532297491**
Status : **Answered**
Chosen Option : **1**

Q.10 **Which of the following cities is known as Detroit of India, being a major automotive hub?**

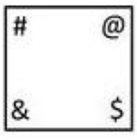
Ans
✔ 1. Chennai
✘ 2. Hyderabad
✘ 3. Gurgaon
✘ 4. Calcutta

Question ID : **7532297490**
Status : **Not Answered**
Chosen Option : **--**

Q.11 Select the figure from among the given options that can replace the question mark (?) in the following series.

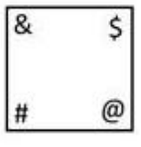


Ans

✔ 1. 

✘ 2. 

✘ 3. 

✘ 4. 

Question ID : **7532297501**
Status : **Answered**
Chosen Option : **1**

Q.12 Select the number from among the given options that can replace the question mark (?) in the following series.

21, 22, ?, 28, 36

Ans

✔ 1. 24

✘ 2. 26

✘ 3. 25

✘ 4. 23

Question ID : **7532297502**
Status : **Answered**
Chosen Option : **1**

Q.13 'Bull' is related to 'Horn' in the same way as 'Peacock' is related to '_____'.

Ans

✘ 1. Wattle

✔ 2. Crest

✘ 3. Feathers

✘ 4. Comb

Question ID : **7532297500**
Status : **Answered**
Chosen Option : **2**

Q.14 What will be the approximate value of the following expression?

$(98.97 + 81.06) \div 17.98 \times 16.96 - 4.02 = ?$

Ans

✗ 1. 162

✓ 2. 166

✗ 3. 130

✗ 4. 148

Question ID : **7532297503**
Status : **Answered**
Chosen Option : **2**

Q.15 If 'A @ B' means 'A is the husband of B', 'A % B' means 'A is the mother of B', and 'A & B' means 'A is the son of B', then how is S related to Q when 'S & P @ R % Q'?

Ans

✗ 1. Cousin

✓ 2. Brother

✗ 3. Son

✗ 4. Uncle

Question ID : **7532297499**
Status : **Answered**
Chosen Option : **2**

Q.16 Select the letter from among the given options that can replace the question mark (?) in the following series.

I, M, P, T, ?, A

Ans

✗ 1. X

✗ 2. V

✓ 3. W

✗ 4. Y

Question ID : **7532297496**
Status : **Answered**
Chosen Option : **3**

Q.17 Five persons (V, W, X, Y and Z) are sitting around a round table facing the centre. X is sitting to the immediate right of V, who is second to the right of W. If Y is not sitting between V and W, then what is the sitting position of Y?

Ans

✓ 1. Exactly between W and X

✗ 2. Exactly between W and Z

✗ 3. To the immediate right of Z

✗ 4. To the immediate left of X

Question ID : **7532297494**
Status : **Answered**
Chosen Option : **1**

Q.18 In a certain code language, COACHING is written as GQCGLKRK. How will FREUDIAN be written in that language?

Ans

✔ 1. JVGWHKCR

✘ 2. HTIYFKER

✘ 3. HTGWFKCP

✘ 4. JVIYHMER

Question ID : **7532297497**
Status : **Answered**
Chosen Option : **1**

Q.19 While going to her office, Jahanavi went 2 km straight, then turned right and covered a distance of 3 km. From there she again turned right and traveled 1 km, and finally turned to her left and covered a distance of 2 km. If she was going towards the east at the end, then in which direction did she begin her journey?

Ans

✘ 1. East

✘ 2. West

✘ 3. South

✔ 4. North

Question ID : **7532297498**
Status : **Answered**
Chosen Option : **4**

Q.20 Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:
1) Some bats are crows.
2) All crows are eagles.

Conclusions:
I. Some eagles are bats.
II. All bats are eagles.

Ans

✘ 1. Neither conclusion I nor II follows

✔ 2. Only conclusion I follows

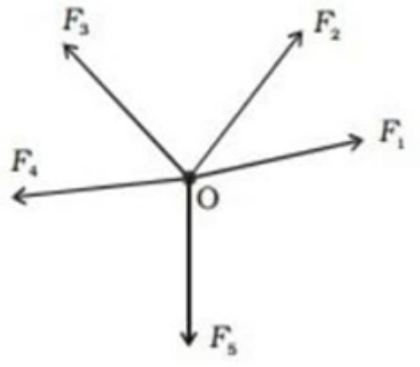
✘ 3. Both conclusions I and II follow

✘ 4. Only conclusion II follows

Question ID : **7532297495**
Status : **Answered**
Chosen Option : **2**

Section : **Subject Content**

Q.1 The forces represented in the given figure are called:



Ans
✗ 1. coplanar forces
✗ 2. coplanar non-concurrent forces
✗ 3. coplanar concurrent forces
✓ 4. concurrent forces

Question ID : **7532297581**
Status : **Answered**
Chosen Option : **3**

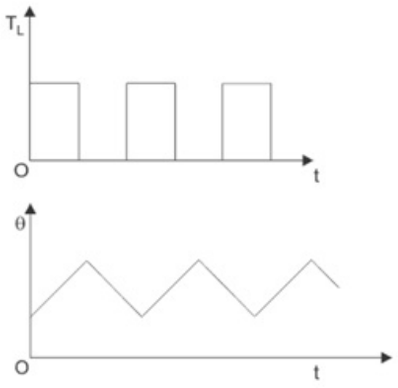
Q.2 **Which of the following requires a greater number of diodes?**

Ans
✓ 1. Full wave bridge rectifier
✗ 2. Full wave centre tap rectifier
✗ 3. Filter circuit
✗ 4. Half wave rectifier circuit

Question ID : **7532297575**
Status : **Answered**
Chosen Option : **1**

Q.3 ('T_L' is load torque, 'θ' is temperature rise, and 't' is time)

Which of the following motor duty classes does the given graph represent?



