



**Notations :**

- 1.Options shown in **green** color and with  icon are correct.
- 2.Options shown in **red** color and with  icon are incorrect.

<b>Question Paper Name:</b>	Electrician 22nd Jan 2019 Shift1
<b>Subject Name:</b>	Electrician
<b>Duration:</b>	150
<b>Total Marks:</b>	175
<b>Display Marks:</b>	No
<b>Share Answer Key With Delivery Engine:</b>	Yes
<b>Actual Answer Key:</b>	Yes
<b>Calculator:</b>	None
<b>Magnifying Glass Required?:</b>	No
<b>Ruler Required?:</b>	No
<b>Eraser Required?:</b>	No
<b>Scratch Pad Required?:</b>	No
<b>Rough Sketch/Notepad Required?:</b>	No
<b>Protractor Required?:</b>	No
<b>Show Watermark on Console?:</b>	Yes
<b>Highlighter:</b>	No
<b>Auto Save on Console?:</b>	No

**Part A**

<b>Group Number :</b>	1
<b>Group Id :</b>	70796647
<b>Group Maximum Duration :</b>	90
<b>Group Minimum Duration :</b>	90
<b>Revisit allowed for view? :</b>	No
<b>Revisit allowed for edit? :</b>	No
<b>Break time:</b>	0
<b>Group Marks:</b>	100

**Part A**

<b>Section Id :</b>	70796647
<b>Section Number :</b>	1
<b>Section type :</b>	Online
<b>Mandatory or Optional:</b>	Mandatory
<b>Number of Questions:</b>	100
<b>Number of Questions to be attempted:</b>	100
<b>Section Marks:</b>	100
<b>Display Number Panel:</b>	Yes
<b>Group All Questions:</b>	No

Sub-Section Id: 70796647  
Question Shuffling Allowed : Yes

Question Number : 1 Question Id : 7079664026 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Who was the captain of the India Men's National Field Hockey Team during the 2018 Men's Hockey World Cup held in Bhubaneswar?

Options :

1.  Manpreet Singh
2.  Manoj Kumar
3.  Devendro Singh
4.  Shiva Thapa

Question Number : 2 Question Id : 7079664027 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Which country is the largest producer of the cocoa crop, the main ingredient used to make chocolate?

Options :

1.  Ivory Coast
2.  Ghana
3.  Brazil
4.  Switzerland

Question Number : 3 Question Id : 7079664028 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Chile is a part of which continent?

Options :

1.  North America
2.  Europe
3.  South America
4.  Asia

Question Number : 4 Question Id : 7079664029 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

1. ✘ Qutb-ud-din Aibak
2. ✔ Muhammad Quli Qutb Shah
3. ✘ Akbar
4. ✘ Jahangir

Question Number : 5 Question Id : 7079664030 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

In which year was the Eiffel Tower built, to celebrate the 100-year anniversary of the French Revolution?

Options :

1. ✔ 1889
2. ✘ 1900
3. ✘ 1886
4. ✘ 1913

Question Number : 6 Question Id : 7079664031 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Nadia Murad and Denis Mukwege won the Nobel Prize in 2018 for which discipline?

Options :

1. ✘ Economic Sciences
2. ✘ Chemistry
3. ✘ Physics
4. ✔ Peace

Question Number : 7 Question Id : 7079664032 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Which of the following is NOT a power of the President of India?

Options :

1. ✘ Appointment of Governors of states
2. ✘ Declaring a national emergency
3. ✘ Appointment of the Chief Justice

4. ✓ Appointment of the Chief Minister of Union Territories

Question Number : 8 Question Id : 7079664033 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Where was the BRICS Summit held in 2018?

Options :

1. ✗ Brazil

2. ✓ South Africa

3. ✗ India

4. ✗ China

Question Number : 9 Question Id : 7079664034 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Who is the Admiral of the Indian Navy as of December 2018?

Options :

1. ✗ Arup Raha

2. ✗ Robin K Dhowan

3. ✓ Sunil Lanba

4. ✗ Birender Singh Dhanoa

Question Number : 10 Question Id : 7079664035 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Which of the following is NOT a traditional dance of Rajasthan?

Options :

1. ✗ Ghoomar

2. ✗ Kathputli

3. ✓ Dumhal

4. ✗ Gair

Question Number : 11 Question Id : 7079664036 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

The Fahrenheit and Celsius scales converge at \_\_\_\_\_.

Options :

1. ✘  $-20^\circ$

2. ✘  $-30^\circ$

3. ✔  $-40^\circ$

4. ✘  $-50^\circ$

Question Number : 12 Question Id : 7079664037 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

One mile is approximately equivalent to \_\_\_\_\_ kilometres.

Options :

1. ✘ 0.8

2. ✘ 1.2

3. ✘ 1.4

4. ✔ 1.6

Question Number : 13 Question Id : 7079664038 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

An object of mass 1 kg is moving with a velocity 10 m/s. Find the kinetic energy of the object.

Options :

1. ✔ 50 J

2. ✘ 100 J

3. ✘ 10 J

4. ✘ 5 J

Question Number : 14 Question Id : 7079664039 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

\_\_\_\_\_ is defined as the time rate at which work is done or energy is transferred.

Options :

1. ✔ Power

2. ✘ force

3. ✘ distance

4. ✘ displacement

Question Number : 15 Question Id : 7079664040 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

The potential energy of a 20-kg object at height  $h$  is 600 J. The value of  $h$  is \_\_\_\_\_. (Take  $g = 10 \text{ m/s}^2$ .)

Options :

1. ✘ 1 m
2. ✘ 2 m
3. ✔ 3 m
4. ✘ 30 m

Question Number : 16 Question Id : 7079664041 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Let  $W_e$  and  $W_m$  be the weight of an object on the Earth and the Moon, respectively. Then, the ratio  $W_e/W_m$  is equal to

\_\_\_\_\_.

Options :

1. ✘ 1
2. ✘ 2
3. ✘ 4
4. ✔ 6

Question Number : 17 Question Id : 7079664042 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

A block of wood floats on water, with 65% of its volume under water. Its density (in  $\text{kg/m}^3$ ) is approximately:

Options :

1. ✘  $0.25 \times 10^2$
2. ✘  $0.35 \times 10^2$
3. ✘  $0.55 \times 10^3$
4. ✔  $0.65 \times 10^3$

Question Number : 18 Question Id : 7079664043 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

The mass density or density of a material is defined as its \_\_\_\_\_.

