UPRVUNL

Previous Year Paper
TG 2 (Electrician)
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(Shift 2)

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Subject	Technician Grade II (Electrician)

Section : **Domain Knowledge**

Q.1 **State whether the given facts about synchronous motor and induction motor are true or false.**

I. A synchronous motor can be operated over a wide range of power factors.
II. An induction motor always runs with a leading power factor.

Ans
✗ 1. I. false, II. false
✗ 2. I. false, II. true
✗ 3. I. true, II. true
✓ 4. I. true, II. false

Question ID : **54062615934**
Status : **Answered**
Chosen Option : **4**

Q.2 **The EMFs of phase 'b' lag behind that of 'a' by 120° and that of 'c' lag behind that of 'b' by 120°. The phase sequence is:**

Ans
✓ 1. a b c
✗ 2. a c b
✗ 3. b a c
✗ 4. c b a

Question ID : **54062615834**
Status : **Answered**
Chosen Option : **2**

Q.3 **निम्न में से कौन-सा लैंप आंतरिक प्रकाश व्यवस्था के लिए मुख्यतः उपयोग नहीं किया जाता है?**

Ans
✗ 1. तापदीप्त लैंप (Incandescent lamp)
✗ 2. फ्लोरोसेंट लैंप (Fluorescent lamp)
✓ 3. निम्न दाब वाले हाइड्रोजन लैंप (Low pressure hydrogen lamp)
✗ 4. मेटल हैलाइड लैंप (Metal halide lamp)

Question ID : **54062615943**
Status : **Answered**
Chosen Option : **4**

Q.4 **Which of the following categories of instruments indicates the magnitude of an electrical quantity at the time when it is being measured?**

Ans
- ✔ 1. Indicating
- ✘ 2. Static
- ✘ 3. Recording
- ✘ 4. Integrating

Question ID : **54062615877**
Status : **Answered**
Chosen Option : **1**

Q.5 **In oil circuit breakers, the heat of the arc evaporates the surrounding oil and dissociates it into a substantial volume of gases at high pressure. Which of the following gases is NOT produced?**

Ans
- ✘ 1. Ethylene
- ✔ 2. Carbon dioxide
- ✘ 3. Methane
- ✘ 4. Hydrogen

Question ID : **54062615896**
Status : **Answered**
Chosen Option : **1**

Q.6 **In which of the following categories of instruments, the signals vary in discrete steps and take on a finite number of different values?**

Ans
- ✔ 1. Digital instruments
- ✘ 2. Dynamic instruments
- ✘ 3. Static instruments
- ✘ 4. Analog instruments

Question ID : **54062615875**
Status : **Answered**
Chosen Option : **4**

Q.7 **If the conductors or the coil remains stationary and the flux linked with it is changed by simply increasing or decreasing the current producing this flux, then this is the case of:**

Ans
- ✔ 1. statically induced EMF
- ✘ 2. operating principle of AC servo motor
- ✘ 3. dynamically induced EMF
- ✘ 4. none of the given options

Question ID : **54062615822**
Status : **Answered**
Chosen Option : **3**

Q.8 **The conductors of an underground cable system are separated by a dielectric of _____ much higher than that of air.**

Ans
- ✔ 1. permittivity
- ✘ 2. electrostatic current
- ✘ 3. resistivity
- ✘ 4. conductivity

Question ID : **54062615925**
Status : **Answered**
Chosen Option : **1**

Q.9 **One important requirement of a distribution system is that _____ at consumers terminal should be as low as possible.**

Ans
- ✘ 1. resistance variations
- ✔ 2. voltage variations
- ✘ 3. cost variations
- ✘ 4. connectivity variations

Question ID : **54062615886**
Status : **Answered**
Chosen Option : **2**

Q.10 **In a three-phase star-connected system, the voltage induced in each winding is called:**

Ans
- ✘ 1. residual voltage
- ✘ 2. potential voltage
- ✘ 3. line voltage
- ✔ 4. phase voltage

Question ID : **54062615838**
Status : **Answered**
Chosen Option : **3**

Q.11 **The rating of a transformer is always expressed in:**

Ans
- ✘ 1. V/Ah
- ✔ 2. kVA
- ✘ 3. kVAR
- ✘ 4. Wh

Question ID : **54062615865**
Status : **Answered**
Chosen Option : **2**

Q.12 Which statement is correct according to Faraday's first law of electromagnetic induction?

Ans

✔ 1. whenever the magnetic flux is linked with circuit changes, an EMF is always induced in it

✘ 2. whenever the electric field is linked with change in circuit, an EMF is always induced in it

✘ 3. whenever the magnetic flux is linked with circuit changes, susceptibility changes proportionally

✘ 4. whenever the magnetic flux is linked with circuit changes, a current is always induced in it

Question ID : **54062615818**
Status : **Answered**
Chosen Option : **1**

Q.13 Which of the following is NOT an example of alkaline batteries?

Ans

✘ 1. Silver-zinc battery

✘ 2. Nickel-cadmium battery

✘ 3. Nickel-iron battery

✔ 4. Lead-acid battery

Question ID : **54062615809**
Status : **Answered**
Chosen Option : **4**

Q.14 Which of the following is NOT a desired property of insulating materials used for underground cables?

Ans

✔ 1. Low dielectric strength

✘ 2. High insulation resistance

✘ 3. High dielectric strength

✘ 4. High mechanical strength

Question ID : **54062615916**
Status : **Answered**
Chosen Option : **1**

Q.15 Tungsten is used to make filaments because:

Ans

✔ 1. it has a very high melting point

✘ 2. it is ductile in nature

✘ 3. it is a bad conductor of heat and electricity

✘ 4. it has a very low melting point

Question ID : **54062615805**
Status : **Answered**
Chosen Option : **1**

Q.16 **Select the appropriate option to complete the given analogy.**

Electric circuit : EMF :: Magnetic circuit : ?

Ans
- ✗ 1. Magnetic flux
- ✓ 2. Magnetomotive force
- ✗ 3. Electrostatic force
- ✗ 4. Reluctance

Question ID : **54062615814**
Status : **Answered**
Chosen Option : **2**

Q.17 **The filament of a 240 V metal-filament lamp is to be constructed from a wire having a diameter of 0.02 mm. Find the resistance if the lamp is to dissipate 60 watts at a filament temperature of 2420°C.**

Ans
- ✗ 1. 480 Ω
- ✗ 2. 96 Ω
- ✗ 3. 48 Ω
- ✓ 4. 960 Ω

Question ID : **54062615796**
Status : **Answered**
Chosen Option : **4**

Q.18 **The process of achieving uniformity in the dielectric stress by using layers of different dielectrics is known as:**

Ans
- ✗ 1. inter-sheath grading
- ✓ 2. capacitance grading
- ✗ 3. inductance grading
- ✗ 4. resistance grading

Question ID : **54062615923**
Status : **Answered**
Chosen Option : **1**

Q.19 **Which of the following is NOT a laying in structure in the draw-in-laying system for underground cables?**

Ans
- ✗ 1. Duct of stone or cast iron
- ✓ 2. Duct of aluminium
- ✗ 3. Conduit
- ✗ 4. Duct of glazed glass

Question ID : **54062615921**
Status : **Answered**
Chosen Option : **4**

Q.20 **A transformer is a device that:**

Ans

✗ 1. transfers electric power from one current level to another without a change of frequency

✗ 2. transfers magnetic energy from one circuit to another without a change of frequency

✓ 3. transfers electric power from one circuit to another without a change of frequency

✗ 4. transfers mechanical power from one circuit to another without a change of frequency

Question ID : **54062615858**
Status : **Answered**
Chosen Option : **3**

Q.21 **As far as distribution systems are concerned, if the declared voltage is 230 V, then the highest voltage of the consumer should NOT exceed _____while the lowest voltage of the consumer should NOT be less than _____.**

Ans

✗ 1. 258 V; 202 V

✗ 2. 235 V; 225 V

✗ 3. 272 V; 200 V

✓ 4. 253 V; 207 V

Question ID : **54062615884**
Status : **Answered**
Chosen Option : **2**

Q.22 **In case of underground cables, the screened cables are used for voltages:**

Ans

✗ 1. below 66 kV

✗ 2. beyond 66 kV

✓ 3. from 22 kV to 66 kV

✗ 4. up to 11 kV

Question ID : **54062615919**
Status : **Answered**
Chosen Option : **1**

Q.23 **_____ से अधिक वोल्टेज के लिए, स्विचगियर उपस्कर को बाहर लगाया जाता है।**

Ans

✗ 1. 33 kV

✗ 2. 11 kV

✓ 3. 66 kV

✗ 4. 44 kV

Question ID : **54062615904**
Status : **Answered**
Chosen Option : **2**

Q.24 **_____, the phase sequence at the load can be reversed though sequence of 3-phase supply remains the same.**

Ans
- ✔ 1. By interchanging any two of the three cables
- ✘ 2. By interacting any two of the three cables
- ✘ 3. By interchanging load
- ✘ 4. By interchanging all three cables

Question ID : **54062615835**
Status : **Answered**
Chosen Option : **1**

Q.25 **In case of a three-phase system, although the distribution of currents between the three lines is continuously changing, yet at any instant the algebraic sum of the instantaneous values of the three currents is:**