Ans

✗ 1. Short time duty

✗ 2. Intermittent periodic duty with starting

✗ 3. Continuous duty

✓ 4. Intermittent periodic duty

Question ID : **7532297570**
Status : **Answered**
Chosen Option : **4**

Q.4 For a P-pole synchronous generator, 180° electrical equals _____ mechanical.

Ans

✓ 1. $\frac{360^\circ}{P}$

✗ 2. $\frac{180^\circ}{P}$

✗ 3. $\frac{90^\circ}{P}$

✗ 4. $\frac{120^\circ}{P}$

Question ID : **7532297527**
Status : **Answered**
Chosen Option : **1**

Q.5 In a single-phase AC circuit, $\frac{reactive\ power}{apparent\ power}$ = _____.

Ans
✔ 1. sin Φ
✘ 2. Cot Φ
✘ 3. tan Φ
✘ 4. Cos Φ

Question ID : **7532297538**
Status : **Answered**
Chosen Option : **1**

Q.6 **Which of the following power plants has low operating cost and high initial cost?**

Ans
✘ 1. Nuclear power plant
✘ 2. Thermal power plant
✔ 3. Hydro-electric power plant
✘ 4. Gas power plant

Question ID : **7532297541**
Status : **Answered**
Chosen Option : **3**

Q.7 **String efficiency is a function of which of the following?**

Ans
✘ 1. Size of the tower
✔ 2. Number of discs in a string
✘ 3. Size of the insulator
✘ 4. Size of the conductor

Question ID : **7532297549**
Status : **Answered**
Chosen Option : **2**

Q.8 **Considering speed and load torque, select the motor that is different.**

Ans
✔ 1. Differentially compound motor
✘ 2. Cumulatively compound motor
✘ 3. Series motor
✘ 4. Permanent magnet motor

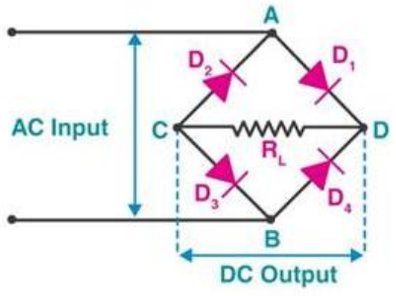
Question ID : **7532297523**
Status : **Answered**
Chosen Option : **3**

Q.9 **Consider the following sources of energy and select the one that is different.**

Ans
✗ 1. Tidal
✗ 2. Wind
✓ 3. Fossil fuels
✗ 4. Solar

Question ID : **7532297539**
Status : **Answered**
Chosen Option : **3**

Q.10 For the given circuit , if the diode between B and D is removed, then output is:



Ans
✗ 1. 0 volt
✗ 2. the same as input voltage
✗ 3. a full wave rectified voltage
✓ 4. a half wave rectified voltage

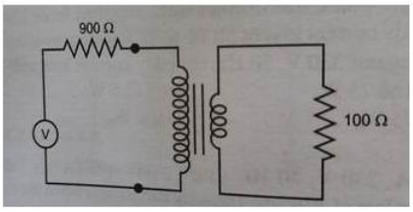
Question ID : **7532297553**
Status : **Answered**
Chosen Option : **4**

Q.11 **Select the diamagnetic material from the given options.**

Ans
✓ 1. Copper
✗ 2. Platinum
✗ 3. Glass
✗ 4. Aluminium

Question ID : **7532297506**
Status : **Answered**
Chosen Option : **3**

Q.12 For the given transformer circuit, if the turns ratio is 3 : 1, then the power transferred to the load is:



Ans

✗ 1. zero

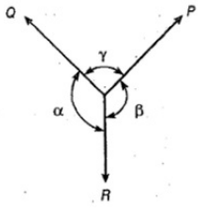
✗ 2. minimum

✗ 3. 500 watts

✓ 4. maximum

Question ID : **7532297525**
Status : **Answered**
Chosen Option : **4**

Q.13 For the given figure, according to Lami's Theorem, $\frac{P}{\sin x} = \frac{y}{\sin \beta} = \frac{z}{\sin \gamma}$. What are x, y and z, respectively, here?