Options :



1. ✘ mass per unit area
2. ✔ mass per unit volume
3. ✘ mass per unit length
4. ✘ mass per ampere

Question Number : 19 Question Id : 7079664044 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

When 1 kg of water is cooled from  $4^{\circ}\text{C}$  to  $0^{\circ}\text{C}$ , its volume \_\_\_\_\_.

Options :

1. ✘ remains the same
2. ✔ increases
3. ✘ decreases
4. ✘ first decreases and then increases

Question Number : 20 Question Id : 7079664045 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

The density of fresh water is \_\_\_\_\_ the density of salt water.

Options :

1. ✔ less than
2. ✘ more than
3. ✘ equal to
4. ✘ negligible compared with

Question Number : 21 Question Id : 7079664046 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

A small angled surface formed between two surfaces is called a \_\_\_\_\_.

Options :

1. ✘ chuck
2. ✘ collar
3. ✔ chamfer

4. ✘ contour

Question Number : 22 Question Id : 7079664047 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

A/an \_\_\_\_\_ angle is the angle between two planes.

Options :

1. ✘ offset

2. ✔ dihedral

3. ✘ polar

4. ✘ spline

Question Number : 23 Question Id : 7079664048 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical [www.exammix.com](http://www.exammix.com)

In third-angle projection, \_\_\_\_\_.

Options :

1. ✘ the object lies in the first quadrant

2. ✘ the object lies between the observer and the plane of projection

3. ✔ the plane of projection lies between the object and the observer

4. ✘ the object lies in the second quadrant

Question Number : 24 Question Id : 7079664049 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

The sum of all internal angles of a quadrilateral is:

Options :

1. ✘ 720°

2. ✘ 180°

3. ✘ 540°

4. ✔ 360°

Question Number : 25 Question Id : 7079664050 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Which of the following is the approximate ratio of length to breadth of any standard Engineering drawing sheet?

Options :



1. ✘  $1 : \sqrt{2}$

2. ✔  $2 : \sqrt{2}$

3. ✘  $1 : \sqrt{3}$

4. ✘  $3 : \sqrt{3}$

Question Number : 26 Question Id : 7079664051 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

\_\_\_\_\_ is a mode of heat transfer by actual motion of matter.

Options :

1. ✘ Conduction

2. ✔ Convection

3. ✘ Radiation

4. ✘ Vaporisation

Question Number : 27 Question Id : 7079664052 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Conduction and convection modes of heat transfer CANNOT operate between bodies separated by \_\_\_\_\_.

Options :

1. ✘ water

2. ✘ ice

3. ✘ aluminium

4. ✔ vacuum

Question Number : 28 Question Id : 7079664053 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

\_\_\_\_\_ is the unit of thermal conductivity.

Options :

1. ✘  $J \cdot s^{-1} \cdot K$

2. ✘  $J \cdot s \cdot K$

3. ✔  $J \cdot s^{-1} \cdot m^{-1} \cdot K^{-1}$

4. ✘  $J^{-1} \cdot s^{-1} \cdot kg^{-1}$

Question Number : 29 Question Id : 7079664054 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Heat supplied to a system is measured in \_\_\_\_\_.

Options :

1. ✘ degrees kelvin

2. ✘ amperes

3. ✘ kilowatts

4. ✔ joules

Question Number : 30 Question Id : 7079664055 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

\_\_\_\_\_ is the heat per unit mass required to change a substance from solid into liquid at the same temperature and pressure.

Options :

1. ✘ Regelation

2. ✘ Sublimation

3. ✘ Vaporisation

4. ✔ Latent heat of fusion

Question Number : 31 Question Id : 7079664056 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Raising the head to straighten the neck is called \_\_\_\_\_.

Note: For this question, discrepancy is found in question/answer. So, this question is ignored for all candidates.

Options :

1. wrist stretch

2. finger fan

3. pectoral stretch

4. chin tuck

Question Number : 32 Question Id : 7079664057 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

A video or photo experiencing a sudden spike in popularity in a short period of time is termed as \_\_\_\_\_.

Options :

1.  viral
2.  virus
3.  Wi-Fi
4.  spam

Question Number : 33 Question Id : 7079664058 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Unsolicited electronic messages sent for marketing purposes are called \_\_\_\_\_.

Options :

1.  spam
2.  unzip
3.  URL
4.  virus

Question Number : 34 Question Id : 7079664059 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

The efficiency of a machine can never be \_\_\_\_\_.

Options :

1.  10%
2.  50%
3.  75%
4.  100%

Question Number : 35 Question Id : 7079664060 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

In practice, the work output of a machine is \_\_\_\_\_ the work input due to the effect of friction.

Options :

1.  always more than
2.  always zero to

3. ✓ always less than

4. ✗ opposite to

**Question Number : 36 Question Id : 7079664061 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

An effort of 5 units is applied on a 10-unit load. The distance travelled by the effort and the load are 50 and 20 units, respectively. Find the efficiency of this machine.

**Options :**

1. ✗ 50%

2. ✗ 60%

3. ✗ 70%

4. ✓ 80%

**Question Number : 37 Question Id : 7079664062 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

The force applied to overcome a load is called \_\_\_\_\_.

**Options :**

1. ✗ Weight

2. ✗ mechanical advantage

3. ✓ effort

4. ✗ velocity ratio

**Question Number : 38 Question Id : 7079664063 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

An object starts from rest at  $x = 0$  m and  $t = 0$  s. It moves with a constant acceleration of  $2 \text{ m/s}^2$  along the x-axis. What is its average velocity between time 1 s and 5 s?

**Options :**

1. ✗ 2 m/s

2. ✗ 4 m/s

3. ✓ 6 m/s

4. ✗ 8 m/s

Question Number : 39 Question Id : 7079664064 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

A 100-g block of lead is heated from  $20^{\circ}\text{C}$  to  $50^{\circ}\text{C}$ . Calculate the amount of heat transferred to the block (specific heat of lead =  $127 \text{ J}\cdot\text{kg}^{-1}\cdot\text{K}^{-1}$ ).