Ans
- ✘ 1. infinite
- ✔ 2. zero
- ✘ 3. I_m
- ✘ 4. one

Question ID : **54062615837**
Status : **Answered**
Chosen Option : **2**

Q.26 **Which law states that the illumination of a surface receiving its flux from a point source is inversely proportional to the square of the distance between the surface and the source?**

Ans
- ✔ 1. Inverse square law
- ✘ 2. Lambert's sine law
- ✘ 3. Lambert's cosine law
- ✘ 4. Inverse cosine law

Question ID : **54062615937**
Status : **Answered**
Chosen Option : **1**

Q.27 **The essential components of a UPS system include:**

Ans
- ✘ 1. a rectifier and thyristor-controlled battery charger
- ✘ 2. an inverter
- ✔ 3. All of the given options
- ✘ 4. a standby battery

Question ID : **54062615798**
Status : **Answered**
Chosen Option : **3**

Q.28 **The overhead line conductors are supported on the poles. These line conductors must be properly _____ from supports.**

Ans
- ✘ 1. separated
- ✔ 2. insulated
- ✘ 3. earthed
- ✘ 4. grounded

Question ID : **54062615891**
Status : **Answered**
Chosen Option : **2**

Q.29 **A _____ is a static piece of apparatus by means of which electric power in one circuit is transformed into electric power of the same frequency in another circuit.**

Ans

✔ 1. transformer

✘ 2. converter

✘ 3. chopper

✘ 4. rectifier

Question ID : **54062615855**
Status : **Answered**
Chosen Option : **1**

Q.30 The earth's magnetic field at the equator is approximately 4×10^{-5} T. Estimate the earth's dipole moment. Take the radius of the earth 6.4×10^{6} m.

Ans

✘ 1. $1.05 \times 10^{23} \text{A m}^2$

✘ 2. $1.05 \times 10^{20} \text{A m}^2$

✔ 3. $8.92 \times 10^{23} \text{A m}^2$

✘ 4. $8.92 \times 10^{20} \text{A m}^2$

Question ID : **54062615869**
Status : **Not Answered**
Chosen Option : **--**

Q.31 **The time period of a sinusoidal waveform with the frequency of 150 Hz is:**

Ans

✔ 1. 0.0067 sec

✘ 2. 6.7 sec

✘ 3. 0.067 sec

✘ 4. 0.67 sec

Question ID : **54062615842**
Status : **Answered**
Chosen Option : **1**

Q.32 **In three-phase star connected system, the voltage available between any pair of terminals is called:**

Ans

✘ 1. residual voltage

✘ 2. phase voltage

✘ 3. potential voltage

✔ 4. line voltage

Question ID : **54062615839**
Status : **Answered**
Chosen Option : **2**

Q.33 **For applications such as electric locomotives and steel rolling mills, which motor should be used?**

Ans

✘ 1. Squirrel cage induction motor

✘ 2. Slip-ring induction motor

✔ 3. DC series motor

✘ 4. DC shunt motor

Question ID : **54062615868**
Status : **Answered**
Chosen Option : **3**

Q.34 **In a transformer, if the primary coil has 3 loops and the secondary coil has 30, then the voltage is:**

Ans
- ✗ 1. 10 V
- ✗ 2. 3 V
- ✓ 3. stepped up 10 times
- ✗ 4. stepped down 10 times

Question ID : **54062615860**
Status : **Answered**
Chosen Option : **4**

Q.35 **The insulator material in overhead lines should be _____ and free from impurities and cracks; otherwise the permittivity will be low.**

Ans
- ✓ 1. non-porous
- ✗ 2. rigid
- ✗ 3. porous
- ✗ 4. fragile

Question ID : **54062615893**
Status : **Answered**
Chosen Option : **2**

Q.36 **Which of the following categories of instruments have high accuracy and high speed of operation?**

Ans
- ✓ 1. Digital instruments
- ✗ 2. Direct current analog instruments
- ✗ 3. Analog instruments
- ✗ 4. Alternating current analog instrument

Question ID : **54062615873**
Status : **Answered**
Chosen Option : **1**

Q.37 **Which of the following does NOT indicate the advantage(s) of mechanical instruments used for measurements?**

Ans
- ✗ 1. No external power supply required for operation
- ✓ 2. Doesn't cause Noise pollution
- ✗ 3. Simple in design and easy to use
- ✗ 4. Reliable and accurate for measurement of stable and time-invariant quantity

Question ID : **54062615874**
Status : **Answered**
Chosen Option : **2**

Q.38 **In case of the rheostatic speed control method for DC motor, the series resistor is inserted in:**

Ans
- ✓ 1. armature winding
- ✗ 2. pole shoes
- ✗ 3. field winding
- ✗ 4. carbon brushes

Question ID : **54062615871**
Status : **Answered**
Chosen Option : **1**

Q.39 **The temperature at which the vibrations of the molecular magnets become random and out of alignment so as to reduce the magnetic strength to zero is called:**

Ans

✗ 1. avalanche temperature

✓ 2. curie point

✗ 3. avalanche breakdown

✗ 4. critical breakdown

Question ID : **54062615813**
Status : **Answered**
Chosen Option : **2**

Q.40 The V_{RN} of the symmetrical star connection system is $230\angle 30°$. The phase sequence is RYB. Find V_{RY}.

Ans

✓ 1. $398.37\angle 60°$

✗ 2. $230\angle -90°$

✗ 3. $398.37\angle -30°$

✗ 4. $230\angle 90°$

Question ID : **54062615850**
Status : **Answered**
Chosen Option : **4**

Q.41 **A _____ consists of two inductive coils that are electrically separated, but magnetically linked, through a path of low reluctance.**

Ans

✓ 1. transformer

✗ 2. rectifier

✗ 3. half bridge converter

✗ 4. chopper

Question ID : **54062615857**
Status : **Answered**
Chosen Option : **1**

Q.42 **In case of underground cables, the belted cables are used for voltages:**

Ans

✗ 1. below 66 kV

✓ 2. up to 11 kV

✗ 3. beyond 66 kV

✗ 4. from 22 kV to 66 kV

Question ID : **54062615918**
Status : **Answered**
Chosen Option : **2**

Q.43 **सिंगल-टर्न प्राइमरी युक्त एक 1000/5A धारा ट्रांसफार्मर में 200 सेकंडरी टर्न हैं। स्टेप-डाउन करंट अनुपात ज्ञात करें।**

Ans

✗ 1. 5 : 100

✓ 2. 200 : 1

✗ 3. 1 : 200

✗ 4. 100 : 5

Question ID : **54062615831**
Status : **Answered**
Chosen Option : **3**

Q.44 **The shell type transformer core is made up of:**

Ans

✔ 1. high grade silicon steel

✘ 2. high grade copper laminations

✘ 3. asbestos stampings

✘ 4. porcelain sheet impregnated with varnish

Question ID : **54062615859**
Status : **Answered**
Chosen Option : **1**

Q.45 **The pin–type insulators are used for the transmission and distribution of electrical power at voltages up to _____.**

Ans

✘ 1. 11 kV

✘ 2. 66 kV

✘ 3. 88 kV

✔ 4. 33 kV

Question ID : **54062615889**
Status : **Answered**
Chosen Option : **1**

Q.46 **Which of the following is the main characteristic of a parallel resistive circuit?**

Ans

✘ 1. Same current flows through all parts of the circuit

✘ 2. Resistances are additive

✘ 3. Different resistors have their individual voltage drops

✔ 4. Conductances are additive

Question ID : **54062615797**
Status : **Answered**
Chosen Option : **4**

Q.47 **Alnico, nickel, cobalt and copper are:**

Ans

✘ 1. Paramagnetic substances

✘ 2. Electrostatic substances

✘ 3. Soft ferromagnetic substances

✔ 4. Hard ferromagnetic substances

Question ID : **54062615930**
Status : **Answered**
Chosen Option : **4**

Q.48 **In the magnetic meridian of a certain place, the horizontal component of the earth's magnetic field is 0.26G and the dip angle is 60°. What is the magnetic field of the earth at this location?**

Ans

✘ 1. 0.60 G

✘ 2. 1 G

✘ 3. 0.26 G

✔ 4. 0.52 G

Question ID : **54062615882**
Status : **Not Answered**
Chosen Option : **--**

Q.49 **In a three phase system:**

Ans

✗ 1. the three coils have only one EMF induced in them, which is similar in all respect except that coils are 120° out of time phase with one another

✗ 2. the six coils have three EMFs induced in them, which are similar in all respects except that they are 60° out of time phase with one another

✓ 3. the three coils have three EMFs induced in them, which are similar in all respects except that they are 120° out of time phase with one another

✗ 4. the three coils have three EMFs induced in them, which are similar in all respects except that they are 360° out of time phase with one another

Question ID : **54062615832**
Status : **Answered**
Chosen Option : **1**

Q.50 In nickel-cadmium batteries, the positive plate consists of which of the following reactive materials?