Ans

✓ 1. α, Q, R

✗ 2. Q, R, α

✗ 3. R, Q, α

✗ 4. α, R, Q

Question ID : **7532297582**
Status : **Answered**
Chosen Option : **1**

Q.14 In the case of PVC cables, the acronym PVC stands for:

Ans

✗ 1. Plastic Vulcanised Chloride

✓ 2. Poly Vinyl Chloride

✗ 3. Plastic Vinyl Chloride

✗ 4. Poly Vulcanised Chloride

Question ID : **7532297564**
Status : **Answered**
Chosen Option : **2**

Q.15 **In a three-phase induction motor, the number of rotor slots are:**

Ans

✗ 1. equal to zero

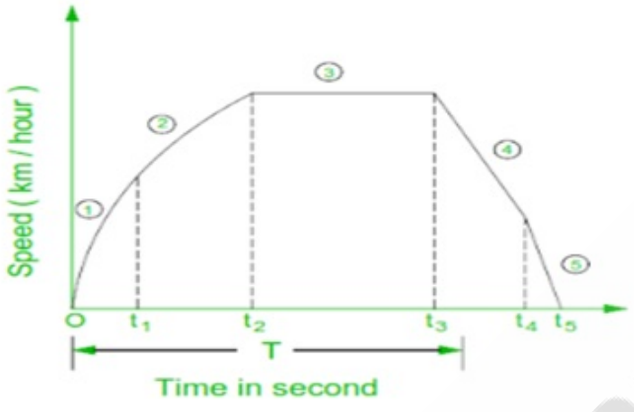
✗ 2. equal to that of stator

✗ 3. more than that of stator

✓ 4. less than that of stator

Question ID : **7532297529**
Status : **Answered**
Chosen Option : **3**

Q.16 In the speed-time curve of a train, the marked period '3' is called:



Ans

✓ 1. free running

✗ 2. rheostatic acceleration

✗ 3. coasting

✗ 4. acceleration on speed curve

Question ID : **7532297566**
Status : **Answered**
Chosen Option : **3**

Q.17 In a transformer, primary current is 500 A and secondary current is 5 A. Find the turn ratio ($\frac{N1}{N2}$).

Ans

✗ 1. 10

✓ 2. $\frac{1}{100}$

✗ 3. $\frac{1}{10}$

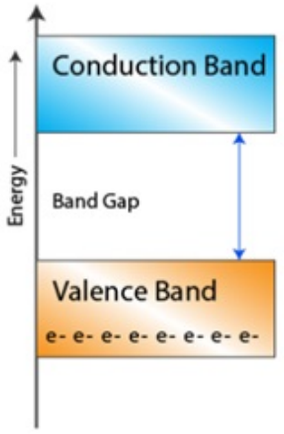
✗ 4. 100

Question ID : **7532297521**
Status : **Answered**
Chosen Option : **2**

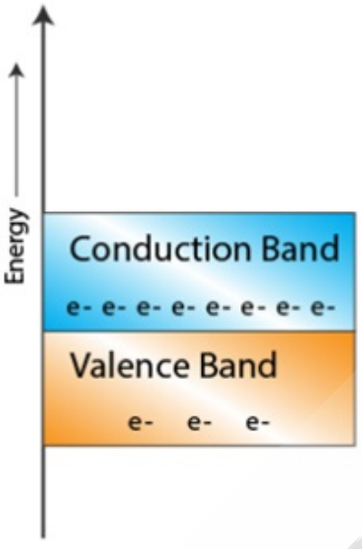
Q.18 Which of the following represents the energy band diagram of a semi-conductor?

Ans

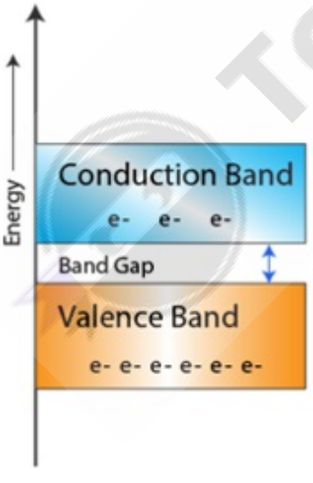
✗ 1.



✗ 2.



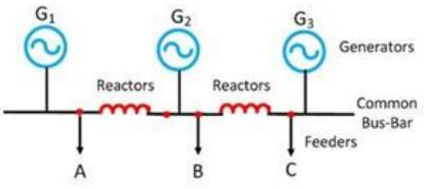
✓ 3.



✗ 4.

Question ID : **7532297577**
Status : **Answered**
Chosen Option : **3**

Q.19 Study the given figure and select the reactor system shown from the given options.



Ans

✗ 1. Feeder reactor

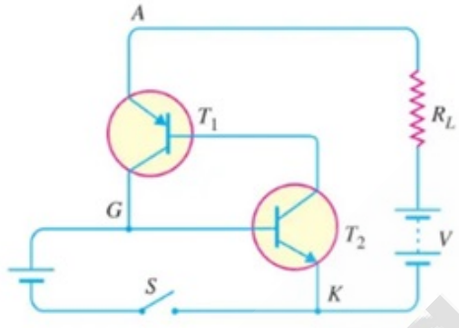
✗ 2. Generator reactor

✗ 3. Bus-bar reactor (Tie-bar system)

✓ 4. Bus-bar reactor (Ring system)

Question ID : **7532297557**
Status : **Answered**
Chosen Option : **4**

Q.20 Which of the following does the given circuit represent?