Options :

1. ✘ 127 J
2. ✘ 230 J
3. ✘ 321 J
4. ✔ 381 J

Question Number : 40 Question Id : 7079664065 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

A brick wall having a thickness of 24 cm has an inner surface temperature of  $25^{\circ}\text{C}$  and an outer surface temperature of  $5^{\circ}\text{C}$ . The rate of heat loss through per square metre of the wall (thermal conductivity =  $0.15 \text{ J}/(\text{s}\cdot\text{m}\cdot\text{K})$ ) is:

Options :

1. ✔ 12.5 J/s
2. ✘ 18.2 J/s
3. ✘ 20.0 J/s
4. ✘ 23.0 J/s

Question Number : 41 Question Id : 7079664066 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Two resistors, one of  $20 \Omega$  and the other of  $30 \Omega$ , are connected in parallel. This combination is connected in series with an  $8\text{-}\Omega$  resistor and a 12-V battery. The current through the  $20\text{-}\Omega$  resistor is:

Options :

1. ✘ 0.12 A
2. ✘ 0.24 A
3. ✔ 0.36 A
4. ✘ 0.60 A

Question Number : 42 Question Id : 7079664067 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

A cylindrical wire of length  $L$  and radius  $r$  has a resistance  $R$ . The resistance of another wire of the same material but half its length and half its radius will be:

Options :



1. ✘ R/2
2. ✘ R
3. ✔ 2R
4. ✘ 4R

Question Number : 43 Question Id : 7079664068 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

A ball is thrown vertically upward with a speed of 30 m/s. The magnitude of its displacement after 4 s will be \_\_\_\_\_

(Take  $g = 10 \text{ m/s}^2$ .)

Options :

1. ✘ 15 m
2. ✘ 30 m
3. ✔ 40 m
4. ✘ 50 m

Question Number : 44 Question Id : 7079664069 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

\_\_\_\_\_ is defined as the total path length travelled by an object divided by the total time interval during which the motion has taken place.

Options :

1. ✘ Instantaneous velocity
2. ✘ Instantaneous acceleration
3. ✔ Average speed
4. ✘ Uniform acceleration

Question Number : 45 Question Id : 7079664070 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

The area under the velocity–time curve between times  $t_1$  and  $t_2$  is equal to the \_\_\_\_\_ of the object during that interval of time.

Options :

1. ✘ acceleration
2. ✘ average velocity



3. ✘ force

4. ✔ magnitude of displacement

Question Number : 46 Question Id : 7079664071 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

\_\_\_\_\_ states that the electric current flowing through a metallic wire is directly proportional to the potential difference 'V' across its ends provided its temperature remains the same.

Options :

1. ✘ Ampere's law

2. ✘ Coulomb's law

3. ✘ Joule's law

4. ✔ Ohm's law

Question Number : 47 Question Id : 7079664072 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Identify the conductor having the lowest resistivity.

Options :

1. ✔ Silver

2. ✘ Aluminium

3. ✘ Copper

4. ✘ Iron

Question Number : 48 Question Id : 7079664073 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Identify the conductor having the highest resistivity.

Options :

1. ✘ Copper

2. ✘ Silver

3. ✘ Aluminium

4. ✔ Mercury

Question Number : 49 Question Id : 7079664074 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Two resistors, each of  $20\ \Omega$ , are connected in parallel, and this combination is connected across a 40-V supply. Find the voltage across each resistor.

Options :

1. ✘ 20 V
2. ✘ 30 V
3. ✔ 40 V
4. ✘ 10 V

Question Number : 50 Question Id : 7079664075 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Two  $100\text{-}\Omega$  resistors are connected in parallel, and this combination is connected across a 40-V supply. Find the current supplied by the voltage source.

Options :

1. ✘ 1.1 A
2. ✔ 0.8 A
3. ✘ 1.5 A
4. ✘ 1.75 A

Question Number : 51 Question Id : 7079664076 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The smallest number that can be added to 56789 to make it divisible by 345 is  $x$ . What is the sum of the digits of  $x$ ?

Options :

1. ✘ 9
2. ✔ 10
3. ✘ 11
4. ✘ 13

Question Number : 52 Question Id : 7079664077 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The unit's digit of  $(1373)^{36} - (1442)^{20}$  is:

Options :

1. ✘ 2
2. ✘ 3

3. ✘ 4

4. ✔ 5

Question Number : 53 Question Id : 7079664078 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

A television set was purchased for ₹ 650, and another ₹ 50 were spent on its transportation. At what price should it be sold so that the profit earned would be 20%?

Options :

1. ✘ ₹ 780

2. ✘ ₹ 810

3. ✔ ₹ 840

4. ✘ ₹ 870

Question Number : 54 Question Id : 7079664079 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

An article was sold for ₹ 576 when its cost price was ₹ 600. What is the percentage loss?

Options :

1. ✘ 3%

2. ✘ 3.50%

3. ✔ 4%

4. ✘ 4.50%

Question Number : 55 Question Id : 7079664080 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

₹ 150 of Amit's pocket money was spent on a pair of shoes and ₹ 75 on a watch. The total amount spent was three-fourth of his total pocket money. What was the amount received by Amit as pocket money?

Options :

1. ✘ ₹ 250

2. ✔ ₹ 300

3. ✘ ₹ 400

4. ✘ ₹ 375

Question Number : 56 Question Id : 7079664081 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

The HCF of two numbers is 9 and their LCM is 252. The sum of numbers is:

Note: For this question, discrepancy is found in question/answer. So, this question is ignored for all candidates.

Options :

1. 78
2. 79
3. 108
4. 90

Question Number : 57 Question Id : 7079664082 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the area of a square whose diagonal measures 4 cm?

Options :

1. ✘  $4 \text{ cm}^2$
2. ✘  $6 \text{ cm}^2$
3. ✔  $8 \text{ cm}^2$
4. ✘  $10 \text{ cm}^2$

Question Number : 58 Question Id : 7079664083 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Calculate the length of the diagonal of a square if the area of the square is  $32 \text{ cm}^2$ .

Options :

1. ✘ 4 cm
2. ✔ 8 cm
3. ✘ 12 cm
4. ✘ 16 cm

Question Number : 59 Question Id : 7079664084 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A train travels 45 m in 3 s. What is the speed of the train in km/h?

Options :

1. ✘ 48

2. ✘ 50.5

3. ✘ 51

4. ✔ 54

Question Number : 60 Question Id : 7079664085 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

A sum of ₹1,250 amounts to ₹1,550 in 4 years. What is the simple interest rate?

Options :

1. ✘ 4%

2. ✔ 6%

3. ✘ 8%

4. ✘ 1%

Question Number : 61 Question Id : 7079664086 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

What will be the simple interest on ₹1,450 invested for 5 years at a rate of 5% pa?