Ans

✓ 1. $Ni(OH)_4$

✗ 2. $NiOH_4$

✗ 3. KOH

✗ 4. $Cd(OH)_2$

Question ID : **54062615810**
Status : **Answered**
Chosen Option : **3**

Q.51 **Aluminium, sodium, calcium, oxygen (at STP) and copper chloride are examples of _____ materials.**

Ans

✓ 1. Paramagnetic

✗ 2. Electrostatic

✗ 3. Insulating

✗ 4. Ferromagnetic

Question ID : **54062615928**
Status : **Answered**
Chosen Option : **1**

Q.52 **An underground cable has one or more _____ depending upon the type of service for which it is intended.**

Ans

✗ 1. switches

✗ 2. Leakages for water to come in

✓ 3. cores

✗ 4. steel casings

Question ID : **54062615911**
Status : **Answered**
Chosen Option : **3**

Q.53 The _____ is the commonly used material for insulators of overhead line is.

Ans
✗ 1. fibre
✗ 2. lead
✓ 3. porcelain
✗ 4. tungsten

Question ID : **54062615890**
Status : **Answered**
Chosen Option : **3**

Q.54 The fault that gives rise to fault current with 120° displacement is which of the following types of fault?

Ans
✗ 1. Asymmetrical fault
✗ 2. Frequency and speed fault
✓ 3. Symmetrical fault
✗ 4. Phase fault

Question ID : **54062615909**
Status : **Not Answered**
Chosen Option : **--**

Q.55 A lamp giving out 1200 lm in all directions is suspended 8 m above the working plane. Calculate the illumination at a point on the working plane 6 m away from the foot of the lamp.

Ans
✗ 1. $1.232\ \text{lm/m}^2$
✓ 2. $0.76\ \text{lm/m}^2$
✗ 3. $1.858\ \text{lm/m}^2$
✗ 4. $0.5 \times 10^3\ \text{lm/m}^2$

Question ID : **54062615939**
Status : **Not Answered**
Chosen Option : **--**

Q.56 When all the three conductors of a 3-phase line are brought together simultaneously into a short-circuit condition, it leads to which of the following types of fault?

Ans
✗ 1. Phase fault
✓ 2. Symmetrical fault
✗ 3. Frequency and speed fault
✗ 4. Asymmetrical fault

Question ID : **54062615910**
Status : **Not Answered**
Chosen Option : **--**

Q.57 Which of the following does NOT represent connection schemes of a distribution system?

Ans
✗ 1. Radial system
✗ 2. Ring main system
✗ 3. Interconnected system
✓ 4. Star-topology

Question ID : **54062615883**
Status : **Answered**
Chosen Option : **4**

Q.58 When balanced, the Wheatstone bridge can be analysed simply as:

Ans

✗ 1. two parallel strings in series

✗ 2. two parallel strings in parallel

✗ 3. two series strings in series

✓ 4. two series strings in parallel

Question ID : **54062615802**
Status : **Answered**
Chosen Option : **4**

Q.59 A current transformer enables heavy alternating current to be measured with the help of:

Ans

✗ 1. standard 100A range DC ammeter

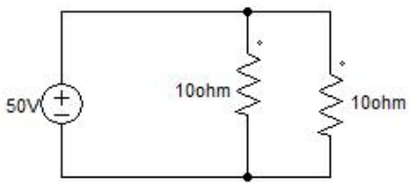
✗ 2. standard DC potentiometer

✗ 3. Standard 230V 5A indicator

✓ 4. standard 5A range AC ammeter

Question ID : **54062615830**
Status : **Answered**
Chosen Option : **4**

Q.60 Find the total current flowing in the given circuit.



Ans

✗ 1. 5A

✗ 2. 1A

✓ 3. 10A

✗ 4. 15A

Question ID : **54062615847**
Status : **Answered**
Chosen Option : **3**

Q.61 The _____ varying alternating quantity can be represented as a phasor.

Ans

✗ 1. triangular

✗ 2. rectangular

✗ 3. circular

✓ 4. sinusoidal

Question ID : **54062615844**
Status : **Answered**
Chosen Option : **4**

Q.62 Which of the following does NOT represent facts about an HRC switch?

Ans

✗ 1. When a fuse blows, it takes some time to replace

✓ 2. It can successfully interrupt large fault currents

✗ 3. It cannot be used profitably at high voltage

✗ 4. It cannot successfully interrupt large fault currents

Question ID : **54062615900**
Status : **Marked For Review**
Chosen Option : **4**

Q.63 The purpose of the open-circuit test of a transformer is:

Ans

✗ 1. to find out maximum heat generated by silicon steel core

✓ 2. to find out the no-load current and losses of the transformer

✗ 3. to find out maximum sustainable current level

✗ 4. to find out maximum sustainable voltage level

Question ID : **54062615864**
Status : **Answered**
Chosen Option : **2**

Q.64 The ratio of losses subtracted from input to the input gives which parameter of transformer?

Ans

✗ 1. Open circuit voltage

✗ 2. Voltage regulation

✗ 3. Short circuit current

✓ 4. Efficiency

Question ID : **54062615866**
Status : **Answered**
Chosen Option : **2**

Q.65 Select the appropriate option to complete the given analogy.

Electric circuit : Conductance :: Magnetic circuit : ?

Ans

✗ 1. Inductance

✗ 2. Resistance

✓ 3. Permeance

✗ 4. Reluctance

Question ID : **54062615816**
Status : **Answered**
Chosen Option : **3**

Q.66 What is the relationship between V_{YB} and V_{YN} in the star connection system?

Ans
✔ 1. $V_{YB} = V_{YN}$

✘ 2. $V_{YB} = \sqrt{3}V_{YN}$

✘ 3. $V_{YB} = \left(\frac{1}{\sqrt{3}}\right)V_{YN}$

✘ 4. $V_{YB} = 3\ V_{YN}$

Question ID : **54062615851**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.67 **Ammeters, voltmeters, wattmeters, frequency meters, power factor meters, etc., fall into which of the following categories of instruments?**

Ans
✘ 1. Recording

✘ 2. Static

✘ 3. Integrating

✔ 4. Indicating

Question ID : **54062615878**
Status : **Answered**
Chosen Option : **4**

Q.68 **A permanent magnet moving coil ammeter is the examples of which category of instruments?**

Ans
✘ 1. Recording instruments

✘ 2. Digital instruments

✘ 3. Static instruments

✔ 4. Analog instruments

Question ID : **54062615876**
Status : **Answered**
Chosen Option : **4**

Q.69 **With reference tothe construction of an underground cable, which of the following sequences is correct?**

Ans
✘ 1. Core, Insulation, Armoring , Metallic Sheath, Bedding, Serving

✘ 2. Core, Insulation, Metallic Sheath, Serving, Bedding

✘ 3. Core, Metallic Sheath, Bedding, Insulation, Armoring, Serving

✔ 4. Core, Insulation, Metallic Sheath, Bedding, Armoring, Serving

Question ID : **54062615915**
Status : **Answered**
Chosen Option : **4**

Q.70 **Which of the following in switchgear equipment does NOT represent types of switches?**

Ans

✗ 1. Oil switches

✗ 2. Isolator or disconnecting switches

✓ 3. Metal-conductor switches

✗ 4. Air-break switches

Question ID : **54062615902**
Status : **Answered**
Chosen Option : **3**

Q.71 **The temperature at which ferromagnetic material change their state to paramagnetic material is called _____.**

Ans

✓ 1. Curie temperature

✗ 2. Critical temperature

✗ 3. Q-point

✗ 4. Avalanche breakdown temperature

Question ID : **54062615936**
Status : **Answered**
Chosen Option : **1**

Q.72 **The core of a three-phase, 50 Hz, 11000/550 V delta/star, 300 kVA, core-type transformer operates with a flux of 0.05 Wb. Find the EMF per turn.**

Ans

✗ 1. 14 V

✗ 2. 17.26 V

✓ 3. 11.1 V

✗ 4. 18.24 V

Question ID : **54062615863**
Status : **Not Answered**
Chosen Option : **--**

Q.73 **Silicon increases the electrical _____ of iron by a factor of about 5.**

Ans

✓ 1. conductance

✗ 2. resistance

✗ 3. field strength

✗ 4. field intensity

Question ID : **54062615801**
Status : **Answered**
Chosen Option : **1**

Q.74 **The difference between the _____ of two alternating quantities is called the phase difference.**

Ans

✗ 1. lengths

✗ 2. time

✗ 3. frequency

✓ 4. phase angle

Question ID : **54062615846**
Status : **Answered**
Chosen Option : **4**

Q.75 **In case of behaviour of electrical wires, in AC power, current likes to travel near the surface of a wire. This phenomenon / characteristic is known as:**

Ans

✗ 1. voltage drop

✓ 2. skin effect

✗ 3. humming noise

✗ 4. touch potential

Question ID : **54062615804**
Status : **Answered**
Chosen Option : **2**

Q.76 **The factors considered for designing of an electrical wire are:**

Ans

✗ 1. Monthly electricity bill

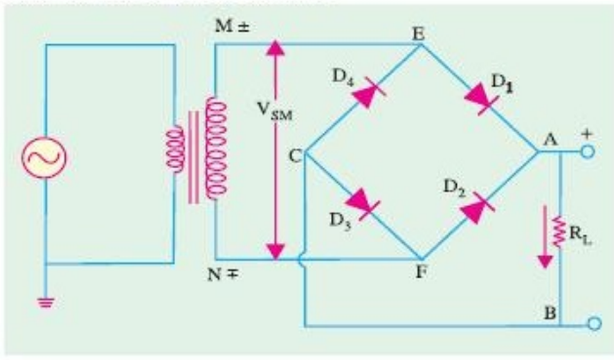
✗ 2. Ratio of PT

✗ 3. Energy meter reading

✓ 4. Current

Question ID : **54062615806**
Status : **Answered**
Chosen Option : **4**

Q.77 Identify the given circuit.