Ans

✗ 1. Two transistor model of MOSFET

✗ 2. Two transistor model of TRIAC

✗ 3. Two transistor model of UJT

✓ 4. Two transistor model of SCR

Question ID : **7532297551**
Status : **Answered**
Chosen Option : **4**

Q.21 **For a short pitched synchronous machine, (distribution factor) × (pitch factor) is:**

Ans

✗ 1. always equal to 1

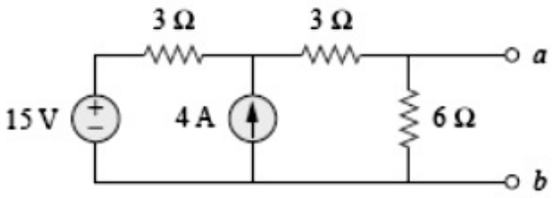
✗ 2. always greater than 1

✓ 3. always less than 1

✗ 4. always zero

Question ID : **7532297528**
Status : **Answered**
Chosen Option : **3**

Q.22 Find the Thevenin's resistance for the given circuit.



Ans
1. 6 Ω
2. 2 Ω
3. 3 Ω
4. 12 Ω

Question ID : **7532297536**
Status : **Answered**
Chosen Option : **3**

Q.23 Which of the following does the given symbol represent?

Ans
1. Power Diode
2. SCR
3. DIAC
4. TRIAC

Question ID : **7532297554**
Status : **Answered**
Chosen Option : **3**

Q.24 For a lap wounded DC machine, $\frac{\text{(number of poles)}}{\text{(number of brushes)}} =$ _____.

Ans
1. 1
2. 2
3. 4
4. 3

Question ID : **7532297522**
Status : **Answered**
Chosen Option : **1**

Q.25 With the usual notations, which of the following equations can measure power factor by using two wattmeter method?

Ans

✗ 1. $\cos^{-1}\sqrt{1+3\left(\frac{W_1-W_2}{W_1+W_2}\right)}$

✓ 2. $\tan^{-1}\sqrt{3}\left(\frac{W_1-W_2}{W_1+W_2}\right)$

✗ 3. $\cos^{-1}\sqrt{3}\left(\frac{W_1-W_2}{W_1+W_2}\right)$

✗ 4. $\tan^{-1}\left(\frac{W_1-W_2}{W_1+W_2}\right)$

Question ID : **7532297514**
Status : **Answered**
Chosen Option : **2**

Q.26 Which of the following does the given circuit symbol represent?

Ans

✗ 1. Circuit breaker

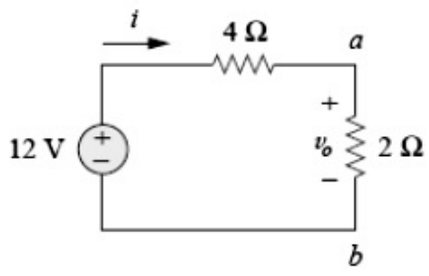
✗ 2. Fuse

✓ 3. Double break isolator

✗ 4. Relay

Question ID : **7532297550**
Status : **Answered**
Chosen Option : **3**

Q.27 For the given circuit, find $\frac{v_o}{i}$.



Ans
✔ 1. 2
✘ 2. 3
✘ 3. 1
✘ 4. 4

Question ID : **7532297535**
Status : **Answered**
Chosen Option : **1**

Q.28 The given truth table represents which of the following?

A	B	Out
0	0	1
0	1	0
1	0	0
1	1	0

Ans
✘ 1. AND gate
✔ 2. NOR gate
✘ 3. OR gate
✘ 4. NAND gate

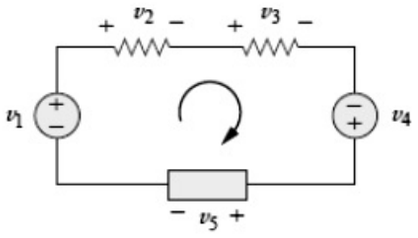
Question ID : **7532297579**
Status : **Answered**
Chosen Option : **2**

Q.29 **If the roughness of the conductor surface is increased, then the corona inception voltage:**

Ans
✘ 1. is increased
✔ 2. is decreased
✘ 3. remains unchanged
✘ 4. becomes infinite

Question ID : **7532297547**
Status : **Answered**
Chosen Option : **2**

Q.30 Which of the following is the correct KVL equation for the given circuit?



Ans
✗ 1. $v_1 + v_4 + v_5 = v_2 + v_3$

✗ 2. $v_1 + v_2 + v_3 = v_4 + v_5$

✗ 3. $v_1 + v_2 + v_3 + v_4 + v_5 = 0$

✓ 4. $v_1 + v_4 = v_2 + v_3 + v_5$

Question ID : **7532297509**
Status : **Answered**
Chosen Option : **4**

Q.31 $\frac{\textit{Power factor of pure capacitive circuit}}{\textit{Power factor of pure resistive circuit}} =$ _____.