Options :

1. ✘ ₹ 365

2. ✔ ₹ 362.5

3. ✘ ₹ 360

4. ✘ ₹ 365.5

Question Number : 62 Question Id : 7079664087 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

If  $a + b = 7$  and  $ab = 12$ , then  $a^2 + b^2$  is equal to:

Options :

1. ✘ 24

2. ✘ 24.5

3. ✔ 25

4. ✘ 25.5

Question Number : 63 Question Id : 7079664088 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

The difference between the roots of the equation  $x^2 - 6x - 16 = 0$  is:

Options :

1. ✘ 9

2. ✔ 10

3. ✘ 11

4. ✘ 12

Question Number : 64 Question Id : 7079664089 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

D is the midpoint of line segment AB. The co-ordinates of A and D are (2, 4) and (-1, 3), respectively. The co-ordinates of B are:

Options :

1. ✘ (3, 1)

2. ✘ (-5, 4)

3. ✔ (-4, 2)

4. ✘ (4, -5)

Question Number : 65 Question Id : 7079664090 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

The areas of two similar triangles  $\triangle XYZ$  and  $\triangle LMN$  are  $49 \text{ cm}^2$  and  $9 \text{ cm}^2$ , respectively. If  $LM = 9 \text{ cm}$ , then the length of  $XY$  is:

Options :

1. ✔ 21 cm

2. ✘ 7 cm

3. ✘ 49 cm

4. ✘ 14 cm

Question Number : 66 Question Id : 7079664091 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

How many degrees does the minute hand of a clock cover in the same time in which the second hand covers  $3240^\circ$ ?

Options :

1. ✘ 45



2. ✘ 48

3. ✘ 51

4. ✔ 54

Question Number : 67 Question Id : 7079664092 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Tap A can fill an empty swimming pool in 10 h. Tap B can fill it in 15 h. How much time will the two taps take to fill the empty pool together?

Options :

1. ✘ 5 h

2. ✘ 8 h

3. ✔ 6 h

4. ✘ 7 h

Question Number : 68 Question Id : 7079664093 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Two taps can fill an empty cistern in 8 min and 20 min, respectively. However, together, they take 30 min to fill it because of a leak. How much time will the leak take to empty a full cistern?

Options :

1. ✔ 120/17 min

2. ✘ 120/19 min

3. ✘ 140/19 min

4. ✘ 140/17 min

Question Number : 69 Question Id : 7079664094 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

If  $(4x + 5) : (3x + 11) = 13:17$ , then  $(5x + 4) : (4x - 1) = ?$

Options :

1. ✘ 3 : 2

2. ✔ 2 : 1

3. ✘ 4 : 3

4. ✘ 5 : 2

Question Number : 70 Question Id : 7079664095 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

15% of 120% of 150 is equal to:

Options :

1. ✘ 24
2. ✔ 27
3. ✘ 30
4. ✘ 33

Question Number : 71 Question Id : 7079664096 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Find the mean of the mode and the median of the given data.

15, 3, 8, 7, 6, 5, 5, 7, 18, 7

Options :

1. ✘ 5
2. ✘ 6
3. ✔ 7
4. ✘ 8

Question Number : 72 Question Id : 7079664097 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

A perfect square number can never have the digit \_\_\_\_\_ at the unit's place.

Options :

1. ✘ 1
2. ✘ 9
3. ✔ 3
4. ✘ 6

Question Number : 73 Question Id : 7079664098 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Two runners, A and B, cover the same distance at the speeds of 15 km/h and 16 km/h, respectively. If A takes 16 min more than B, then the distance (in km) is:

Options :

1. ✘ 48

2. ✘ 54

3. ✔ 64

4. ✘ 70

**Question Number : 74 Question Id : 7079664099 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

A and B can complete a task in 30 days, whereas A, B and C can complete the same task in 21 days. In how many days can C alone complete the task?

**Options :**

1. ✘ 65

2. ✔ 70

3. ✘ 72.5

4. ✘ 67.5

**Question Number : 75 Question Id : 7079664100 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

The average age of a family of 5 members is 20 years, with the youngest member being 5 years old. What was the average age (in years) of the family just before the birth of the youngest member?

**Options :**

1. ✘ 18.25

2. ✘ 18.5

3. ✔ 18.75

4. ✘ 19

**Question Number : 76 Question Id : 7079664101 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

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

Nose: Smell:: Ears : ?

**Options :**

1. ✘ Two

2. ✔ Sound

3. ✘ Deaf

4. ✘ Ear-ring

Question Number : 77 Question Id : 7079664102 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

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

400: 20:: 100: ?

Options :

1. ✘ 50

2. ✔ 10

3. ✔ 5

4. ✘ 1

Note: For this question, ambiguity is found in question/answer. Candidate will get full marks for this question if any of the correct options are chosen.

Question Number : 78 Question Id : 7079664103 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

A series is given, with one term missing. Choose the correct alternative from the given ones that will complete the series.

DE, GH, JK, MN, ?

Options :

1. ✘ OP

2. ✘ QR

3. ✘ RP

4. ✔ PQ

Question Number : 79 Question Id : 7079664104 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

A series is given, with one number missing. Choose the correct alternative from the given ones that will complete the series.

9.3, 10.1, 10.9, 11.7, ?, 13.3

Options :

1. ✘ 12.2

2. ✘ 12.7

3. ✔ 12.5

4. ✘ 12.9

**Question Number : 80 Question Id : 7079664105 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

In a code language, 349 means 'painting is art', 749 means 'drawing is art' and 573 means 'painting and drawing'. Find the code for 'and'.

**Options :**

1. ✘ 3

2. ✘ 7

3. ✘ 9

4. ✔ 5

**Question Number : 81 Question Id : 7079664106 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

In a code language, if MYTHIC is written as OAVJKE, then how will FOG be written as in the same language?

**Options :**

1. ✘ PNM

2. ✘ KIH

3. ✘ FDC

4. ✔ HQI

**Question Number : 82 Question Id : 7079664107 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

If '+' represents '×', '-' represents '+', '×' represents '÷' and '÷' represents '-', then find the value of the following expression.

$$6 \div 8 \times 2 - 4$$

**Options :**

1. ✘ 12

2. ✘ 18

3. ✘ 24

4. ✓ 6

Question Number : 83 Question Id : 7079664108 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Which two signs should be interchanged to correct the given equation?

$$3 \times 6 + 2 - 4 \div 8 = 13$$

Options :

1. ✗  $\times$  and  $-$

2. ✗  $+$  and  $\times$

3. ✗  $+$  and  $-$

4. ✓  $\div$  and  $+$

Question Number : 84 Question Id : 7079664109 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

If  $C \$ D$  means C is the husband of D,  $C \& D$  means C is the mother of D and  $C \% D$  means C is the son of D, then what does  $X \% Z \$ W \& Y$  mean if W has only one son?