Ans

✓ 1. Single phase full wave rectifier

✗ 2. Astable multivibrator

✗ 3. Monostable multivibrator

✗ 4. Single phase half wave rectifier

Question ID : **54062615827**
Status : **Answered**
Chosen Option : **1**

Q.78 **The insulator material in the overhead lines should have a high ratio of _____ to flashover.**

Ans

✗ 1. tensile strength

✗ 2. relative permittivity

✗ 3. flashback

✓ 4. puncture strength

Question ID : **54062615894**
Status : **Answered**
Chosen Option : **1**

Q.79 **In case of a short circuit, the voltage becomes _____ and the current _____.**

Ans

✔ 1. zero; abnormally high

✘ 2. abnormally high; zero

✘ 3. abnormally high; abnormally high

✘ 4. zero; zero

Question ID : **54062615907**
Status : **Answered**
Chosen Option : **1**

Q.80 **What is the current expression in the R-L circuit?**

Ans

✘ 1. $i = \left(\frac{V}{R}\right)\left(1 + \exp\left(\left(\frac{R}{L}\right)t\right)\right)$

✘ 2. $i = -\left(\frac{V}{R}\right)\left(1 + \exp\left(\left(\frac{R}{L}\right)t\right)\right)$

✘ 3. $i = -\left(\frac{V}{R}\right)\left(1 - \exp\left(\left(\frac{R}{L}\right)t\right)\right)$

✔ 4. $i = \left(\frac{V}{R}\right)\left(1 - \exp\left(\left(-\frac{R}{L}\right)t\right)\right)$

Question ID : **54062615848**
Status : **Not Answered**
Chosen Option : **--**

Q.81 **The phenomenon whereby an EMF and current (i.e. flow of electrons) is induced in any conductor which is cut across or is cut by a magnetic flux is known as:**

Ans

✘ 1. magnetic field strength

✘ 2. electrostatic conductance

✘ 3. magnetic susceptibility

✔ 4. electromagnetic induction

Question ID : **54062615817**
Status : **Answered**
Chosen Option : **4**

Q.82 **The physical basis of a transformer is the _____ between two circuits linked by a common magnetic flux.**

Ans

✔ 1. mutual induction

✘ 2. magnetic connection

✘ 3. self-induction

✘ 4. statically induced current

Question ID : **54062615856**
Status : **Answered**
Chosen Option : **1**

Q.83 What is the current in the R-L circuit at time t = 0?

Ans

✗ 1. $\frac{V}{R}$

✗ 2. $\frac{V}{L}$

✗ 3. $1A$

✓ 4. $0A$

Question ID : **54062615849**
Status : **Answered**
Chosen Option : **4**

Q.84 Which of the following motors is preferred to drive the rotary compressor?

Ans

✗ 1. Three-phase induction motor

✗ 2. Universal motor

✓ 3. Synchronous motor

✗ 4. DC series motor Synchronous motor

Question ID : **54062615870**
Status : **Answered**
Chosen Option : **2**

Q.85 The order in which the three phases attain their peak or maximum values is known as:

Ans

✗ 1. phase difference

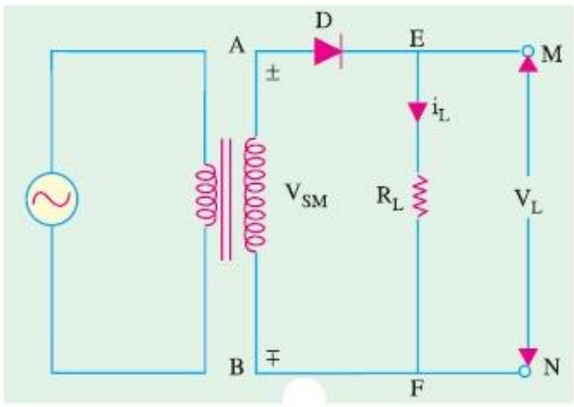
✓ 2. phase sequence

✗ 3. phase distraction

✗ 4. phase alteration

Question ID : **54062615833**
Status : **Answered**
Chosen Option : **2**

Q.86 Identify the given image.



Ans
1. Single phase half wave rectifier
2. Single phase full wave rectifier
3. Single phase half wave inverter
4. Single phase full wave inverter

Question ID : **54062615826**
Status : **Not Answered**
Chosen Option : **--**

Q.87 **One of the following types of lamps is a low-weight mercury vapour lamp. In this lamp, an electric current in the gas energises mercury vapour, which delivers ultraviolet radiation through discharge process and the ultraviolet radiation causes the phosphor coating of the lamp's inner wall to radiate visible light?**

Ans
1. Halogen lamp
2. Sodium vapour lamp
3. LED lamp
4. Fluorescent lamp

Question ID : **54062615940**
Status : **Answered**
Chosen Option : **4**

Q.88 **A solenoid has a core of a material with relative permeability 400. The windings of the solenoid are insulated from the core and carry a current of 2 A. If the number of turns is 1000 per metre, calculate field H.**

Ans
1. 2×10^3 A/m
2. 5×10^{-3} A/m
3. 2×10^{-3} A/m
4. 5×10^3 A/m

Question ID : **54062615885**
Status : **Not Answered**
Chosen Option : **--**

Q.89 **The function of a/an_____ is to ensure absolute continuity of power to the computerised control systems thereby protecting critical equipment from electrical supply failure.**

Ans

✗ 1. inverter

✓ 2. UPS

✗ 3. SMPS

✗ 4. battery charger

Question ID : **54062615808**
Status : **Answered**
Chosen Option : **2**

Q.90 **The _____ materials having low retentivity are widely used in power and communication apparatus.**

Ans

✗ 1. Antistatic

✗ 2. Electrostatic

✓ 3. Ferromagnetic

✗ 4. Insulating

Question ID : **54062615825**
Status : **Answered**
Chosen Option : **4**

Q.91 **Which of the following is NOT a fact about switchgears?**

Ans

✓ 1. Switchgear fails to ensure continuous supply in same situations

✗ 2. Switchgear equipment is concerned with switching and interrupting current

✗ 3. Switchgear protects the system from the damage

✗ 4. Switchgear operates under normal or abnormal conditions

Question ID : **54062615898**
Status : **Answered**
Chosen Option : **1**

Q.92 **During power measurement in a DC circuit using suitable arrangement of a voltmeter (V) and an ammeter (A), the power indicated is:**

Ans

✗ 1. Power consumed – Power loss in ammeter

✗ 2. Power indicated + Power loss in voltmeter

✗ 3. Power consumed + Power loss in voltmeter

✓ 4. Power consumed + Power loss in ammeter

Question ID : **54062615881**
Status : **Not Answered**
Chosen Option : **--**

Q.93 Which statement is correct according to Faraday's second law of electromagnetic induction:

Ans
1. All of the given option
2. $e = -N\frac{d\emptyset}{dt}$ volts with usual notations
3. the magnitude of the flux - linkages is equal to the rate of change of induced EMF
4. $e = -N^2\frac{d\emptyset}{dt}$ volts with usual notations

Question ID : **54062615819**
Status : **Answered**
Chosen Option : **2**

Q.94 **The _____ is of metal-clad type. In this type of construction, all live parts are completely enclosed in an earthed metal ring.**

Ans
1. indoor switchgear
2. digital instrument
3. primary switchgear
4. analog instrument

Question ID : **54062615905**
Status : **Not Answered**
Chosen Option : **--**

Q.95 **In case of underground cables, which of the following factors does NOT cause the temperature of the cable to rise?**

Ans
1. Low resistivity of conductors
2. Eddy current loss in the sheath
3. Copper loss in the conductors
4. Hysteresis loss in the dielectric

Question ID : **54062615927**
Status : **Answered**
Chosen Option : **1**

Q.96 **_____ means degree of closeness of the color of lumens from the lamps to the standard lumen color.**

Ans
1. CCT or Correlated Color Temperature
2. CCP or Correlated Color Pressure
3. CRI or Color Rendering Index
4. CCT or Coefficient Color Temperature

Question ID : **54062615945**
Status : **Answered**
Chosen Option : **3**

Q.97 **The phasors are assumed to be rotated in the _____ direction.**

Ans
- ✔ 1. anticlockwise
- ✘ 2. clockwise
- ✘ 3. triangular
- ✘ 4. periodic

Question ID : **54062615845**
Status : **Answered**
Chosen Option : **1**

Q.98 **The quality of a magnetic substance due to which energy is dissipated in it on the reversal of its magnetism is known as:**

Ans
- ✘ 1. mutually induced EMF
- ✘ 2. magnetic reluctance
- ✘ 3. self-inductance
- ✔ 4. magnetic hysteresis

Question ID : **54062615824**
Status : **Answered**
Chosen Option : **4**

Q.99 **In a distribution system, _____ causes lamps to burn out permanently and may cause failure of other appliances.**

Ans
- ✘ 1. low permittivity
- ✘ 2. high resistance
- ✔ 3. high voltage
- ✘ 4. low voltage

Question ID : **54062615888**
Status : **Answered**
Chosen Option : **3**

Q.100 **What will happen to a DC series motor if the series windings are shunted by a variable resistance?**

Ans
- ✘ 1. The speed of the motor will decrease
- ✔ 2. The speed of the motor will increase
- ✘ 3. The iron losses in the motor will increase
- ✘ 4. The leakage flux will be reduced to zero

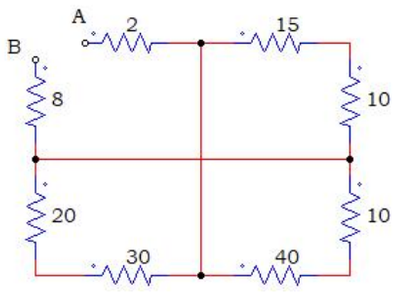
Question ID : **54062615872**
Status : **Answered**
Chosen Option : **1**

Q.101 **In order to protect the cable from moisture, gases or other damaging liquids in the soil and atmosphere:**

Ans
- ✘ 1. steel casing
- ✘ 2. Cable has to be break at certain intervals
- ✘ 3. a layer of strong acid is provided over the insulation
- ✔ 4. A metallic sheath of lead or aluminium is provided over the insulation.