Ans
✓ 1. 0

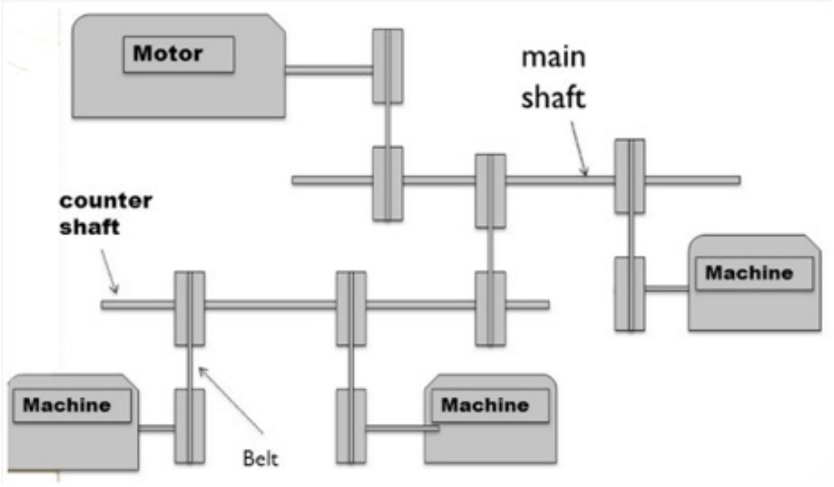
✗ 2. Infinity

✗ 3. −1

✗ 4. 1

Question ID : **7532297532**
Status : **Answered**
Chosen Option : **1**

Q.32 Which of the following is the drive shown in the given figure



Ans
✗ 1. Multi motor drive
✗ 2. Mechanical drive
✓ 3. Group drive
✗ 4. Individual drive

Question ID : **7532297571**
Status : **Not Answered**
Chosen Option : **--**

Q.33 **The resistance of a coil of 220 V, 400 W electric lamp is:**

Ans
✗ 1. 50 Ω
✓ 2. 121 Ω
✗ 3. 80 Ω
✗ 4. 200 Ω

Question ID : **7532297545**
Status : **Answered**
Chosen Option : **2**

Q.34 **An ideal PN diode, when reverse biased, behaves like which of the following?**

Ans
✗ 1. Closed switch
✓ 2. Perfect insulator
✗ 3. Perfect semi-conductor
✗ 4. Perfect conductor

Question ID : **7532297576**
Status : **Answered**
Chosen Option : **2**

Q.35 Which of the following types of lighting is shown in the given figure?

Ans
✗ 1. Direct
✓ 2. Semi-direct
✗ 3. Indirect
✗ 4. Semi-indirect

Question ID : **7532297565**
Status : **Answered**
Chosen Option : **4**

Q.36 **For which of the following is the turns ration equal to 1?**

Ans
✓ 1. Isolation transformer
✗ 2. Step down transformer
✗ 3. Instrument transformer
✗ 4. Distribution transformer

Question ID : **7532297520**
Status : **Answered**
Chosen Option : **1**

Q.37 **Which of the following is true for the common emitter configuration of BJT, with usual notations?**

Ans
✗ 1. $\beta = I_B / I_C$
✗ 2. $\beta = I_E / I_B$
✓ 3. $\beta = I_C / I_B$
✗ 4. $\beta = I_C / I_E$

Question ID : **7532297572**
Status : **Answered**
Chosen Option : **3**

Q.38 Which of the following is an intermediate power plant?

Ans
✔ 1. Solar power plant
✘ 2. Gas turbine power plant
✘ 3. Fuel cell plant
✘ 4. Hydro-electric power plant

Question ID : **7532297544**
Status : **Answered**
Chosen Option : **2**

Q.39 Connecting a low resistance in parallel to the coil circuit of an instrument is used for which of the following applications?

Ans
✘ 1. For extending the range of a frequency meter
✘ 2. For extending the range of a voltmeter
✔ 3. For extending the range of an ammeter
✘ 4. For extending the range of a power factor meter

Question ID : **7532297516**
Status : **Answered**
Chosen Option : **3**

Q.40 Which of the following is related to functioning of isolator?

Ans
✔ 1. Disconnection under no load condition for safety isolation and maintenance
✘ 2. Disconnection in case of rapid fluctuations in load
✘ 3. Disconnection under surge over voltage
✘ 4. Disconnection under short circuit conditions

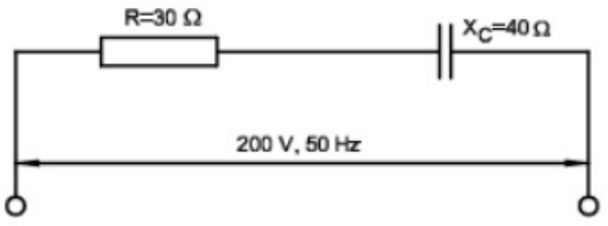
Question ID : **7532297556**
Status : **Answered**
Chosen Option : **1**

Q.41 Which of the following instruments is related to electric lighting?

Ans
✘ 1. Pyrometer
✔ 2. Lux meter
✘ 3. Sonometer
✘ 4. Thermometer

Question ID : **7532297563**
Status : **Answered**
Chosen Option : **2**

Q.42 Calculate the operating power factor of the given circuit.



Ans

✗ 1. 0.8

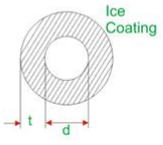
✗ 2. 1

✗ 3. 0.4

✓ 4. 0.6

Question ID : **7532297533**
Status : **Answered**
Chosen Option : **4**

Q.43 In the given figure, if 't' is the thickness of the ice around the conductor, then find the expression for volume of ice per unit length.



