पावरग्रिड
POWERGRID

पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
POWER GRID CORPORATION OF INDIA LIMITED
(A Government of India Enterprise)

Participant ID	
Participant Name	
Tests Center Name	
Test Date	20/06/2023
Test Time	11:30 AM - 12:30 PM
Subject	Field Supervisor (Electrical)

Section : **General English**

Q.1 Select the most appropriate option to fill in the blank.

Water supply _____ May and July is adversely affected in areas serviced by the Yamuna.

Ans
✔ 1. between
✗ 2. from
✗ 3. across
✗ 4. among

Question ID : **630680246388**
Option 1 ID : **630680955840**
Option 2 ID : **630680955839**
Option 3 ID : **630680955842**
Option 4 ID : **630680955841**
Status : **Answered**
Chosen Option : **2**

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Q.2 **Select the most appropriate ANTONYM of the bracketed word in the following sentence to fill in the blank.**

The performance of the company declined due to the _____ attitude of the top management.
(Compassionate)

Ans
✗ 1. vivacious
✗ 2. animated
✗ 3. rhapsodic
✓ 4. apathetic

Question ID : **630680246389**
Option 1 ID : **630680955845**
Option 2 ID : **630680955843**
Option 3 ID : **630680955846**
Option 4 ID : **630680955844**
Status : **Answered**
Chosen Option : **2**

Q.3 **Select the most appropriate option to fill in the blank.**

From farmers to pre-schoolers, Indian app startups are innovating _____ everyone.

Ans
✓ 1. for
✗ 2. on
✗ 3. by
✗ 4. at

Question ID : **630680246387**
Option 1 ID : **630680955838**
Option 2 ID : **630680955835**
Option 3 ID : **630680955837**
Option 4 ID : **630680955836**
Status : **Answered**
Chosen Option : **1**

Q.4 **Select the most appropriate option to fill in the blanks.**

_____ excess of work is always painful, yet work is not more painful than _____ idleness.

Ans

✗ 1. A; the

✗ 2. No word; an

✓ 3. An; no word

✗ 4. The; an

Question ID : **630680246386**
Option 1 ID : **630680955831**
Option 2 ID : **630680955834**
Option 3 ID : **630680955833**
Option 4 ID : **630680955832**
Status : **Answered**
Chosen Option : **3**

Q.5 **Sentences of a paragraph are given below in jumbled order. Select the option that arranges the sentences in the correct order to form a meaningful and coherent paragraph.**

A. The Etruscans raised a great army and marched toward Rome.
B. The Romans knew that they were not strong enough to meet the Etruscans in open battle.
C. Once there was a war between the Roman people and the Etruscans.
D. The city had never been in such great danger before.

Ans

✗ 1. DBAC

✗ 2. CDBA

✗ 3. BACD

✓ 4. CADB

Question ID : **630680246390**
Option 1 ID : **630680955847**
Option 2 ID : **630680955848**
Option 3 ID : **630680955850**
Option 4 ID : **630680955849**
Status : **Answered**
Chosen Option : **1**

Section : **Reasoning**

Q.1 Refer to the given number, symbol series and answer the question that follows.

(Left) 3 @ % & 2 $ 5 @ 4 % $ # 5 1 # 1 # 3 ^ 8 % 7 $ & 9 3 # 2 & * % & @ 2 (Right)

How many symbols (from left to right) are immediately preceded by a symbol but NOT immediately followed by a number?

Ans

✗ 1. 3

✗ 2. 4

✓ 3. 5

✗ 4. 2

Question ID : **630680246392**
Option 1 ID : **630680955856**
Option 2 ID : **630680955857**
Option 3 ID : **630680955858**
Option 4 ID : **630680955855**
Status : **Answered**
Chosen Option : **3**

Q.2 In a certain code language, BASKET is coded as UFLTBC. How will TENNIS be coded in the same language?

Ans

✗ 1. TOJOFU

✓ 2. TJOOFU

✗ 3. TFOOJU

✗ 4. TJOFOU

Question ID : **630680246395**
Option 1 ID : **630680955869**
Option 2 ID : **630680955870**
Option 3 ID : **630680955867**
Option 4 ID : **630680955868**
Status : **Answered**
Chosen Option : **2**

Q.3 Select the option that is related to the third letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster.

SUCCESS : TVDDFTT : : TALLEST : ?

Ans

✔ 1. UBMMFTU

✗ 2. UBMMFTR

✗ 3. UCMMFTU

✗ 4. UBMMFUU

Question ID : **630680246396**
Option 1 ID : **630680955872**
Option 2 ID : **630680955871**
Option 3 ID : **630680955873**
Option 4 ID : **630680955874**
Status : **Answered**
Chosen Option : **1**

Q.4 Refer to the given number, symbol series and answer the question that follows.

(Left) * % & @ 2 1 # 3 ^ 5 @ 3 # 2 $ 5 @ 4 % $ # 5 1 # 2 & (Right)

How many symbols (from left to right) are immediately preceded by a number and also immediately followed by a symbol?