Question ID : **54062615913**
Status : **Answered**
Chosen Option : **4**

Q.102 Study the given circuit and find the equivalent resistance between points A and B.



Ans

✗ 1. 40 Ω

✓ 2. 22.5 Ω

✗ 3. 5.25 Ω

✗ 4. 9.586 Ω

Question ID : **54062615799**
Status : **Not Answered**
Chosen Option : **--**

Q.103 In a delta connection system of RYB phase sequence, the voltage across terminals Y and B is $415\angle 60°$. Calculate the line voltage V_{YB}.

Ans

✓ 1. $415\angle 60°$

✗ 2. $\sqrt{3}(415\angle 60°)$

✗ 3. $440\angle 120°$

✗ 4. $\left(\frac{440}{\sqrt{3}}\right)\angle 60°$

Question ID : **54062615852**
Status : **Answered**
Chosen Option : **1**

Q.104 _____ is equal to the work done in joules in carrying a unit magnetic pole once through the entire magnetic circuit.

Ans

✗ 1. Permeability

✗ 2. Permeance

✗ 3. Reluctance

✓ 4. MMF

Question ID : **54062615815**
Status : **Answered**
Chosen Option : **4**

Q.105 The self-current-carrying capacity of an underground cable is determined by the maximum permissible _____.

Ans

✗ 1. pressure rise

✗ 2. humidity rise

✗ 3. current rise

✓ 4. temperature rise

Question ID : **54062615926**
Status : **Answered**
Chosen Option : **3**

Q.106 _____ में कमजोर चुंबकीय क्षेत्र से मजबूत चुंबकीय क्षेत्र में स्थानांतरित होने की प्रवृत्ति होती है।

Ans
1. अनुचुंबकीय पदार्थ (Paramagnetic substances)
2. लौहचुंबकीय पदार्थ (Ferromagnetic substances)
3. इंसुलेटिंग पदार्थ (Insulating substances)
4. विद्युत-स्थैतिक पदार्थ (Electrostatic substances)

Question ID : **54062615929**
Status : **Answered**
Chosen Option : **2**

Q.107 For underground cables, a layer of _____ is applied over a metallic sheath, which consists of a fibrous material such as jute or hessian tape to protect the metallic sheath against corrosion and from mechanical injury.

Ans
1. serving
2. bedding
3. armoring
4. insulation

Question ID : **54062615914**
Status : **Answered**
Chosen Option : **2**

Q.108 As magnetic material is heated, its magnetic strength will _____.

Ans
1. exponentially increase
2. increase linearly
3. remain unaffected
4. deduce

Question ID : **54062615812**
Status : **Answered**
Chosen Option : **4**

Q.109 State whether the given facts about synchronous motor and induction motor are true or false.

I. Despite any load, a synchronous motor runs at a constant average speed.
II. With an increase in load, the speed of an induction motor falls somewhat.

Ans
1. I. false, II. true
2. I. false, II. false
3. I. true, II. false
4. I. true, II. true

Question ID : **54062615932**
Status : **Answered**
Chosen Option : **4**

Q.110 In a distribution system, _____ causes loss of revenue, insufficient lighting and possible burning out of motors.

Ans

✗ 1. high voltage

✓ 2. low voltage

✗ 3. low permittivity

✗ 4. high resistance

Question ID : **54062615887**
Status : **Answered**
Chosen Option : **2**

Q.111 Line to ground (L-G), line to line (L-L), double line to ground (LL-G) are which of the following types of faults?

Ans

✗ 1. Phase faults

✗ 2. Symmetrical faults

✗ 3. Frequency and speed faults

✓ 4. Asymmetrical faults

Question ID : **54062615908**
Status : **Not Answered**
Chosen Option : **--**

Q.112 Which of the following is NOT a different type of bus-bar arrangement for switchgear systems?

Ans

✓ 1. Original bus-bar system

✗ 2. Single bus-bar system with sectionalisation

✗ 3. Single bus-bar system

✗ 4. Double bus bar system

Question ID : **54062615903**
Status : **Not Answered**
Chosen Option : **--**

Q.113 The length occupied by one complete cycle of the waveform is called its _____.

Ans

✗ 1. velocity

✗ 2. standard harmonic distortion

✗ 3. retentivity

✓ 4. wavelength

Question ID : **54062615840**
Status : **Answered**
Chosen Option : **4**

Q.114 If the transformation ratio is greater than 1, then the transformer is said to be:

Ans

✗ 1. DC transformer

✗ 2. current transformer

✓ 3. step-up transformer

✗ 4. step-down transformer

Question ID : **54062615861**
Status : **Answered**
Chosen Option : **3**

Q.115 Complete the following discharge reaction at positive plate.

$Ni(OH)_4 + 2K \longrightarrow$

Ans
1. $2KOH_2 + 2\ NiOH$
2. $2NiOH_2 + 2\ KOH$
3. $NiOH_2 + 2\ KOH$
4. $Ni(OH)_2 + 2\ KOH$

Question ID : **54062615811**
Status : **Answered**
Chosen Option : **4**

Q.116 **Select the appropriate option to complete the given analogy.**

Lenz's law : Statically induced EMF :: Fleming's rule : ?

Ans
1. Neither statically nor dynamically induced EMF
2. Both statically and dynamically induced EMF
3. Statically induced EMF
4. Dynamically induced EMF

Question ID : **54062615821**
Status : **Answered**
Chosen Option : **4**

Q.117 **For the purpose of getting maximum efficiency from the transformer, Iron losses must be balanced by _____.**

Ans
1. self-induced EMF
2. dynamically induced EMF
3. copper losses
4. open circuit voltage

Question ID : **54062615867**
Status : **Answered**
Chosen Option : **3**

Q.118 **The field coils of a 6-pole DC generator, each having 500 turns, are connected in series. When the field is excited, there is a magnetic flux of 0.02 Wb/pole. If the field circuit is opened in 0.02 seconds and residual magnetism is 0.002 Wb/pole, then calculate the average voltage that is induced across the field terminals.**

Ans
1. 8500 V
2. 2420.23 V
3. 8 kV
4. 16.2 kV

Question ID : **54062615820**
Status : **Not Answered**
Chosen Option : **--**

Q.119 Which of the following options DOES NOT represent the category of a circuit breaker?

Ans

✗ 1. Vacuum circuit breakers

✗ 2. Oil circuit breakers

✗ 3. Air-blast circuit breakers

✓ 4. Sulphuric acid circuit breakers

Question ID : **54062615895**
Status : **Answered**
Chosen Option : **4**

Q.120 The maximum flux density in the core of a 250/2000-volts, 50-Hz single-phase transformer is 1.2 Wb/m^2. If the EMF per turn is 8 volts, then determine the area of the core.

Ans

✓ 1. $0.03\ m^2$

✗ 2. $0.25\ m^2$

✗ 3. $0.05\ m^2$

✗ 4. $0.5\ m^2$

Question ID : **54062615862**
Status : **Not Answered**
Chosen Option : **--**

Q.121 State whether the given facts about synchronous motor and induction motor are true or false.

I. For a synchronous motor, the torque gets affected with a change in the applied voltage.
II. For an induction motor, the change in applied voltage does not affect the torque.

Ans

✗ 1. I. true, II. true

✗ 2. I. false, II. true

✗ 3. I. true, II. false

✓ 4. I. false, II. false

Question ID : **54062615933**
Status : **Answered**
Chosen Option : **4**

Q.122 In a balanced three-phase system with delta load, if we assume that the line voltage is $V_{RY} = 200\angle 0°$ as the reference phasor, then the source voltage V_{YB} is:

Ans

✗ 1. $60\angle 120°$

✓ 2. $200\angle -120°$

✗ 3. $200\angle 240°$

✗ 4. $90\angle 0°$

Question ID : **54062615854**
Status : **Answered**
Chosen Option : **3**

Q.123 Which of the following properties is not desirable for the insulators in overhead lines?