Ans

✓ 1. $\pi t(d + t)$

✗ 2. $\pi(d + t)$

✗ 3. $\pi t(d - t)$

✗ 4. $\pi(d - t)$

Question ID : **7532297546**
Status : **Not Answered**
Chosen Option : **--**

Q.44 8600 kcal = _____.

Ans

✓ 1. 10 kWh

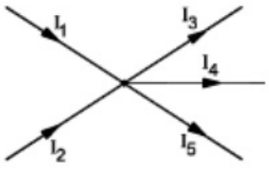
✗ 2. 1 kWh

✗ 3. 0.1 kWh

✗ 4. 100 kWh

Question ID : **7532297508**
Status : **Answered**
Chosen Option : **2**

Q.45 Study the given diagram. If $I_1 = 2$ A, $I_2 = 10$ A, $I_3 = 4$ A and $I_4 = 5$ A, then find $(I_5 - I_1)$.



Ans

✗ 1. 12 A

✓ 2. 1 A

✗ 3. 3 A

✗ 4. 2 A

Question ID : **7532297504**
Status : **Answered**
Chosen Option : **2**

Q.46 **Which of the following is unitless?**

Ans

✗ 1. Flux

✓ 2. Relative permeability

✗ 3. Reluctance

✗ 4. Flux density

Question ID : **7532297507**
Status : **Answered**
Chosen Option : **2**

Q.47 **The earth resistance of any earthing wiring should NOT be more than _____.**

Ans

✗ 1. 50 ohms

✗ 2. 500 ohms

✓ 3. 5 ohms

✗ 4. 0.5 ohms

Question ID : **7532297561**
Status : **Answered**
Chosen Option : **3**

Q.48 **Which of the following are the parts in a battery?**

Ans

✗ 1. Capacitor, electrolyte, anode

✗ 2. Capacitor, electrolyte, cathode

✗ 3. Separators, electrolyte, capacitor

✓ 4. Separators, electrolyte, anode

Question ID : **7532297511**
Status : **Answered**
Chosen Option : **4**

Q.49 **Two voltmeters are connected in series across 240 V supply. The resistance of voltmeter A and B are 5k Ω and 10k Ω, respectively.**

$$\frac{\text{Reading of meter A}}{\text{Reading of meter B}} = ?$$

Ans

✗ 1. $\frac{1}{6}$

✗ 2. $\frac{1}{4}$

✗ 3. $\frac{1}{3}$

✓ 4. $\frac{1}{2}$

Question ID : **7532297513**
Status : **Answered**
Chosen Option : **4**

Q.50 **Which of the following is a measuring unit of voltage?**

Ans

✗ 1. Coulomb/second

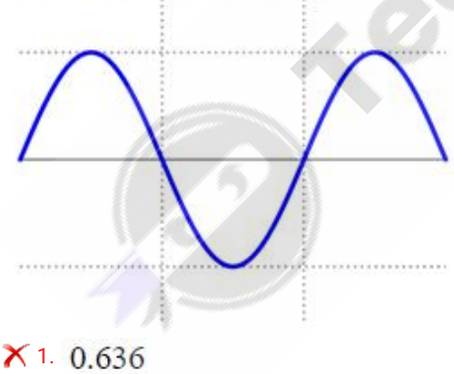
✗ 2. Joule/second

✗ 3. Joule – second

✓ 4. Joule/coulomb

Question ID : **7532297517**
Status : **Answered**
Chosen Option : **4**

Q.51 For the given wave form, calculate the peak factor.



Ans

✗ 1. 0.636

✗ 2. 0.707

✓ 3. 1.414

✗ 4. 1.1

Question ID : **7532297537**
Status : **Answered**
Chosen Option : **3**

Q.52 **Which of the following losses is least significant while calculating the efficiency of a DC machine?**

Ans
✗ 1. Iron loss
✗ 2. Armature copper loss
✗ 3. Field copper loss
✓ 4. Mechanical loss

Question ID : **7532297524**
Status : **Answered**
Chosen Option : **1**

Q.53 **If the height of the transmission tower is decreased, the capacitance of the line to earth will:**

Ans
✗ 1. decrease exponentially
✗ 2. remain the same
✗ 3. decrease
✓ 4. increase

Question ID : **7532297548**
Status : **Answered**
Chosen Option : **4**

Q.54 **To which of the following is stroboscopic effect NOT related?**

Ans
✗ 1. Mercury vapour lamp
✗ 2. Sodium vapour lamp
✗ 3. Fluorescent lamp
✓ 4. Incandescent lamp

Question ID : **7532297562**
Status : **Answered**
Chosen Option : **4**

Q.55 **Which of the following is used to avoid moisture ingress in the oil tank of a transformer?**

Ans
✓ 1. Breather
✗ 2. Fuse
✗ 3. Conservator
✗ 4. Relay

Question ID : **7532297560**
Status : **Answered**
Chosen Option : **1**

Q.56 The ratio $\frac{fusing\ current}{current\ rating\ of\ fuse}$ = _____.