Ans

✔ 1. 1

✗ 2. 2

✗ 3. 4

✗ 4. 3

Question ID : **630680246391**
Option 1 ID : **630680955851**
Option 2 ID : **630680955852**
Option 3 ID : **630680955853**
Option 4 ID : **630680955854**
Status : **Answered**
Chosen Option : **1**

Q.5 A person has six coins: C1, C2, C3, C4, C5, and C6, each having a different weight.

- The weight of C1 is twice as much as that of C2.
- The weight of C2 is four and a half times as much as that of C3.
- The weight of C3 is half as much as that of C4.
- The weight of C4 is half as much as that of C5.
- C6 is three times the weight of C5.

Which of the following is the heaviest in weight?

Ans

✗ 1. C4

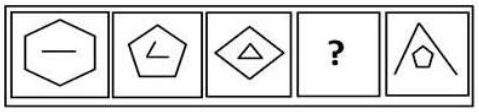
✓ 2. C6

✗ 3. C2

✗ 4. C1

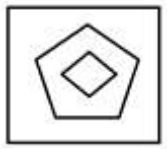
Question ID : **630680246393**
Option 1 ID : **630680955862**
Option 2 ID : **630680955861**
Option 3 ID : **630680955860**
Option 4 ID : **630680955859**
Status : **Answered**
Chosen Option : **2**

Q.6 Select the figure from among the given options that can replace the question mark (?) in the following series.



Ans

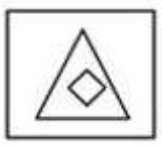
✗ 1.



✗ 2.

✗ 3.

✓ 4.



Question ID : **630680246397**
Option 1 ID : **630680955877**
Option 2 ID : **630680955876**
Option 3 ID : **630680955878**
Option 4 ID : **630680955875**
Status : **Answered**
Chosen Option : **4**

Q.7 Select the number from among the given options that can replace the question mark (?) in the following series.

13, 41, 125, 377, ?

Ans

✔ 1. 1133

✘ 2. 1313

✘ 3. 1314

✘ 4. 1331

Question ID : **630680246399**
Option 1 ID : **630680955884**
Option 2 ID : **630680955883**
Option 3 ID : **630680955886**
Option 4 ID : **630680955885**
Status : **Answered**
Chosen Option : **1**

Q.8 Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.

DJI, IDB, NXU, ?, XLG

Ans

✘ 1. SSN

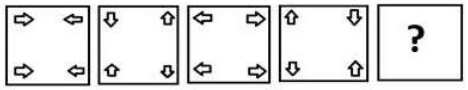
✘ 2. SRM

✔ 3. SRN

✘ 4. TRN

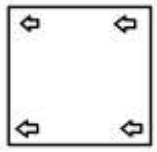
Question ID : **630680246394**
Option 1 ID : **630680955863**
Option 2 ID : **630680955864**
Option 3 ID : **630680955865**
Option 4 ID : **630680955866**
Status : **Answered**
Chosen Option : **3**

Q.9 Select the figure from among the given options that can replace the question mark (?) in the following series.

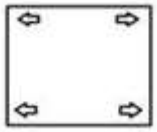


Ans

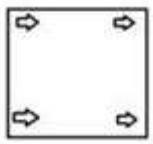
✗ 1.



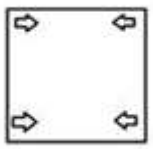
✗ 2.



✗ 3.

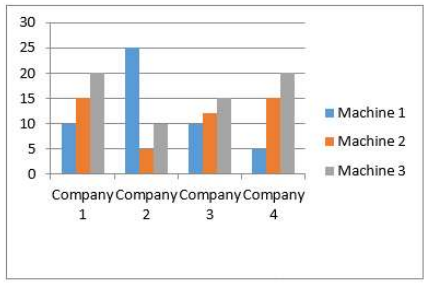


✓ 4.



Question ID : **630680246398**
Option 1 ID : **630680955882**
Option 2 ID : **630680955881**
Option 3 ID : **630680955880**
Option 4 ID : **630680955879**
Status : **Answered**
Chosen Option : **1**

Q.10 The number of days required to produce a product B by using all three machines in series for 4 different companies is given in the following graph.



Which company produces the product the earliest?

Ans

✔ 1. Company 3

✘ 2. Company 2

✘ 3. Company 4

✘ 4. Company 1

Question ID : **630680246400**
Option 1 ID : **630680955889**
Option 2 ID : **630680955888**
Option 3 ID : **630680955890**
Option 4 ID : **630680955887**
Status : **Answered**
Chosen Option : **1**

Section : **Quantitative Aptitude**

Q.1 A shopkeeper has 150 articles of the same cost price. He sells two-third of them at a profit of 35% and the remaining articles at a loss of 16%. What is his profit percentage in the entire transaction?

Ans

✔ 1. 18%

✗ 2. 16%

✗ 3. 20%

✗ 4. 14%

Question ID : **630680246404**
Option 1 ID : **630680955904**
Option 2 ID : **630680955905**
Option 3 ID : **630680955906**
Option 4 ID : **630680955903**
Status : **Answered**
Chosen Option : **1**

Q.2 The monthly salary of some workers in a factory is ₹28,500. When four workers whose average monthly salary is ₹25,600 left the factory and three workers whose monthly salary is ₹34,400 joined the factory, the average monthly salary of workers in the factory now increases by ₹1,172. The number of workers initially in the factory was:

Ans

✔ 1. 26

✗ 2. 28

✗ 3. 24

✗ 4. 32

Question ID : **630680246401**
Option 1 ID : **630680955892**
Option 2 ID : **630680955893**
Option 3 ID : **630680955891**
Option 4 ID : **630680955894**
Status : **Answered**
Chosen Option : **1**

Q.3 The income of Arun is ₹36,000 which is 20% less than the income of Babita. The expenditure of Babita is ₹30,000 which is 25% more than the expenditure of Arun. What is the difference (in ₹) between the savings of Babita and Arun?