Options :

1. ✗ Y is the brother of X

2. ✓ X is the brother of Y

3. ✗ X is the son of Y

4. ✗ Y is the son of X

Question Number : 85 Question Id : 7079664110 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

If  $G + H$  means G is the son H,  $G - H$  means G is the husband of H and  $G * H$  means G is the sister of H, which of the following shows that J is the mother-in-law of N?

Options :

1. ✓  $N - M * K + J$

2. ✗  $N * M - K + J$

3. ✗  $N + M - K * J$

4. ✗  $N + M * K - J$



Question Number : 86 Question Id : 7079664111 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Two statements are given, followed by two conclusions, I and II. Consider the statements to be true even if they seem to be at variance with commonly known facts, and decide which of the given conclusions, if any, follow (s) from the given statements.

**Statement 1:** All bees are hornets.

**Statement 2:** Some bees are wasps.

**Conclusion I:** Some hornets are wasps.

**Conclusion II:** Some wasps are bees.

Options :

1. ✘ Only conclusion I follows.
2. ✘ Only conclusion II follows.
3. ✔ Both conclusions I and II follow.
4. ✘ Neither conclusion I nor II follows.

Question Number : 87 Question Id : 7079664112 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Two statements are given, followed by three conclusions, I, II and III. Consider the statements to be true even if they seem to be at variance with commonly known facts, and decide which of the given conclusions, if any, follow (s) from the given statements.

**Statement 1:** No boats are ships.

**Statement 2:** All ship are steamers.

**Conclusion I:** Some boats are steamers.

**Conclusion II:** No ships are boats.

**Conclusion III:** Some steamers are ships.

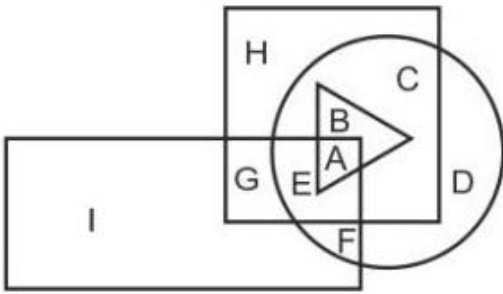
Options :

1. ✘ Only conclusions I and II follow.
2. ✔ Only conclusions II and III follow.
3. ✘ Only conclusions I and III follow.
4. ✘ All the conclusions, I, II and III, follow.

Question Number : 88 Question Id : 7079664113 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

In the following figure, the square represents dieticians, the triangle represents botanists, the circle represents psychologists and the rectangle represents Indians. Which set of letters represents the psychologists who are also botanists?

In the following figure, square represents Dieticians, triangle represents Botanists, circle represents Psychologists and rectangle represents Indians. Which set of letters represents Psychologists who are Botanists?



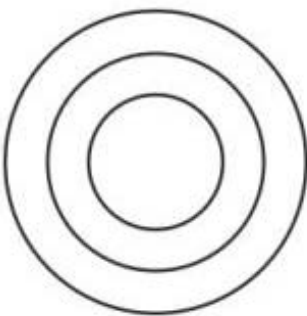
Options :

1. ✘ ABEC
2. ✘ AGE
3. ✔ AB
4. ✘ AEF

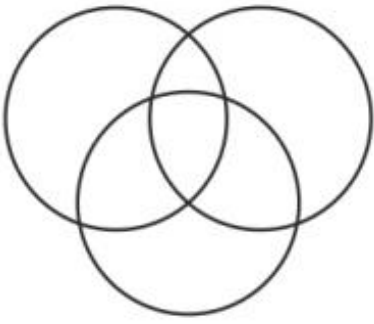
Question Number : 89 Question Id : 7079664114 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following Venn diagrams best represents the relationship between squares, quadrilaterals and geometrical figures?

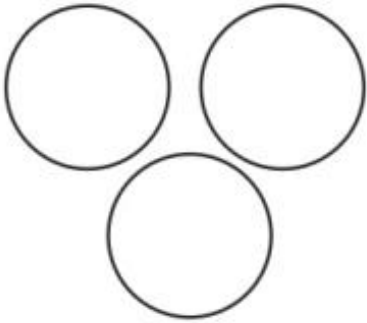
Options :



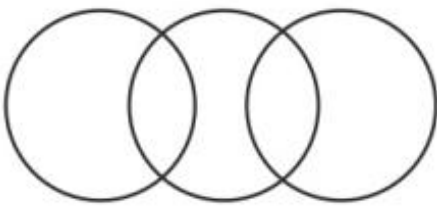
1. ✔



2. ✘



3. ✘



4. ✘

Question Number : 90 Question Id : 7079664115 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Read the given question carefully and decide which of the following statements is/are sufficient to answer the question.

**Question:** What was the share of the picnic cost to be borne by each student?

**Statements:**

I) The total cost of the picnic was ₹12,500, and the number of students who went for the picnic was 15.

II) If 3 fewer students would have gone, then the cost of the picnic per student would have increased by ₹120.

**Options :**

1. ✔ I alone is sufficient while II alone is not sufficient.

2. ✘ II alone is sufficient while I alone is not sufficient.

3. ✘ Either I or II is sufficient.

4. ✘ Neither I nor II is sufficient.

Question Number : 91 Question Id : 7079664116 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Given below is a statement followed by two conclusions numbered I and II. Assume everything in the statement to be true, and then decide which of the given conclusions logically follow (s) , beyond a reasonable doubt, from the information given in the statement.

**Statement:** The colour of blood is red due to the presence of red blood cells.

**Conclusion I:** If red blood cells are removed, blood will lose its red colour.

**Conclusion II:** Red blood cells will be red as long as they remain in the blood.

Options :

1.  Only conclusion I follows.
2.  Only conclusion II follows.
3.  Both conclusions I and II follow.
4.  Neither conclusion I nor II follows.

Question Number : 92 Question Id : 7079664117 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

In this question, a statement is given, followed by some conclusions given as options. Choose the conclusion that logically follows from the given statement.

**Statement:** The fear of punishment reduces instances of cheating during exams.

Options :

1.  Instances of cheating increase if exam is difficult.
2.  Punishment is a factor that controls incidences of cheating during exams.
3.  Invigilators are to be blamed if students are caught cheating during exams.
4.  Education has become rote learning, and hence, students cheat.

Question Number : 93 Question Id : 7079664118 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Find the odd letter cluster out of the given alternatives.

Options :

1.  IKM



2. ✓ GEC

3. ✗ OQS

4. ✗ UWY

Question Number : 94 Question Id : 7079664119 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Find the odd word out of the given alternatives.