Ans

✔ 1. Low relative permittivity

✘ 2. High mechanical strength

✘ 3. High electrical resistance

✘ 4. High relative permittivity

Question ID : **54062615892**
Status : **Answered**
Chosen Option : **4**

Q.124 The AC system is advantageous compared to DC system because:

Ans

✔ 1. AC voltages can be easily changed in magnitude

✘ 2. DC voltage cannot be used for domestic appliances

✘ 3. DC grid system is not possible

✘ 4. DC system do not have fine speed control

Question ID : **54062615841**
Status : **Answered**
Chosen Option : **1**

Q.125 _____ is a portable instrument used for testing the insulation resistance of a circuit.

Ans

✘ 1. Tong tester

✘ 2. Tester

✘ 3. Multimeter

✔ 4. Megger

Question ID : **54062615828**
Status : **Answered**
Chosen Option : **4**

Q.126 The _____ of an underground cable system is more important than that of an overhead line. This is because in cables, the conductors are nearer to each other and to the earthed sheath.

Ans

✘ 1. reluctance

✘ 2. resistance

✔ 3. capacitance

✘ 4. inductance

Question ID : **54062615924**
Status : **Answered**
Chosen Option : **3**

Q.127 Which law states that the illumination of a surface at any point is proportional to the cosine of the angle between the normal at the point and the direction of the luminous flux?

Ans

✘ 1. Inverse cosine law

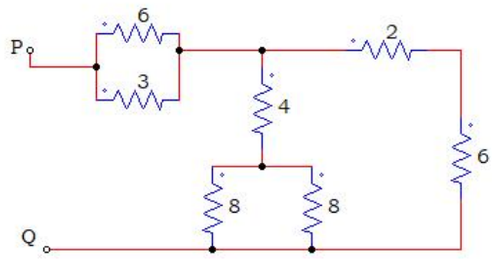
✘ 2. Inverse square law

✔ 3. Lambert's cosine law

✘ 4. Lambert's sine law

Question ID : **54062615938**
Status : **Answered**
Chosen Option : **3**

Q.128 Study the given circuit and find the equivalent resistance between points P and Q.



Ans
1. 5 Ω
2. 21.5 Ω
3. 6 Ω
4. 2.352 Ω

Question ID : **54062615800**
Status : **Answered**
Chosen Option : **3**

Q.129 **The apparatus used for switching, controlling and protecting the electrical circuits and equipment is known as:**

Ans
1. switchgear
2. router
3. bridge
4. repeater

Question ID : **54062615897**
Status : **Answered**
Chosen Option : **1**

Q.130 **The _____ with ordinary fuse is the simplest form of switchgear and is used to control and protect lights and other equipment in homes, offices.**

Ans
1. air-break switch
2. HRC switch
3. oil switch
4. tumbler switch

Question ID : **54062615899**
Status : **Answered**
Chosen Option : **2**

Q.131 **केबलों के परावैद्युत में समान विद्युतस्थैतिक प्रतिबल (uniform electrostatic stress) प्राप्त करने की प्रक्रिया को किसके रूप में जाना जाता है?**

Ans
1. केबलों की ग्रेडिंग (grading of cables)
2. केबलों का परिरक्षण (shielding of cables)
3. केबलों की कर्तन (shredding of cables)
4. केबलों का प्रसार (spreading of cables)

Question ID : **54062615922**
Status : **Answered**
Chosen Option : **1**

Q.132 The average value of a sine wave of maximum value Vm over one cycle is _____.

Ans

✗ 1. $\frac{Vm}{2}$

✗ 2. $\frac{Vm}{\sqrt{2}}$

✗ 3. $\frac{2Vm}{\pi}$

✓ 4. zero

Question ID : **54062615843**
Status : **Answered**
Chosen Option : **3**

Q.133 Four arms of a Wheatstone bridge are connected as follows: R1 = 80 Ω between points A and C; R2 = 120 Ω between points B and C; R3 = 480 Ω between points A and D; R4 = 160 Ω between points B and D; a 100 V supply is connected between points A and B. Find output voltage between points C and D.

Ans

✗ 1. 25 V

✗ 2. 60 V

✓ 3. 35 V

✗ 4. 48.25 V

Question ID : **54062615803**
Status : **Not Answered**
Chosen Option : **--**

Q.134 A star-connected 3-phase load consists of three similar impedances. When the load is connected to a 3-phase 400 V, 50 Hz supply, it takes 30 A line current at a power factor of 0.8 lagging. Calculate the total power taken by the load.

Ans

✗ 1. 1.6627 W

✗ 2. 1.6627 kW

✗ 3. 16.627 W

✓ 4. 16.627 kW

Question ID : **54062615853**
Status : **Answered**
Chosen Option : **2**

Q.135 A conductor of length 1 m moves at right angles to a uniform magnetic field of flux density 1.5 Wb/m^2 with a velocity of 50 m/s. Calculate the EMF induced in it.

Ans

✗ 1. 75 kV

✗ 2. 8 kV

✗ 3. 8 V

✓ 4. 75 V

Question ID : **54062615823**
Status : **Answered**
Chosen Option : **4**

Q.136 Which of the following is NOT the desirable feature of a switchgear?

Ans

✗ 1. Quick operation

✗ 2. Complete stability

✓ 3. Fully automatic operation without manual intervention

✗ 4. Thermal effect stability

Question ID : **54062615901**
Status : **Answered**
Chosen Option : **3**

Q.137 State whether the given facts about synchronous motor are true or false.

I. Dampers do not completely prevent hunting.
II. Dampers make synchronous motors self-starting.

Ans

✗ 1. I. false II. false

✓ 2. I. true II. true

✗ 3. I. true II. false

✗ 4. I. false II. true

Question ID : **54062615931**
Status : **Answered**
Chosen Option : **4**

Q.138 If 40 J work is done in bringing a charge 4×10^{-19} C from infinity to a point in electric field, what is the potential at that point?

Ans

✓ 1. 10 V

✗ 2. 20 V

✗ 3. 100 V

✗ 4. 10^{-3} V

Question ID : **54062615807**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.139 Iron, cobalt, nickel, gadolinium are:

Ans

✗ 1. Hard ferromagnetic substances

✗ 2. Paramagnetic substances

✗ 3. Electrostatic substances

✓ 4. Soft ferromagnetic substances

Question ID : **54062615935**
Status : **Answered**
Chosen Option : **1**

Q.140 भूमिगत केबल की इंसुलेट सामग्री ऐसी होनी चाहिए, जो हवा या मिट्टी से नमी को अवशोषित न करे; यह विशेषता क्या कहलाती है?

Ans
✔ 1. गैर आर्द्रताग्राही (non-hygroscopic)
✘ 2. गैर विषैले (non-toxic)
✘ 3. गैर परावैद्युत (non-dielectric)
✘ 4. गैर ज्वलनशील (non-inflammable)

Question ID : **54062615917**
Status : **Answered**
Chosen Option : **1**

Q.141 In a three-phase star-connected system, point N is known as:

Ans
✘ 1. Curie point
✘ 2. Q-point
✘ 3. Nelson point
✔ 4. Star point

Question ID : **54062615836**
Status : **Answered**
Chosen Option : **4**

Q.142 _____ work by running electricity through gas inside the coils, exciting that gas and producing light. There is a coating on the spirals, which makes this light white. These bulbs do not get nearly as hot as incandescent bulbs.

Ans
✘ 1. Fluorescent bulbs
✔ 2. Compact fluorescent light bulbs
✘ 3. Halogen bulbs
✘ 4. Sodium vapour bulbs

Question ID : **54062615941**
Status : **Answered**
Chosen Option : **2**

Q.143 In the alternating current (AC) circuits, where p(t), v(t) and i(t) are the values of instantaneous power, voltage and current, respectively, the power at any instant is given by:

Ans
✔ 1. $P(t) = V(t) \times I(t)$
✘ 2. $P(t) = V(t) + I(t)$
✘ 3. $P(t) = \frac{V(t)}{I(t)}$
✘ 4. $P(t) = V(t) - I(t)$

Question ID : **54062615879**
Status : **Answered**
Chosen Option : **1**

Q.144 In underground cables, which of the following is NOT the most commonly used materials for insulation?

Ans

✗ 1. Rubber mineral compound

✗ 2. Impregnated paper

✓ 3. Impregnated fibre

✗ 4. Varnished cambric

Question ID : **54062615912**
Status : **Answered**
Chosen Option : **4**

Q.145 What is the magnitude of the equatorial field due to a bar magnet of length 5.0 cm at a distance of 50 cm from its mid-point? The magnetic moment of the bar magnet is 0.40 A m^2.

Ans

✗ 1. $3.2\ T$

✗ 2. $3.2 \times 10^{-3}\ T$

✗ 3. $3.2 \times 10^{-6}\ T$

✓ 4. $3.2 \times 10^{-7}\ T$

Question ID : **54062615829**
Status : **Not Answered**
Chosen Option : **--**

Q.146 The _____ provide much higher efficacy than the incandescent lamps.

Ans

✓ 1. Fluorescent lamps

✗ 2. Low pressure hydrogen lamps

✗ 3. Metal halide lamps

✗ 4. Incandescent lamps

Question ID : **54062615944**
Status : **Answered**
Chosen Option : **1**

Q.147 भूमिगत केबल डालने के लिए निम्न में से कौन-सी विधि सबसे सरल और सबसे सस्ती है?