Ans

✔ 1. ₹3,000

✘ 2. ₹3,200

✘ 3. ₹2,800

✘ 4. ₹2,500

Question ID : **630680246403**
Option 1 ID : **630680955901**
Option 2 ID : **630680955902**
Option 3 ID : **630680955900**
Option 4 ID : **630680955899**
Status : **Answered**
Chosen Option : **1**

Q.4 A varies directly as B and inversely as C. When B = 20, C = 15, then A = 16. What will be the value of A when B = 18 and C = 22.5?

Ans

✘ 1. 8.4

✘ 2. 10.8

✔ 3. 9.6

✘ 4. 12.4

Question ID : **630680246408**
Option 1 ID : **630680955919**
Option 2 ID : **630680955921**
Option 3 ID : **630680955920**
Option 4 ID : **630680955922**
Status : **Answered**
Chosen Option : **2**

Q.5 An article is sold for ₹1,989 after giving two successive discounts of 20% and 15% on its marked price. If no discount is given on the marked price, then there is a gain of 30%. What is the cost price of the article?

Ans

✗ 1. ₹2,150

✓ 2. ₹2,250

✗ 3. ₹2,200

✗ 4. ₹2,000

Question ID : **630680246405**
Option 1 ID : **630680955909**
Option 2 ID : **630680955907**
Option 3 ID : **630680955908**
Option 4 ID : **630680955910**
Status : **Answered**
Chosen Option : **2**

Q.6 A number is successively increased by 20% and 25%, and then successively decreased by 30%, 8% and 5%. The net percentage increase/decrease in the original number is:

Ans

✗ 1. decrease by 15%

✗ 2. increase by 15%

✗ 3. increase by 7.2%

✓ 4. decrease by 8.23%

Question ID : **630680246402**
Option 1 ID : **630680955896**
Option 2 ID : **630680955895**
Option 3 ID : **630680955897**
Option 4 ID : **630680955898**
Status : **Answered**
Chosen Option : **4**

Q.7 A shopkeeper sells an article after giving a discount of 28% on its marked price. He earns a profit of 25% by selling it for ₹180 above its cost price. What is the marked price (in ₹) of the article?

Ans

✗ 1. ₹1,180

✗ 2. ₹1,280

✓ 3. ₹1,250

✗ 4. ₹1,200

Question ID : **630680246406**
Option 1 ID : **630680955911**
Option 2 ID : **630680955914**
Option 3 ID : **630680955913**
Option 4 ID : **630680955912**
Status : **Not Answered**
Chosen Option : **--**

Q.8 The ratio of acid and water in a solution of 90 litres is 7 : 11. How much water (in litres) should be mixed in this solution so that the ratio of acid and water in the resulting solution becomes 2 : 5?

Ans

✗ 1. 30.5

✗ 2. 30

✓ 3. 32.5

✗ 4. 32

Question ID : **630680246407**
Option 1 ID : **630680955916**
Option 2 ID : **630680955915**
Option 3 ID : **630680955918**
Option 4 ID : **630680955917**
Status : **Answered**
Chosen Option : **3**

Q.9 A 320-m long train crosses a pole in 24 seconds, and passes completely train Y, running in opposite direction at a speed of 60 km/h, in 22 seconds. What is the length (in m) of train Y?

Ans

✗ 1. 300

✗ 2. 330

✓ 3. 340

✗ 4. 310

Question ID : **630680246409**
Option 1 ID : **630680955923**
Option 2 ID : **630680955925**
Option 3 ID : **630680955926**
Option 4 ID : **630680955924**
Status : **Not Answered**
Chosen Option : **--**

Q.10 A can complete a certain work in 20 days. B is 25% more efficient than A. They worked together for 4 days and C completed the remaining work in $5\frac{1}{2}$ days. In how many days can A, B and C together complete 85% of the original work?

Ans

✗ 1. 5

✗ 2. $5\frac{1}{2}$

✓ 3. 4

✗ 4. $4\frac{1}{2}$

Question ID : **630680246410**
Option 1 ID : **630680955929**
Option 2 ID : **630680955930**
Option 3 ID : **630680955927**
Option 4 ID : **630680955928**
Status : **Not Answered**
Chosen Option : **--**

Section : **Electrical Engineering**

Q.1 What will be the equivalent resistance if a uniform wire of resistance 50 Ω is cut into five equal parts and these parts are connected in parallel?