Options :

1. ✗ Tree

2. ✗ Herb

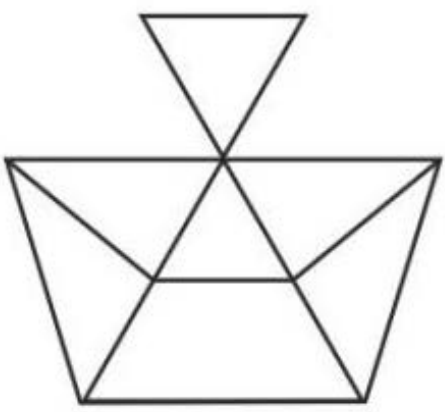
3. ✓ Flower

4. ✗ Shrub

Question Number : 95 Question Id : 7079664120 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

What is the minimum number of lines required to make the given image?

What is the minimum number of lines required to make the given image?



Options :

1. ✗ 9

2. ✗ 11

3. ✓ 10

4. ✗ 12

Question Number : 96 Question Id : 7079664121 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Read the given information carefully and answer the question that follows.

Q, R, S and T are sitting around a round table. Q is sitting next to R. S is sitting to the left of T. Q is not sitting next to T.

Which of the following statements is INCORRECT?

Options :

1. ✗ S is facing R.

2. ✗ Q is facing T.

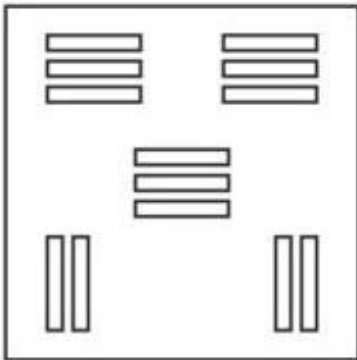
3. ✓ Q is to the left of R.

4. ✗ S is to the right of Q.

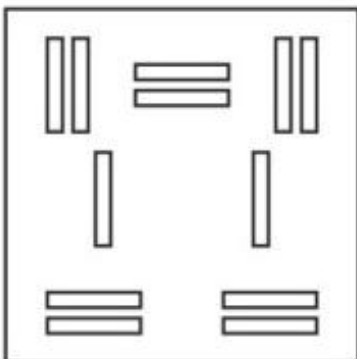
Question Number : 97 Question Id : 7079664122 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Choose the figure that is different from the rest.

Options :

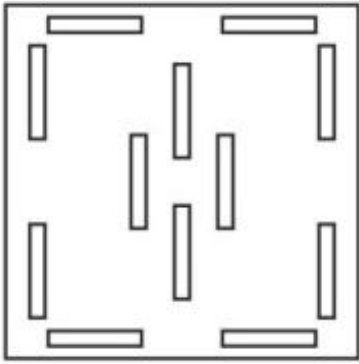


1. ✓

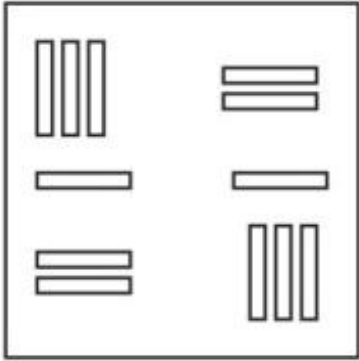


2. ✗





3. ✘

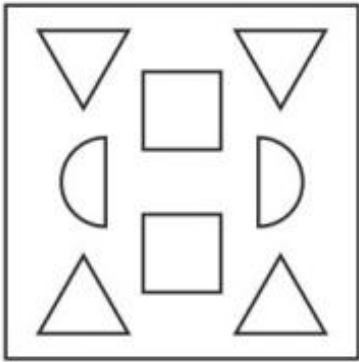


4. ✘

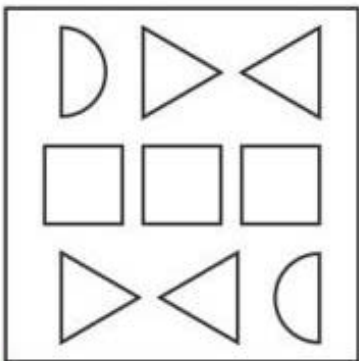
Question Number : 98 Question Id : 7079664123 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
 Single Line Question Option : No Option Orientation : Vertical

Choose the figure that is different from the rest.

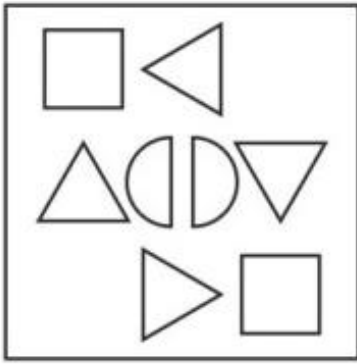
Options :



1. ✘



2. ✔



3. ✘



4. ✘

Question Number : 99 Question Id : 7079664124 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A taxi travels 7 km south, then turns towards the east and travels 5 km, then turns towards the north and travels 7 km and then turns to its left and travels 2 km. What is the location of the taxi now with respect to its starting position?

Options :

1. ✔ 3 km towards the east
2. ✘ 7 km towards the west
3. ✘ 7 km towards the east
4. ✘ 3 km towards the west

Question Number : 100 Question Id : 7079664125 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Two fielders, I and J, start from the same point on a ground. I runs 20 m north and then turns towards the east and runs 35 m. He then turns to his right and runs 15 m. Meanwhile, J runs 30 m north and then turns right and runs 35 m. Where is J now with respect to I?

Options :

1. ✘ 25 m towards the south
2. ✘ 35 m towards the north
3. ✔ 25 m towards the north

4. ✘ 35 m towards the south

Part B

Group Number : 2  
Group Id : 70796648  
Group Maximum Duration : 60  
Group Minimum Duration : 60  
Revisit allowed for view? : No  
Revisit allowed for edit? : No  
Break time: 0  
Group Marks: 75

Electrician

Section Id : 70796648  
Section Number : 1  
Section type : Online  
Mandatory or Optional: Mandatory  
Number of Questions: 75  
Number of Questions to be attempted: 75  
Section Marks: 75  
Display Number Panel: Yes  
Group All Questions: No

Sub-Section Number: 1  
Sub-Section Id: 70796648  
Question Shuffling Allowed : Yes

Question Number : 101 Question Id : 7079664126 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Trickle charging of a storage battery helps to:

Options :

1. ✘ increase its reserve capacity
2. ✘ prevent sulphation
3. ✘ maintain proper electrolyte level
4. ✔ to attain a fully charged state

Question Number : 102 Question Id : 7079664127 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

The lowest scale probe suitable for measuring 250V DC using a CRO with I/P limit of 30V is:

Options :

1. ✘ 1X
2. ✔ 10X
3. ✘ 100X
4. ✘ 1000X

Question Number : 103 Question Id : 7079664128 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

How many diodes are required to build a full wave rectifier from a Centre Tap transformer?