Ans

✓ 1. डायरेक्ट लेयिंग (Direct laying)

✗ 2. फाइबर लेयिंग (Fibre laying)

✗ 3. सॉलिड लेयिंग (Solid laying)

✗ 4. ड्रा-इन लेयिंग (Draw-in-laying)

Question ID : **54062615920**
Status : **Answered**
Chosen Option : **1**

Q.148 A tube light is a lamp that works on low pressure _____ discharge phenomenon and converts ultra-violate ray into visible ray with the help of phosphor coated inside a glass tube.

Ans

✗ 1. scandium iodide

✓ 2. mercury vapour

✗ 3. sodium iodide

✗ 4. metal halide

Question ID : **54062615942**
Status : **Marked For Review**
Chosen Option : **2**

Q.149 Whenever a fault occurs on a network such that a large current flows in one or more phases, a/an _____ is said to have occurred.

Ans
1. frequency change
2. speed fault
3. short circuit
4. phase fault

Question ID : **54062615906**
Status : **Answered**
Chosen Option : **3**

Q.150 The power in DC circuits can be measured by:

Ans
1. wattmeter
2. phase sequence meter
3. frequency meter
4. tachometer

Question ID : **54062615880**
Status : **Answered**
Chosen Option : **1**

Section : **General Hindi and General Knowledge and Reasoning**

Q.1 मूर्खपन में अपना नुकसान स्वयं करना – के लिए उचित मुहावरा है:

Ans
1. अपने पैर पर कुल्हाड़ी मारना
2. घुटने टेक देना
3. आँखें खुली की खुली रह जाना
4. कान का कच्चा होना

Question ID : **54062615960**
Status : **Answered**
Chosen Option : **1**

Q.2 विलोम शब्द का कौन सा युग्म गलत है?

Ans
1. उपाय – उपमेय
2. उग्र – सौम्य
3. अवनि – अंबर
4. अनुज - अग्रज

Question ID : **54062615955**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.3 'जो अच्छे कुल में उत्पन्न हुआ हो' वाक्यांश के लिए एक शब्द है:

Ans
1. उच्च कुल
2. कुलघातक
3. कुलांत
4. कुलीन

Question ID : **54062615957**
Status : **Answered**
Chosen Option : **4**

Q.4 'बाग में लाल फूल खिले हैं।' वाक्य में प्रयुक्त विशेषण है:

Ans
1. सार्वनामिक विशेषण
2. परिमाणवाचक विशेषण
3. संख्यावाचक विशेषण
4. गुणवाचक विशेषण

Question ID : **54062615952**
Status : **Answered**
Chosen Option : **4**

Q.5 'निजत्व' का संज्ञा भेद है:

Ans
1. समूहवाचक संज्ञा
2. भाववाचक संज्ञा
3. जातिवाचक संज्ञा
4. व्यक्तिवाचक संज्ञा

Question ID : **54062615950**
Status : **Answered**
Chosen Option : **3**

Q.6 'निर्झर – निर्जर' शब्द युग्म के सही अर्थ भेद का चयन कीजिए:

Ans
1. सूखा - सुनसान
2. हलका - निर्जीव
3. झरना - देवता
4. देवता - झरना

Question ID : **54062615956**
Status : **Answered**
Chosen Option : **2**

Q.7 'तुच्छ' का पर्यायवाची है:

Ans
1. दर्प
2. वात
3. निकृष्ट
4. दरिद्र

Question ID : **54062615954**
Status : **Not Answered**
Chosen Option : **--**

Q.8 वाक्य की समाप्ति पर किस चिह्न का प्रयोग किया जाता है?

Ans
1. पूर्ण विराम चिह्न
2. योजक चिह्न
3. निर्देशक चिह्न
4. अल्प विराम चिह्न

Question ID : **54062615962**
Status : **Answered**
Chosen Option : **1**

Q.9 कौन सा शब्द प्रत्यय युक्त है?

Ans
1. सरहद
2. छलावा
3. उनींद
4. निर्बल

Question ID : **54062615947**
Status : **Answered**
Chosen Option : **2**

Q.10 निम्नलिखित तत्सम तद्भव शब्द युग्म में से कौन सा विकल्प अशुद्ध है:

Ans
1. स्वर्ण – सपना
2. मूढ़ – मूर्ख
3. तृण – तिनका
4. अक्षि – आँख

Question ID : **54062615948**
Status : **Answered**
Chosen Option : **1**

Q.11 सीधे का मुँह कुत्ता चाटे – लोकोक्ति का अर्थ है:

Ans
1. मूर्खता दिखाना
2. स्वार्थी होना
3. बहुत सीधापन नुकसान देता है
4. कहीं का न रहना

Question ID : **54062615961**
Status : **Answered**
Chosen Option : **3**

Q.12 शुद्ध शब्द का चयन कीजिए:

Ans
1. सृष्टि
2. वेम्नस्यता
3. श्रिमान
4. आपार

Question ID : **54062615958**
Status : **Answered**
Chosen Option : **4**

Q.13 निम्नलिखित में से अशुद्ध शब्द है:

Ans
1. परिक्षा
2. प्रतीक्षा
3. महाबली
4. बलिदान

Question ID : **54062615959**
Status : **Answered**
Chosen Option : **1**

Q.14 निम्नलिखित में से कौन सा देशज शब्द है?

Ans
1. कीमत
2. बेटा
3. उच्च
4. खिड़की

Question ID : **54062615949**
Status : **Not Answered**
Chosen Option : **--**

Q.15 अध्यापिका छात्र से पाठ पढ़वाती हैं। रेखांकित का क्रिया भेद है:

Ans
1. नामधातु क्रिया
2. सकर्मक क्रिया
3. प्रेरणार्थक क्रिया
4. संयुक्त क्रिया

Question ID : **54062615953**
Status : **Answered**
Chosen Option : **3**

Q.16 'अनुपस्थित' में प्रयुक्त उपसर्ग है:

Ans
1. अन्
2. अन
3. अनु
4. अ

Question ID : **54062615946**
Status : **Answered**
Chosen Option : **1**

Q.17 'बड़ों का आदर करना हमारा कर्तव्य है।' रेखांकित सर्वनाम का भेद है:

Ans
1. अनिश्चयवाचक सर्वनाम
2. अन्य पुरुषवाचक सर्वनाम
3. उत्तम पुरुषवाचक सर्वनाम
4. संबंधवाचक सर्वनाम

Question ID : **54062615951**
Status : **Answered**
Chosen Option : **3**

Q.18 1991 में जब आर्थिक सुधार और उदारीकरण की शुरुआत हुई, तब निम्नलिखित में से कौन भारत के वित्त मंत्री थे?

Ans
1. प्रणब मुखर्जी
2. पी.वी. नरसिम्हा राव
3. पी. चिदंबरम
4. मनमोहन सिंह

Question ID : **54062615977**
Status : **Answered**
Chosen Option : **2**

Q.19 Who is the Comptroller and Auditor General of India, as of January 2020?

Ans
1. VN Kaul
2. Rajiv Mehrishi
3. VinodRai
4. Shashi Kant Sharma

Question ID : **54062615975**
Status : **Answered**
Chosen Option : **4**

Q.20 प्रकृति से प्राप्त संसाधन, जो बिना किसी संशोधन के इस्तेमाल किए जाते हैं, क्या कहलाते हैं?

Ans
1. चिकित्सा संसाधन
2. मानव संसाधन
3. आर्थिक संसाधन
4. प्राकृतिक संसाधन

Question ID : **54062615967**
Status : **Answered**
Chosen Option : **4**

Q.21 Who designed the Chhatrapati Shivaji Maharaj Terminus (formerly Victoria Terminus) in Mumbai?

Ans
1. Edwin Lutyens
2. FW Stevens
3. George Wittet
4. Robert Chisholm

Question ID : **54062615964**
Status : **Not Answered**
Chosen Option : **--**

Q.22 तीन वार्षिक योजनाओं की अवधि क्या थी?

Ans
1. 1961-64
2. 1966-69
3. 1958-61
4. 1969-72

Question ID : **54062615978**
Status : **Not Answered**
Chosen Option : **--**

Q.23 When was the Rajiv Gandhi International Airport, Hyderabad opened to commercial traffic?

Ans
1. 2007
2. 2006
3. 2005
4. 2008

Question ID : **54062615968**
Status : **Not Answered**
Chosen Option : **--**

Q.24 The temples at Khajuraho were built during which dynasty?

Ans

✔ 1. Chandella dynasty

✘ 2. Pallava dynasty

✘ 3. Gupta dynasty

✘ 4. Chola dynasty

Question ID : **54062615966**
Status : **Not Answered**
Chosen Option : **--**

Q.25 Which among the following when released in the atmosphere creates a greenhouse effect by trapping the heat radiated from the earth?

Ans

✘ 1. Ferrous dioxide

✘ 2. Nitrogen dioxide

✘ 3. Sulphur dioxide

✔ 4. Carbon dioxide

Question ID : **54062615970**
Status : **Answered**
Chosen Option : **4**

Q.26 Who was the President of India in the year 1968?

Ans

✘ 1. Sarvepalli Radhakrishnan

✘ 2. Varahagiri Venkata Giri

✔ 3. Zakir Husain

✘ 4. Fakhruddin Ali Ahmed

Question ID : **54062615974**
Status : **Not Answered**
Chosen Option : **--**

Q.27 भारत में अनवरत योजनाओं की अवधि क्या थी?