Ans

✗ 1. 10 Ω

✗ 2. 5 Ω

✓ 3. 2 Ω

✗ 4. 15 Ω

Question ID : **630680246415**
Option 1 ID : **630680955949**
Option 2 ID : **630680955948**
Option 3 ID : **630680955947**
Option 4 ID : **630680955950**
Status : **Answered**
Chosen Option : **1**

Q.2 A unity feedback control system has the open-loop transfer function G(s) = K / (s(s + 4)). What will be the value of 'K' if the damping ratio is 0.707?

Ans

✗ 1. 6

✓ 2. 8

✗ 3. 4

✗ 4. 2

Question ID : **630680246450**
Option 1 ID : **630680956089**
Option 2 ID : **630680956090**
Option 3 ID : **630680956088**
Option 4 ID : **630680956087**
Status : **Answered**
Chosen Option : **4**

Q.3 In monopolar HVDC links, which polarity is generally utilised as a transmission conductor, due to comparatively lower radio interference?

Ans

✔ 1. Negative

✗ 2. Both positive and negative

✗ 3. Positive or negative

✗ 4. Positive

Question ID : **630680246460**
Option 1 ID : **630680956128**
Option 2 ID : **630680956129**
Option 3 ID : **630680956130**
Option 4 ID : **630680956127**
Status : **Answered**
Chosen Option : **2**

Q.4 For the most economical working, _____.

Ans

✗ 1. it does not depend upon the variable part of the annual charge and the cost of annual losses caused by energy wasted in the conductor

✔ 2. the variable part of the annual charge should be equal to the cost of annual losses caused by energy wasted in the conductor

✗ 3. the variable part of the annual charge should be less than the cost of annual losses caused by energy wasted in the conductor

✗ 4. the variable part of the annual charge should be more than the cost of annual losses caused by energy wasted in the conductor

Question ID : **630680246441**
Option 1 ID : **630680956054**
Option 2 ID : **630680956053**
Option 3 ID : **630680956051**
Option 4 ID : **630680956052**
Status : **Answered**
Chosen Option : **1**

Q.5 If the maximum power is being transferred to a load, then what is the power transfer efficiency?

Ans

✗ 1. 75%

✗ 2. 25%

✓ 3. 50%

✗ 4. 100%

Question ID : **630680246417**
Option 1 ID : **630680955957**
Option 2 ID : **630680955955**
Option 3 ID : **630680955956**
Option 4 ID : **630680955958**
Status : **Answered**
Chosen Option : **3**

Q.6 What is the magnitude of voltage of a synchronous generator obtained by using the synchronous impedance method?

Ans

✗ 1. Nearly accurate, as it accounts for magnetic saturation.

✗ 2. Nearly accurate, as the generator is normally operated in the unsaturated region of magnetisation.

✗ 3. Lower than actual, as it does not account for magnetic saturation.

✓ 4. Higher than actual, as it does not account for magnetic saturation.

Question ID : **630680246433**
Option 1 ID : **630680956021**
Option 2 ID : **630680956022**
Option 3 ID : **630680956020**
Option 4 ID : **630680956019**
Status : **Answered**
Chosen Option : **2**

Q.7 A change of 8.0 mA in the emitter current brings about a change of 7.9 mA in the collector current. How much change in the base current is required so as to bring about the same change (that is 7.9 mA) in the collector current?

Ans

1. 0.4 mA ✗
2. 0.1 mA ✓
3. 0.3 mA ✗
4. 0.2 mA ✗

Question ID : **630680246446**
Option 1 ID : **630680956074**
Option 2 ID : **630680956071**
Option 3 ID : **630680956073**
Option 4 ID : **630680956072**
Status : **Answered**
Chosen Option : **2**

Q.8 If resistance of an electrical circuit is doubled, without changing any other parameter or supply voltage, then current in the circuit will _____.

Ans

1. reduce to quarter ✗
2. get doubled ✗
3. reduce to half ✓
4. remain unchanged ✗

Question ID : **630680246411**
Option 1 ID : **630680955933**
Option 2 ID : **630680955931**
Option 3 ID : **630680955932**
Option 4 ID : **630680955934**
Status : **Answered**
Chosen Option : **3**

Q.9 Which of the following is an example of a polar dielectric?

Ans
1. Polyethylene ✗
2. Quartz ✓
3. Teflon ✗
4. Nylon ✗

Question ID : **630680246452**
Option 1 ID : **630680956095**
Option 2 ID : **630680956097**
Option 3 ID : **630680956098**
Option 4 ID : **630680956096**
Status : **Answered**
Chosen Option : **2**

Q.10 Magnetic leakage factor is the ratio of _____.

Ans
1. useful flux to total flux. ✗
2. flux in the air gap to flux in the iron path. ✗
3. flux in the air gap to useful flux. ✗
4. total flux to useful flux. ✓

Question ID : **630680246422**
Option 1 ID : **630680955975**
Option 2 ID : **630680955978**
Option 3 ID : **630680955977**
Option 4 ID : **630680955976**
Status : **Answered**
Chosen Option : **2**

Q.11 In brushless DC motors, which type of motor is used?