Ans
✗ 1. less than 1
✗ 2. 1
✗ 3. 0
✓ 4. greater than 1

Question ID : **7532297558**
Status : **Answered**
Chosen Option : **4**

Q.57 Perform binary addition between $(101110)_2$ and $(111101)_2$.

Ans
✗ 1. $(1001011)_2$
✗ 2. $(110101)_2$
✗ 3. $(101011)_2$
✓ 4. $(1101011)_2$

Question ID : **7532297580**
Status : **Answered**
Chosen Option : **4**

Q.58 In the relation, if $I = kd^x$, k is fuse constant, I is fuse current, d is the diameter of the fuse wire, then the value of 'X' is equal to:

Ans
✗ 1. 1
✓ 2. 1.5
✗ 3. 2.5
✗ 4. 2

Question ID : **7532297555**
Status : **Answered**
Chosen Option : **2**

Q.59 **State whether the following statements are true or FALSE.**

1. Salient pole rotor alternators have non-uniform airgap.
2. Salient pole rotor alternators are mechanically robust.

Ans
✓ 1. 1 is true but 2 is false.
✗ 2. 1 is false but 2 is true.
✗ 3. Both 1 and 2 are false.
✗ 4. Both 1 and 2 are true.

Question ID : **7532297526**
Status : **Answered**
Chosen Option : **1**

Q.60 If a lamp efficiency is given as 12 lumen/watt, then the lamp should be:

Ans

✗ 1. a CFL

✗ 2. a fluorescent lamp

✗ 3. an LED lamp

✓ 4. an incandescent lamp

Question ID : **7532297567**
Status : **Answered**
Chosen Option : **4**

Q.61 (Demand factor) × (Connected load) = _____.

Ans

✗ 1. Load factor

✓ 2. Maximum demand

✗ 3. Average load

✗ 4. Plant use factor

Question ID : **7532297540**
Status : **Answered**
Chosen Option : **2**

Q.62 Which of the following is NOT related to 3-phase squirrel cage induction motor?

Ans

✓ 1. Good speed regulation

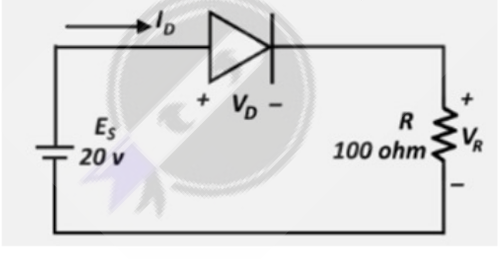
✗ 2. Robust construction

✗ 3. Low starting torque

✗ 4. Low cost

Question ID : **7532297530**
Status : **Not Answered**
Chosen Option : **--**

Q.63 For the given circuit, assuming the diode as an ideal diode, what is the voltage drop across resistor?



Ans

✓ 1. 20 V

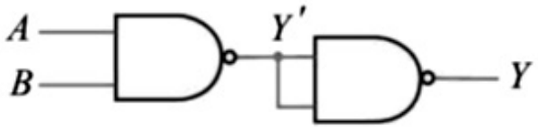
✗ 2. 30 V

✗ 3. 0 V

✗ 4. 10 V

Question ID : **7532297574**
Status : **Answered**
Chosen Option : **1**

Q.64 In the given circuit, $Y\overline{Y}$ = _____.



Ans
✗ 1. Y
✗ 2. 1
✗ 3. $\overline{Y}$
✓ 4. 0

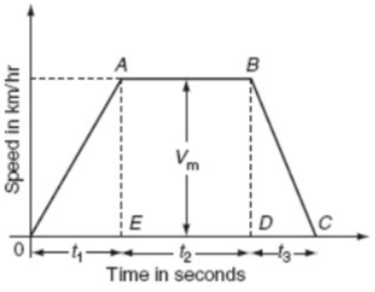
Question ID : **7532297578**
Status : **Answered**
Chosen Option : **4**

Q.65 **VAWT related to wind turbine denotes:**

Ans
✓ 1. Vertical Axis Wind Turbine
✗ 2. Variable Area Wind Turbine
✗ 3. Variable Axis Wind Turbine
✗ 4. Volt Ampere Wind Turbine

Question ID : **7532297543**
Status : **Answered**
Chosen Option : **1**

Q.66 For the given curve, if α = acceleration in kmphps and β = retardation in kmphps, then β = _____.



Ans

✗ 1. $\frac{V_m}{t_2}$

✓ 2. $\frac{V_m}{t_3}$

✗ 3. $\frac{V_m}{t_1}$

✗ 4. $\frac{V_m}{t_1 + t_2}$

Question ID : **7532297569**
Status : **Answered**
Chosen Option : **2**

Q.67 **Which of the following is NOT related to BJT?**

Ans

✗ 1. Collector

✗ 2. Emitter

✗ 3. Base

✓ 4. Drain

Question ID : **7532297552**
Status : **Answered**
Chosen Option : **4**

Q.68 LT^{-1} **is the dimension of which of the following?**

Ans

✓ 1. Velocity

✗ 2. Acceleration

✗ 3. Distance

✗ 4. Force

Question ID : **7532297512**
Status : **Answered**
Chosen Option : **1**

Q.69 **The method of finding the centre of gravity of a square is same as that of a:**