Ans

✔ 1. 1978-80

✘ 2. 1991-93

✘ 3. 1980-82

✘ 4. 1976-78

Question ID : **54062615971**
Status : **Not Answered**
Chosen Option : **--**

Q.28 संसद में केंद्रीय बजट कौन प्रस्तुत करता है?

Ans

✘ 1. विदेश मंत्री

✘ 2. वाणिज्य और उद्योग मंत्री

✘ 3. गृह मंत्री

✔ 4. वित्त मंत्री

Question ID : **54062615976**
Status : **Answered**
Chosen Option : **4**

Q.29 तुगलक वंश का संस्थापक कौन था?

Ans
1. फिरोज शाह तुगलक
2. गयासुद्दीन तुगलक
3. मुहम्मद बिन तुगलक
4. नसीरुद्दीन मोहम्मद शाह तुगलक

Question ID : **54062615965**
Status : **Not Answered**
Chosen Option : **--**

Q.30 निम्नलिखित में से किस राज्य की विधान सभा में सबसे अधिक सीटें हैं?

Ans
1. पश्चिम बंगाल
2. महाराष्ट्र
3. मध्य प्रदेश
4. बिहार

Question ID : **54062615973**
Status : **Answered**
Chosen Option : **3**

Q.31 When was the McMahan line drawn?

Ans
1. 1915
2. 1921
3. 1914
4. 1920

Question ID : **54062615969**
Status : **Not Answered**
Chosen Option : **--**

Q.32 How many times Mahmud Ghaznavi attacked ancient India?

Ans
1. 15
2. 19
3. 17
4. 21

Question ID : **54062615963**
Status : **Answered**
Chosen Option : **3**

Q.33 हिंदी और अंग्रेजी भाषा में लिखी गई भारतीय संविधान की मूल प्रतियां, भारतीय संसद के पुस्तकालय में विशेष रूप से बने _____ से भरे हुए बक्सों में रखी जाती हैं।

Ans
1. हीलियम
2. हाइड्रोजन
3. फ्लोरीन
4. नाइट्रोजन

Question ID : **54062615972**
Status : **Answered**
Chosen Option : **4**

Q.34 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:
I. Some doctors are students.
II. All students are boys.

Conclusions:
I. All doctors are boys.
II. Some boys are doctors.
III. Some boys are students.
IV. All students are doctors.

Ans

✗ 1. All the conclusions I, II, III and IV follow.

✓ 2. Only conclusions II and III follow.

✗ 3. Only conclusion I follows.

✗ 4. Only conclusions I, II and III follow.

Question ID : **54062615988**
Status : **Answered**
Chosen Option : **2**

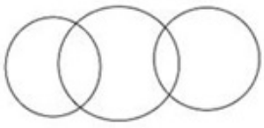
Q.35 निम्नलिखित वर्गों के बीच के संबंध का सर्वोत्तम तरीके से प्रतिनिधित्व करनेवाले वेन आरेख का चयन कीजिए।

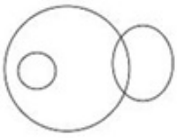
सब्जी, हरी, अमरूद

Ans

✗ 1. 

✗ 2. 

✓ 3. 

✗ 4. 

Question ID : **54062615992**
Status : **Answered**
Chosen Option : **1**

Q.36 20-year-old Renu is four times as old as her sister Kiran. After how many years will Renu become twice as old as Kiran?

Ans

✗ 1. 15

✓ 2. 10

✗ 3. 5

✗ 4. 20

Question ID : **54062615990**
Status : **Not Answered**
Chosen Option : **--**

Q.37 In a certain code language, MOBILE is written as LEIOBM. How will LAPTOP be written as in that language?

Ans

✔ 1. OPTAPL

✘ 2. ALPPTO

✘ 3. PLTOAP

✘ 4. APLOTP

Question ID : **54062615985**
Status : **Answered**
Chosen Option : **1**

Q.38 Select the option that is related to the third number in the same way as the second number is related to the first number.

9 : 82 : : 11 : ?

Ans

✘ 1. 111

✘ 2. 121

✘ 3. 110

✔ 4. 122

Question ID : **54062615991**
Status : **Answered**
Chosen Option : **4**

Q.39 Four number pairs have been given out of which three are alike in some manner and one is different. Select the odd one.

Ans

✘ 1. 11, 125

✔ 2. 13, 172

✘ 3. 9, 85

✘ 4. 8, 68

Question ID : **54062615989**
Status : **Answered**
Chosen Option : **2**

Q.40 In a row, Aman is at the 20th position from the left and Gita is at the 14th position from the right. If they interchange their positions, Aman becomes 30th from the left. Now what is the position of Gita from the right?

Ans

✔ 1. 24th

✘ 2. 22nd

✘ 3. 25th

✘ 4. 20th

Question ID : **54062615986**
Status : **Answered**
Chosen Option : **1**

Q.41 Select the option that is related to the third term in the same way as the second term is related to the first term.

Snakes : Hiss : : Elephants : ?

Ans

✗ 1. Bray

✓ 2. Trumpet

✗ 3. Quack

✗ 4. Hoot

Question ID : **54062615982**
Status : **Answered**
Chosen Option : **4**

Q.42 Select the letter-cluster that can replace the question mark (?) in the following series.

AGM, BFP, CES, DDV, ?

Ans

✗ 1. EEC

✗ 2. FFG

✓ 3. ECY

✗ 4. FGH

Question ID : **54062615979**
Status : **Answered**
Chosen Option : **3**

Q.43 दिए गए चार शब्दों में से तीन शब्द एक निश्चित तरीके से समान हैं और एक भिन्न है। विषम शब्द का चयन कीजिए।

Ans

✗ 1. आयत

✗ 2. वर्ग

✗ 3. समचतुर्भुज

✓ 4. घनाभ

Question ID : **54062615980**
Status : **Answered**
Chosen Option : **4**

Q.44 Four letter-clusters have been given out of which three are alike in some manner and one is different. Select the odd one.

Ans

✗ 1. MQTV

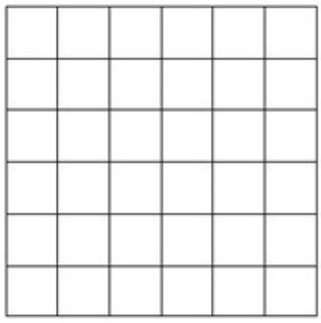
✓ 2. OSVZ

✗ 3. LPSU

✗ 4. FJMO

Question ID : **54062615981**
Status : **Answered**
Chosen Option : **2**

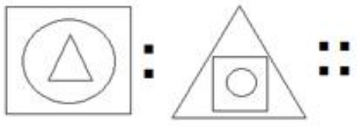
Q.45 How many squares are there in the following figure?

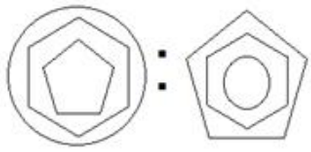
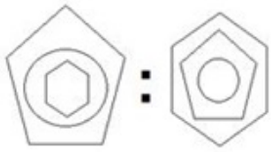
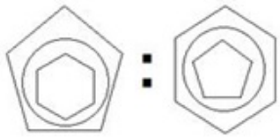
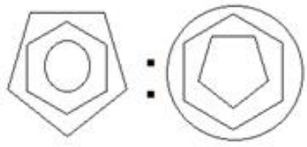


Ans
1. 94
2. 91
3. 78
4. 76

Question ID : **54062615995**
Status : **Answered**
Chosen Option : **2**

Q.46 Select the related figures from the given options.

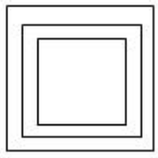


Ans
1. 
2. 
3. 
4. 

Question ID : **54062615993**
Status : **Answered**
Chosen Option : **2**

Q.47 Four figures have been given out of which three are alike in some manner and one is different.
Select the one that is different.

Ans

✗ 1. 

✗ 2. 

✓ 3. 

✗ 4. 

Question ID : **54062615994**
Status : **Answered**
Chosen Option : **2**

Q.48 In a certain code language,

SIP DIP GIP means 'Ram and Sita'
DIP TIN TO means 'Ram is handsome'
GIP TO PIC means 'Sita is beautiful'

Which of the following is the code for 'Sita'?

Ans

✓ 1. GIP

✗ 2. PIC

✗ 3. TO

✗ 4. DIP

Question ID : **54062615984**
Status : **Answered**
Chosen Option : **1**

Q.49 यदि 'D', 'A' की पत्नी है, 'C', 'A' का बेटा है,'F', 'C'का बेटा है,'B', 'F' की माता है, 'G', 'E' का बेटा है और 'E','B' का भाई है, तो 'E', 'F' से कैसे संबंधित है?

Ans
1. भाई
2. मामा
3. पिता
4. दादाजी/नानाजी

Question ID : **54062615987**
Status : **Answered**
Chosen Option : **2**

Q.50 Select the option that is related to the fourth term in the same way as the first term is related to the second term.

DGJ : KNQ : : ? : MPS

Ans
1. EIL
2. EJK
3. FJK
4. FIL

Question ID : **54062615983**
Status : **Answered**
Chosen Option : **4**