Options :

1. ✘ 3
2. ✘ 4
3. ✔ 2
4. ✘ 1

Question Number : 104 Question Id : 7079664129 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

For normal operation of NPN transistor:

Options :

1. ✔  
Emitter-Base Junction must be forward biased and Base-collector junction must be reverse biased
2. ✘  
Emitter Base Junction must be forward biased and Base-collector junction must be forward biased
3. ✘  
Emitter Base Junction must be reverse biased and Base-collector junction must be reverse biased
4. ✘  
Emitter Base Junction must be reverse biased and Base-collector junction must be forward biased

Question Number : 105 Question Id : 7079664130 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

The main purpose of flux in soldering is to:

Options :

1. ✔ keep the metal surface clean and oxide – free
2. ✘ ensure proper texture

3. ✘ reduce temperature
4. ✘ reduce melting point

Question Number : 106 Question Id : 7079664131 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

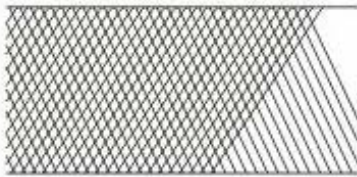
Choose the type of cable used for domestic appliances from the given options.

Options :

1. ✘ Armoured Cable
2. ✔ Round Flexible Cable
3. ✘ Submersible Flat Cable
4. ✘ Shielded Cable

Question Number : 107 Question Id : 7079664132 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Identify the type of file shown in the given figure.



Options :

1. ✘ RASP Cut File
2. ✔ Double Cut File
3. ✘ Curved Cut File
4. ✘ Single Cut File

Question Number : 108 Question Id : 7079664133 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Induced low voltage on metal equipment which causes low shock can be prevented using:

Options :

1. ✔ earthing
2. ✘ neutral



- 3. ✘ phase line
- 4. ✘ insulated footwear

Question Number : 109 Question Id : 7079664134 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

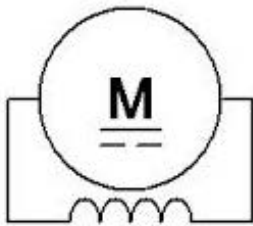
How is a Lissajous pattern created?

Options :

- 1. ✘ By drawing square wave and sine wave on the same axis
- 2. ✘ By drawing two square waves on different axis
- 3. ✔ By drawing two sine waves which are at right angles to each other
- 4. ✘ By drawing two sine waves on the same axis

Question Number : 110 Question Id : 7079664135 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The symbol in the given figure shows a:



Options :

- 1. ✔ DC motor
- 2. ✘ 3-phase induction motor
- 3. ✘ Servo motor
- 4. ✘ Synchronous motor

Question Number : 111 Question Id : 7079664136 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Grooves in cleat wiring are made of \_\_\_\_\_.

Options :

- 1. ✔ porcelain
- 2. ✘ glass



3. ✘ steel

4. ✘ copper

Question Number : 112 Question Id : 7079664137 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

What happens when back EMF of a DC motor vanishes suddenly?

Options :

1. ✘ The motor will stop

2. ✘ The motor will continue to run

3. ✘ The motor will become noisy

4. ✔ The motor armature will burn

Question Number : 113 Question Id : 7079664138 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

The turns ratio of an isolation transformer is:

Options :

1. ✘ 1 : 2

2. ✘ 2 : 1

3. ✘ 1 : 3

4. ✔ 1 : 1

Question Number : 114 Question Id : 7079664139 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

A series capacitance voltmeter can measure:

Options :

1. ✘ DC voltage

2. ✘ DC current

3. ✘ AC current

4. ✔ AC voltage

Question Number : 115 Question Id : 7079664140 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Ammeter provides the path for:

Options :

1.  Maximum current
2.  Minimum current
3.  Maximum voltage
4.  Minimum voltage

Question Number : 116 Question Id : 7079664141 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

If the armature of a DC motor has 39 slots with 12 conductors per slot. Then the total number of conductors are \_\_\_\_\_.

Options :

1.  568
2.  468
3.  51
4.  27

Question Number : 117 Question Id : 7079664142 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

For which of the following purposes are low voltage lamps used?

Options :

1.  Stadium lighting
2.  Industrial lighting
3.  Automotive lighting
4.  Flood lighting

Question Number : 118 Question Id : 7079664143 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Which pliers are most suitable for cutting hard wires?

Options :

1.  Wire strippers
2.  Diagonal cutters

3. ✘ Long nose pliers

4. ✘ Locking pliers

Question Number : 119 Question Id : 7079664144 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Which among the following is the standard voltage used for primary distribution?

Options :

1. ✔ 11 kV

2. ✘ 8 kV

3. ✘ 15 kV

4. ✘ 1 kV

Question Number : 120 Question Id : 7079664145 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Short \_\_\_\_\_ Compound Generator is a type of DC generator.

Options :

1. ✘ Series

2. ✔ Shunt

3. ✘ Negative

4. ✘ Permanent

Question Number : 121 Question Id : 7079664146 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

In Separately Excited Generator, the field windings are connected in:

Options :

1. ✘ Series with source

2. ✔ Shunt with source

3. ✘ open circuit

4. ✘ close circuit

Question Number : 122 Question Id : 7079664147 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Series Generators are generally NOT used because their terminal voltage:

Options :

1. ✓ varies with load variation
2. ✗ does not vary with load variation
3. ✗ is very high
4. ✗ is very low

Question Number : 123 Question Id : 7079664148 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Which of the following machines converts electrical energy into mechanical energy?

Options :

1. ✓ Synchronous motor
2. ✗ Dynamo
3. ✗ UPS
4. ✗ SMPS

Question Number : 124 Question Id : 7079664149 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

In an electric vehicle, a speedometer displays the speed of the vehicle, whereas a/an \_\_\_\_\_ displays the speed of the motor.