Ans

✔ 1. Synchronous motor

✗ 2. Induction motor

✗ 3. DC shunt motor

✗ 4. DC series motor

Question ID : **630680246428**
Option 1 ID : **630680956002**
Option 2 ID : **630680956001**
Option 3 ID : **630680955999**
Option 4 ID : **630680956000**
Status : **Answered**
Chosen Option : **1**

Q.12 Damper winding in a synchronous motor running at a synchronous speed provides:

Ans

✗ 1. eddy current torque

✔ 2. no torque

✗ 3. damping torque

✗ 4. torque aiding the developed torque

Question ID : **630680246435**
Option 1 ID : **630680956030**
Option 2 ID : **630680956027**
Option 3 ID : **630680956029**
Option 4 ID : **630680956028**
Status : **Answered**
Chosen Option : **2**

Q.13 Distributors are conductors:

Ans

✗ 1.
of large current carrying capacity, carrying the current in bulk to the feeder points.

✓ 2.
from which current is tapped off for supply to the consumer.

✗ 3.
of small size, placed between the distributor's and consumer's premises.

✗ 4.
from which current is tapped off for supply to the sub-station.

Question ID : **630680246439**
Option 1 ID : **630680956043**
Option 2 ID : **630680956046**
Option 3 ID : **630680956044**
Option 4 ID : **630680956045**
Status : **Answered**
Chosen Option : **1**

Q.14 What is the relation among E_f, V_t and δ for a generating synchronous machine carrying load?

(Note that usual symbols are used.)

Ans

✓ 1. E_f leads V_t by angle δ

✗ 2. E_f lags V_t by angle δ

✗ 3. E_f and V_t are in phase

✗ 4. E_f and V_t are in phase opposition

Question ID : **630680246432**
Option 1 ID : **630680956015**
Option 2 ID : **630680956016**
Option 3 ID : **630680956017**
Option 4 ID : **630680956018**
Status : **Answered**
Chosen Option : **1**

Q.15 A single-core cable has core diameter of 2.5 cm and insulation thickness of 1.25 cm. The resistivity of the insulation is 4.5×10^{14} Ω-cm. Find the insulation resistance per km.

Ans

✗ 1. 355 Ω

✗ 2. 405 Ω

✗ 3. 515 Ω

✓ 4. 495 Ω

Question ID : **630680246438**
Option 1 ID : **630680956039**
Option 2 ID : **630680956040**
Option 3 ID : **630680956042**
Option 4 ID : **630680956041**
Status : **Answered**
Chosen Option : **2**

Q.16 A coil of 300 turns, wound on a core of non-magnetic material, has 10 mH of inductance. Find the flux produced by 5A of current.

Ans

✗ 1. 2.1648 mWb

✗ 2. 1.4372 mWb

✓ 3. 0.1667 mWb

✗ 4. 0.7681 mWb

Question ID : **630680246421**
Option 1 ID : **630680955971**
Option 2 ID : **630680955972**
Option 3 ID : **630680955974**
Option 4 ID : **630680955973**
Status : **Answered**
Chosen Option : **3**

Q.17 The total angle occupied by the phase winding along the armature periphery is called _____.

Ans

✔ 1. phase spread

✗ 2. breadth factor

✗ 3. distributed spread

✗ 4. armature spread

Question ID : **630680246427**
Option 1 ID : **630680955997**
Option 2 ID : **630680955995**
Option 3 ID : **630680955998**
Option 4 ID : **630680955996**
Status : **Answered**
Chosen Option : **1**

Q.18 To provide discriminative protection without employing pilot wires in a transmission line, which of the following protections is best suited?

Ans

✗ 1. Voltage protection

✔ 2. Distance or impedance protection

✗ 3. Feeder protection

✗ 4. Current protection

Question ID : **630680246457**
Option 1 ID : **630680956117**
Option 2 ID : **630680956115**
Option 3 ID : **630680956118**
Option 4 ID : **630680956116**
Status : **Answered**
Chosen Option : **2**

Q.19 A single-phase overhead line consists of two conductors of diameter 2 cm with a spacing of 1.5 m between their centres. Determine the line voltage for commencing of corona. Dielectric strength of air is 21 kV/cm.

Ans

✗ 1. 142.65 kV

✗ 2. 220 kV

✓ 3. 105.72 kV

✗ 4. 154.87 kV

Question ID : **630680246453**
Option 1 ID : **630680956100**
Option 2 ID : **630680956102**
Option 3 ID : **630680956099**
Option 4 ID : **630680956101**
Status : **Answered**
Chosen Option : **1**

Q.20 In a synchronous machine, the induced EMF phasor:

Ans

✗ 1. leads the flux phasor by 90°.

✗ 2. is in phase opposition to the flux phasor.

✗ 3. is in phase with the flux phasor.

✓ 4. lags behind the flux phasor by 90°.

Question ID : **630680246431**
Option 1 ID : **630680956011**
Option 2 ID : **630680956014**
Option 3 ID : **630680956013**
Option 4 ID : **630680956012**
Status : **Answered**
Chosen Option : **4**

Q.21 The most appropriate operating speeds (in rpm) of generators used in thermal, nuclear and hydroelectric power plants are _____.

Ans

✗ 1. 2000, 1500 and 750, respectively

✗ 2. 3000, 15,000 and 750, respectively

✓ 3. 3000, 3000 and 300, respectively

✗ 4. 1500, 1500 and 600, respectively

Question ID : **630680246437**
Option 1 ID : **630680956035**
Option 2 ID : **630680956038**
Option 3 ID : **630680956037**
Option 4 ID : **630680956036**
Status : **Answered**
Chosen Option : **3**

Q.22 One coulomb is approximately equal to _____.