Ans

✗ 1. hemi-sphere

✗ 2. semi-circle

✗ 3. triangle

✓ 4. rectangle

Question ID : **7532297583**
Status : **Answered**
Chosen Option : **4**

Q.70 A (0 – 100 V) MC voltmeter with the internal resistance of 2 Ω is used to measure voltage up to 200 V. The additional resistance to be connected in series with the voltmeter is:

Ans

✗ 1. 20Ω

✗ 2. 200Ω

✗ 3. 2000Ω

✓ 4. 2Ω

Question ID : **7532297518**
Status : **Answered**
Chosen Option : **4**

Q.71 **Which of the following can measure the AC current directly?**

Ans

✗ 1. Wattmeter

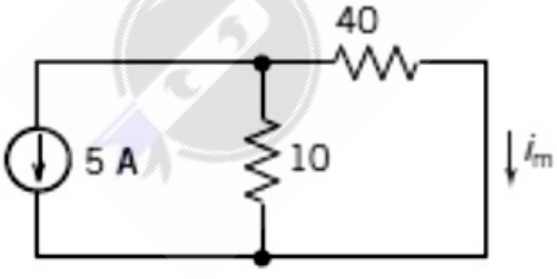
✓ 2. Tong tester

✗ 3. Phase sequence meter

✗ 4. Megger

Question ID : **7532297519**
Status : **Answered**
Chosen Option : **2**

Q.72 Find current i_m in the given circuit.



Ans

✗ 1. $4\,A$

✗ 2. $1\,A$

✓ 3. $-1\,A$

✗ 4. $-4\,A$

Question ID : **7532297568**
Status : **Answered**
Chosen Option : **3**

Q.73 **Fire point and flash point are the terms related to which of the following power plants?**

Ans

✗ 1. Nuclear power plant

✓ 2. Diesel power plant

✗ 3. Hydro power plant

✗ 4. Solar power Plant

Question ID : **7532297542**
Status : **Answered**
Chosen Option : **2**

Q.74 **Which of the following is NOT an application of high resistivity material?**

Ans

✗ 1. Oven

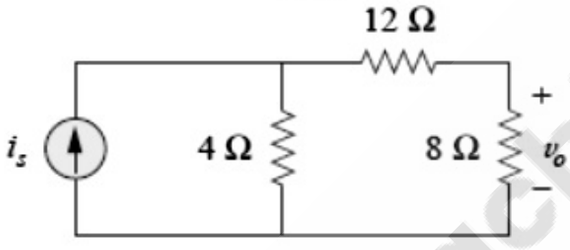
✗ 2. Heater

✓ 3. Overhead transmission line

✗ 4. Starter

Question ID : **7532297510**
Status : **Answered**
Chosen Option : **3**

Q.75 For the given circuit, find i_s, when $v_0 = 40$ V.



Ans

✗ 1. 40 A

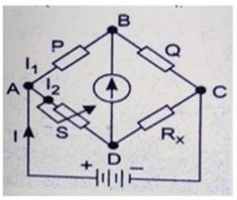
✓ 2. 30 A

✗ 3. 10 A

✗ 4. 20 A

Question ID : **7532297534**
Status : **Answered**
Chosen Option : **2**

Q.76 For the given Wheatstone bridge, if P, Q, S are 900 Ω, 300 Ω and 15 Ω, respectively, calculate R_x, such that the bridge is balanced.



Ans

✗ 1. 30 Ω

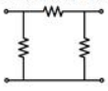
✓ 2. 5 Ω

✗ 3. 90 Ω

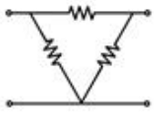
✗ 4. 15 Ω

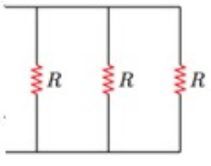
Question ID : **7532297515**
Status : **Answered**
Chosen Option : **2**

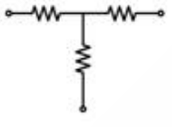
Q.77 Find the electrically equivalent for the given circuit, assuming all resistors are of equal value.

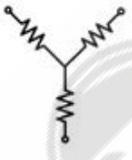


Ans

✓ 1. 

✗ 2. 

✗ 3. 

✗ 4. 

Question ID : **7532297531**
Status : **Answered**
Chosen Option : **1**

Q.78 With usual notations, the given symbols are related to which of the following laws?

Ans
✗ 1. Faraday's I law
✗ 2. Lenz's law
✓ 3. Ohm's law
✗ 4. Faraday's II law

Question ID : **7532297505**
Status : **Answered**
Chosen Option : **3**

Q.79 The ratio $\frac{barrier\ potential\ of\ silicon}{barrier\ potential\ of\ germanium}$ is approximately equal to:

Ans
✓ 1. 2
✗ 2. 3
✗ 3. 4
✗ 4. 1

Question ID : **7532297573**
Status : **Answered**
Chosen Option : **1**

Q.80 **Which of the following is a switch?**

Ans
✗ 1. Circuit breaker
✓ 2. Isolator
✗ 3. Fuse
✗ 4. Relay

Question ID : **7532297559**
Status : **Answered**
Chosen Option : **4**