Ans

✗ 1. 62.4×10^{16} electrons

✗ 2. 624×10^{18} electrons

✓ 3. 624×10^{16} electrons

✗ 4. 62.4×10^{18} electrons

Question ID : **630680246413**
Option 1 ID : **630680955939**
Option 2 ID : **630680955942**
Option 3 ID : **630680955940**
Option 4 ID : **630680955941**
Status : **Answered**
Chosen Option : **3**

Q.23 In a hydroelectric power station, which type of alternator is used?

Ans

1. ✗ Steam turbine alternator
2. ✓ Salient pole alternator
3. ✗ Non-salient pole alternator
4. ✗ Turbo generator

Question ID : **630680246436**
Option 1 ID : **630680956031**
Option 2 ID : **630680956032**
Option 3 ID : **630680956034**
Option 4 ID : **630680956033**
Status : **Answered**
Chosen Option : **2**

Q.24 Which of the following is the unit of energy meter constant?

Ans

1. ✗ It is a unit-less quantity.
2. ✓ Number of revolutions/KWh.
3. ✗ KWh/Number of revolutions.
4. ✗ KWh.

Question ID : **630680246424**
Option 1 ID : **630680955983**
Option 2 ID : **630680955986**
Option 3 ID : **630680955985**
Option 4 ID : **630680955984**
Status : **Answered**
Chosen Option : **1**

Q.25 What will be the type of the semiconductor device if a current is found to pass through the circuit when the device is connected in series with a battery and a resistance?

(Consider that the current drops to almost zero when the polarity of the battery is reversed.)

Ans

✗ 1. An n-type semiconductor

✗ 2. An intrinsic semiconductor

✓ 3. A p-n junction

✗ 4. A p-type semiconductor

Question ID : **630680246447**
Option 1 ID : **630680956077**
Option 2 ID : **630680956075**
Option 3 ID : **630680956078**
Option 4 ID : **630680956076**
Status : **Answered**
Chosen Option : **2**

Q.26 Two single-phase furnaces A and B are supplied at 100 V by means of a Scott-connected transformer combination from a 3-phase 6600 V system. The voltage of the furnace A is leading. Find the furnace currents when the furnace A takes 400 kW at 0.707 PF lagging and the furnace B takes 800 kW at unity PF.

Ans

✗ 1. 4367 A, 6488 A

✓ 2. 5658 A, 8000 A

✗ 3. 5165 A, 9259 A

✗ 4. 5218 A, 8500 A

Question ID : **630680246430**
Option 1 ID : **630680956007**
Option 2 ID : **630680956009**
Option 3 ID : **630680956008**
Option 4 ID : **630680956010**
Status : **Answered**
Chosen Option : **2**

Q.27 A 50 A, 230 V meter on full-load test makes 61 revolutions in 37 seconds. If the normal disc speed is 500 revolutions/kWh, find the percentage error.

Ans

✗ 1. 8.43%

✗ 2. 5.66%

✗ 3. 1.89%

✓ 4. 3.22%

Question ID : **630680246425**
Option 1 ID : **630680955987**
Option 2 ID : **630680955988**
Option 3 ID : **630680955990**
Option 4 ID : **630680955989**
Status : **Answered**
Chosen Option : **3**

Q.28 The conductivity of silicon is:

Ans

✗ 1. about 10^{11} times greater than that of copper.

✓ 2. about 10^{11} times smaller than that of copper.

✗ 3. about 10^{8} times greater than that of copper.

✗ 4. about 10^{8} times smaller than that of copper.

Question ID : **630680246444**
Option 1 ID : **630680956063**
Option 2 ID : **630680956064**
Option 3 ID : **630680956065**
Option 4 ID : **630680956066**
Status : **Answered**
Chosen Option : **2**

Q.29 For voltage 'V' and surge impedance 'Z', the surge impedance loading of the line is _____.

Ans

✗ 1. $2V^2Z$

✗ 2. V^2Z

✗ 3. $2V^2/Z$

✓ 4. V^2/Z

Question ID : **630680246459**
Option 1 ID : **630680956125**
Option 2 ID : **630680956123**
Option 3 ID : **630680956126**
Option 4 ID : **630680956124**
Status : **Answered**
Chosen Option : **4**

Q.30 A straight, long conductor of length 1 m, carrying 60 A of current, is placed at right angles to a uniform magnetic field of strength 2.5 T. Determine the mechanical force acting on the conductor.

Ans

✓ 1. 150 N

✗ 2. 200 N

✗ 3. 50 N

✗ 4. 100 N

Question ID : **630680246412**
Option 1 ID : **630680955937**
Option 2 ID : **630680955938**
Option 3 ID : **630680955935**
Option 4 ID : **630680955936**
Status : **Answered**
Chosen Option : **1**

Q.31 Switching impulse tests are applicable for rated voltages above:

Ans

✗ 1. 110 kV

✗ 2. 33 kV

✗ 3. 66 kV

✓ 4. 220 kV

Question ID : **630680246456**
Option 1 ID : **630680956113**
Option 2 ID : **630680956111**
Option 3 ID : **630680956112**
Option 4 ID : **630680956114**
Status : **Answered**
Chosen Option : **3**

Q.32 Regarding an ideal operational amplifier, which of the following statements is INCORRECT?

Ans

✗ 1. The gain is infinite.

✗ 2. The input resistance is infinite.

✗ 3. The input current is zero.

✓ 4. The output resistance is infinite.

Question ID : **630680246448**
Option 1 ID : **630680956079**
Option 2 ID : **630680956080**
Option 3 ID : **630680956081**
Option 4 ID : **630680956082**
Status : **Answered**
Chosen Option : **4**

Q.33 String efficiency is the ratio between _____.

Ans

✔ 1. the flash-over voltage of string of n units and n times of the flash-over voltage of 1 unit

✗ 2. the flash-over voltage of string of 1 unit and n times of the flash-over voltage of 1 unit

✗ 3. n times of the flash-over voltage of 1 unit and the flash-over voltage of string of 1 unit

✗ 4. n times of the flash-over voltage of 1 unit and the flash-over voltage of string of n units

Question ID : **630680246454**
Option 1 ID : **630680956103**
Option 2 ID : **630680956105**
Option 3 ID : **630680956106**
Option 4 ID : **630680956104**
Status : **Answered**
Chosen Option : **2**

Q.34 What will happen to the electric potential energy of two charges when separation between these charges is increased?

Ans

✔ 1. It may increase or decrease.

✗ 2. It will increase.

✗ 3. It will remain the same.

✗ 4. It will decrease.

Question ID : **630680246414**
Option 1 ID : **630680955946**
Option 2 ID : **630680955943**
Option 3 ID : **630680955945**
Option 4 ID : **630680955944**
Status : **Answered**
Chosen Option : **2**

Q.35 Which of the following causes insulator failure?

Ans

✗ 1. Switching

✗ 2. Lightning

✓ 3. All of the given options

✗ 4. Stress

Question ID : **630680246455**
Option 1 ID : **630680956108**
Option 2 ID : **630680956109**
Option 3 ID : **630680956110**
Option 4 ID : **630680956107**
Status : **Answered**
Chosen Option : **3**

Q.36 For a control system, if blocks $G_1(s)$ and $G_2(s)$ are connected in cascade, then which of the following options will represent the equivalent transfer function?

Ans

✗ 1. $G_1(s) + G_2(s)$

✗ 2. $G_1(s) \ / \ G_2(s)$

✓ 3. $G_1(s) \times G_2(s)$

✗ 4. $G_1(s) - G_2(s)$

Question ID : **630680246449**
Option 1 ID : **630680956083**
Option 2 ID : **630680956086**
Option 3 ID : **630680956085**
Option 4 ID : **630680956084**
Status : **Answered**
Chosen Option : **3**

Q.37 The step-up sub-stations are associated with a:

Ans

✗ 1. all of the given options.

✓ 2. generating station.

✗ 3. transmission station.

✗ 4. distribution station.

Question ID : **630680246440**
Option 1 ID : **630680956050**
Option 2 ID : **630680956049**
Option 3 ID : **630680956047**
Option 4 ID : **630680956048**
Status : **Answered**
Chosen Option : **2**

Q.38 A positively charged particle projected towards the east is deflected towards the north by a magnetic field. The field may be:

Ans

✓ 1. downward

✗ 2. upward

✗ 3. towards the east

✗ 4. absent

Question ID : **630680246420**
Option 1 ID : **630680955968**
Option 2 ID : **630680955967**
Option 3 ID : **630680955969**
Option 4 ID : **630680955970**
Status : **Answered**
Chosen Option : **2**

Q.39 Which of the following instruments works only in AC systems?

Ans

✔ 1. Induction type instrument.

✗ 2. MI type instrument.

✗ 3. PMMC type instrument.

✗ 4. Dynamometer type instrument.

Question ID : **630680246423**
Option 1 ID : **630680955981**
Option 2 ID : **630680955979**
Option 3 ID : **630680955980**
Option 4 ID : **630680955982**
Status : **Answered**
Chosen Option : **1**

Q.40 To compensate the Ferranti effect in transmission lines, _____ are switched on at the receiving-end bus of the transmission system in each phase.

Ans

✗ 1. series capacitors

✗ 2. series inductors

✔ 3. shunt inductors

✗ 4. shunt capacitors

Question ID : **630680246458**
Option 1 ID : **630680956119**
Option 2 ID : **630680956121**
Option 3 ID : **630680956122**
Option 4 ID : **630680956120**
Status : **Answered**
Chosen Option : **4**

Q.41 Frequency error in a moving-iron instrument can be compensated by connecting a _____.

Ans

✗ 1. suitable capacitor 'C' in series with a swamping resistor 'R'

✗ 2. suitable inductor 'L' in series with a swamping resistor 'R'

✓ 3. suitable capacitor 'C' in parallel with a swamping resistor 'R'

✗ 4. suitable inductor 'L' in parallel with a swamping resistor 'R'

Question ID : **630680246426**
Option 1 ID : **630680955994**
Option 2 ID : **630680955993**
Option 3 ID : **630680955992**
Option 4 ID : **630680955991**
Status : **Answered**
Chosen Option : **1**

Q.42 What is the value of a solid angle subtended by a point in all the directions in space?

Ans

✗ 1. 3π steradian

✗ 2. π steradian

✓ 3. 4π steradian

✗ 4. 2π steradian

Question ID : **630680246443**
Option 1 ID : **630680956061**
Option 2 ID : **630680956059**
Option 3 ID : **630680956062**
Option 4 ID : **630680956060**
Status : **Answered**
Chosen Option : **4**

Q.43 Before and after the source is replaced in an electrical circuit, the ratio of response to excitation for the reciprocity theorem _____.

Ans

✗ 1. may be the same

✗ 2. must be different

✓ 3. must be the same

✗ 4. may be different

Question ID : **630680246419**
Option 1 ID : **630680955965**
Option 2 ID : **630680955964**
Option 3 ID : **630680955963**
Option 4 ID : **630680955966**
Status : **Answered**
Chosen Option : **3**

Q.44 Semiconductors with an impurity doped into them are called:

Ans

✗ 1. impure semiconductors.

✗ 2. pure semiconductors.

✗ 3. intrinsic semiconductors.

✓ 4. extrinsic semiconductors.

Question ID : **630680246445**
Option 1 ID : **630680956069**
Option 2 ID : **630680956070**
Option 3 ID : **630680956067**
Option 4 ID : **630680956068**
Status : **Answered**
Chosen Option : **4**

Q.45 Suppose that a synchronous motor is operating on no load at unity power factor. What will be the magnitude of power factor if the field current is increased?

Ans

✗ 1. Leading and the current will decrease.

✗ 2. Lagging and the current will decrease.

✗ 3. Lagging and the current will increase.

✓ 4. Leading and the current will increase.

Question ID : **630680246434**
Option 1 ID : **630680956023**
Option 2 ID : **630680956024**
Option 3 ID : **630680956026**
Option 4 ID : **630680956025**
Status : **Answered**
Chosen Option : **1**

Q.46 A 25 HP, 250 V DC series motor has 0.1 Ω of armature resistance, 0.05 Ω of field resistance and 3 V of brush contact drop. When the line current is 80 A, the speed is 600 rpm. Find the speed when the line current is 100 A.

Ans

✗ 1. 524.7 rpm

✗ 2. 567.4 rpm

✓ 3. 473. 9 rpm

✗ 4. 429.63 rpm

Question ID : **630680246429**
Option 1 ID : **630680956004**
Option 2 ID : **630680956003**
Option 3 ID : **630680956005**
Option 4 ID : **630680956006**
Status : **Answered**
Chosen Option : **2**

Q.47 An over-current relay has a current setting of 150% and a time multiplier setting of 0.5. The relay is connected in the circuit through a CT with a ratio 500 : 5 A. Calculate the plug setting multiplier if the circuit carries 6000 A of fault current.

Ans

✗ 1. 10

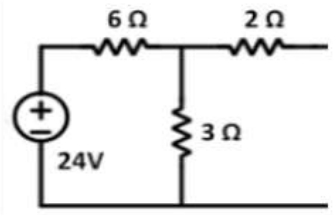
✓ 2. 8

✗ 3. 4

✗ 4. 6

Question ID : **630680246442**
Option 1 ID : **630680956058**
Option 2 ID : **630680956057**
Option 3 ID : **630680956055**
Option 4 ID : **630680956056**
Status : **Answered**
Chosen Option : **2**

Q.48



What is the Norton resistance across the open-circuit terminals in the network shown above?

Ans

✗ 1. 6 Ω

✗ 2. 8 Ω

✗ 3. 2 Ω

✓ 4. 4 Ω

Question ID : **630680246418**
Option 1 ID : **630680955961**
Option 2 ID : **630680955962**
Option 3 ID : **630680955959**
Option 4 ID : **630680955960**
Status : **Answered**
Chosen Option : **4**

Q.49 Which of the following methods provides the highest accuracy for high voltage measurement?

Ans

✗ 1. Rod gaps

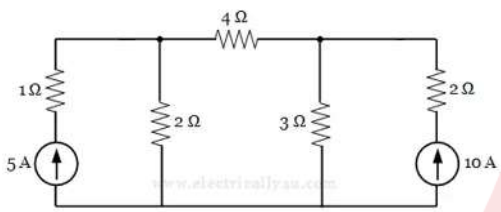
✗ 2. All the given methods provide the same accuracy

✓ 3. Sphere gaps

✗ 4. Field gaps

Question ID : **630680246451**
Option 1 ID : **630680956091**
Option 2 ID : **630680956094**
Option 3 ID : **630680956093**
Option 4 ID : **630680956092**
Status : **Answered**
Chosen Option : **2**

Q.50



What will be the magnitude of the current flowing through the 4 Ω resistor shown in the above circuit?

Ans

✗ 1. 5.24 A

✗ 2. 4.24 A

✗ 3. 3.24 A

✓ 4. 2.24 A

Question ID : **630680246416**
Option 1 ID : **630680955954**
Option 2 ID : **630680955953**
Option 3 ID : **630680955952**
Option 4 ID : **630680955951**
Status : **Answered**
Chosen Option : **1**