Options :

1. ✗ altimeter
2. ✓ tachometer
3. ✗ barometer
4. ✗ magnetometer

Question Number : 125 Question Id : 7079664150 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Synchronous motors are:

Options :

1. ✓ not self-starting motors
2. ✗ self-balancing motors

3. ✘ self- controlling motors

4. ✘ self-starting motors

Question Number : 126 Question Id : 7079664151 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

The speed of an induction motor falls slightly with the increase of:

Options :

1. ✘ capacitance

2. ✘ resistance

3. ✘ magnetic flux

4. ✔ load

Question Number : 127 Question Id : 7079664152 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

The recommended configuration for soldering is:

Options :

1. ✔ Lap joint

2. ✘ Butt joint

3. ✘ Scarf joint

4. ✘ Wave joint

Question Number : 128 Question Id : 7079664153 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Among the following, which metal is NOT usually preferred as flux for soldering applications?

Options :

1. ✘ Zinc chloride

2. ✘ Borax

3. ✘ Ammonium chloride

4. ✔ Lead

Question Number : 129 Question Id : 7079664154 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical



The conductor used in electrical wiring should be of \_\_\_\_\_.

Options :

1. ✓ copper
2. ✗ steel
3. ✗ iron
4. ✗ tin

Question Number : 130 Question Id : 7079664155 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In which of the following transformers, secondary winding is always kept closed?

Options :

1. ✗ Potential transformer
2. ✗ Power transformer
3. ✓ Current transformer
4. ✗ Distribution transformer

Question Number : 131 Question Id : 7079664156 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

An alkaline cell is discharged at a steady current of 4A for 12 hours. To restore it to its original state of charge, a steady current of 3A for 20 hours is required. Calculate Ah efficiency.

Options :

1. ✗ 70%
2. ✗ 60%
3. ✓ 80%
4. ✗ 90%

Question Number : 132 Question Id : 7079664157 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The positive plates of nickel iron cell are made up of:

Options :

1. ✓ Nickel hydroxide
2. ✗ Lead peroxide



3. ✘ Ferrous hydroxide

4. ✘ Potassium hydroxide

Question Number : 133 Question Id : 7079664158 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

A battery charger acts like a \_\_\_\_\_.

Options :

1. ✔ rectifier

2. ✘ converter

3. ✘ chopper

4. ✘ cycloconverter

Question Number : 134 Question Id : 7079664159 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

The function of line supports in power transmission is to \_\_\_\_\_.

Options :

1. ✔ maintain adequate clearance between energized conductors and the ground

2. ✘ to prevent lightning

3. ✘ fix or hold service lines

4. ✘ act as a stay or guy wire

Question Number : 135 Question Id : 7079664160 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Which of the following is NOT an insulator?

Options :

1. ✘ Glass

2. ✔ Gold

3. ✘ Wood

4. ✘ Mica

Question Number : 136 Question Id : 7079664161 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Speed control of Universal Motors can be done by:

Options :

1. ✓ Phase angle control
2. ✗ Magnitude control
3. ✗ Field flux control
4. ✗ Frequency control

Question Number : 137 Question Id : 7079664162 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Identify the type of joint shown in the picture from the given options.



Options :

1. ✗ Tee Joint
2. ✓ Rat Tail Joint
3. ✗ Britannia Joint
4. ✗ Scarfed Joint

Question Number : 138 Question Id : 7079664163 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

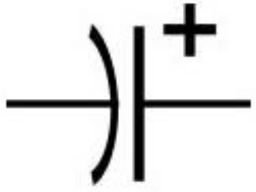
Identify the type of lug used for connecting an aluminum cable to a copper bus bar.

Options :

1. ✗ Copper Lug
2. ✓ Bi-Metallic Cable Lug
3. ✗ Bi-Metallic Cable Connector
4. ✗ Insulated Sleeve Lug

Question Number : 139 Question Id : 7079664164 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Which symbol is shown in the following image?



Options :

1. ✓ Polarized capacitor
2. ✗ Resistor
3. ✗ Capacitor
4. ✗ Battery

Question Number : 140 Question Id : 7079664165 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Which tool is used for finishing a circular hole?

Options :

1. ✗ Drill
2. ✗ Chisel
3. ✓ Half round file
4. ✗ Flat file

Question Number : 141 Question Id : 7079664166 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

What is the efficiency of a half wave rectifier?

Options :

1. ✗ 81.2%
2. ✓ 40.6%
3. ✗ 100%
4. ✗ 20%

Question Number : 142 Question Id : 7079664167 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Which device is used to increase the magnitude of the signal?

Options :

1. ✘ Rectifier
2. ✘ Inverter
3. ✔ Amplifier
4. ✘ Attenuator

Question Number : 143 Question Id : 7079664168 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

What is the SI unit of electromotive force?

Options :

1. ✔ Volt
2. ✘ Ampere
3. ✘ Newton
4. ✘ Webers

Question Number : 144 Question Id : 7079664169 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

During electrical work which one of the following avoids electrical shock

Options :

1. ✘ Metal rod
2. ✘ Wet wood
3. ✘ Wet rope
4. ✔ Dry wood

Question Number : 145 Question Id : 7079664170 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Which of the following meters CANNOT be used on DC circuits?

Options :

1. ✘ Mercury Motor meter
2. ✘ Voltmeter
3. ✔ Induction meter

4. ✘ Commutator motor meter

Question Number : 146 Question Id : 7079664171 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Which among the given is the insulation resistance test voltage required for equipment running on a maximum of 600 volts?

Options :

1. ✔ 1000 V

2. ✘ 500 V

3. ✘ 300 V

4. ✘ 100 V

Question Number : 147 Question Id : 7079664172 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

If the field of a DC shunt motor is opened while running, what will happen to the speed?

Options :

1. ✘ Speed of the motor will reduce

2. ✘ Speed of the motor will remain constant

3. ✔ Speed of the motor will become dangerously high

4. ✘ The motor will get locked

Question Number : 148 Question Id : 7079664173 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Which of the following acts as a protection from high voltage surges?

Options :

1. ✘ Thermal over load relay

2. ✔ Horn gaps

3. ✘ Conservator

4. ✘ Breather

Question Number : 149 Question Id : 7079664174 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

If a 200kVA, 2000/200V transformer has 100 turns in its secondary windings, then the number of turns in its primary are \_\_\_\_\_.

Options :



1. ✓ 1000 turns
2. ✗ 10 turns
3. ✗ 100 turns
4. ✗ 10000 turns

Question Number : 150 Question Id : 7079664175 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

How much energy is used by an 80% efficient, 2kW motor running at a peak load for 5 hours?

Options :

1. ✗ 2 kWh
2. ✗ 4 kWh
3. ✓ 8 kWh
4. ✗ 16 kWh

Question Number : 151 Question Id : 7079664176 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

In a 3-phase system balanced star connected system, how many wattmeters are sufficient to measure the total power?

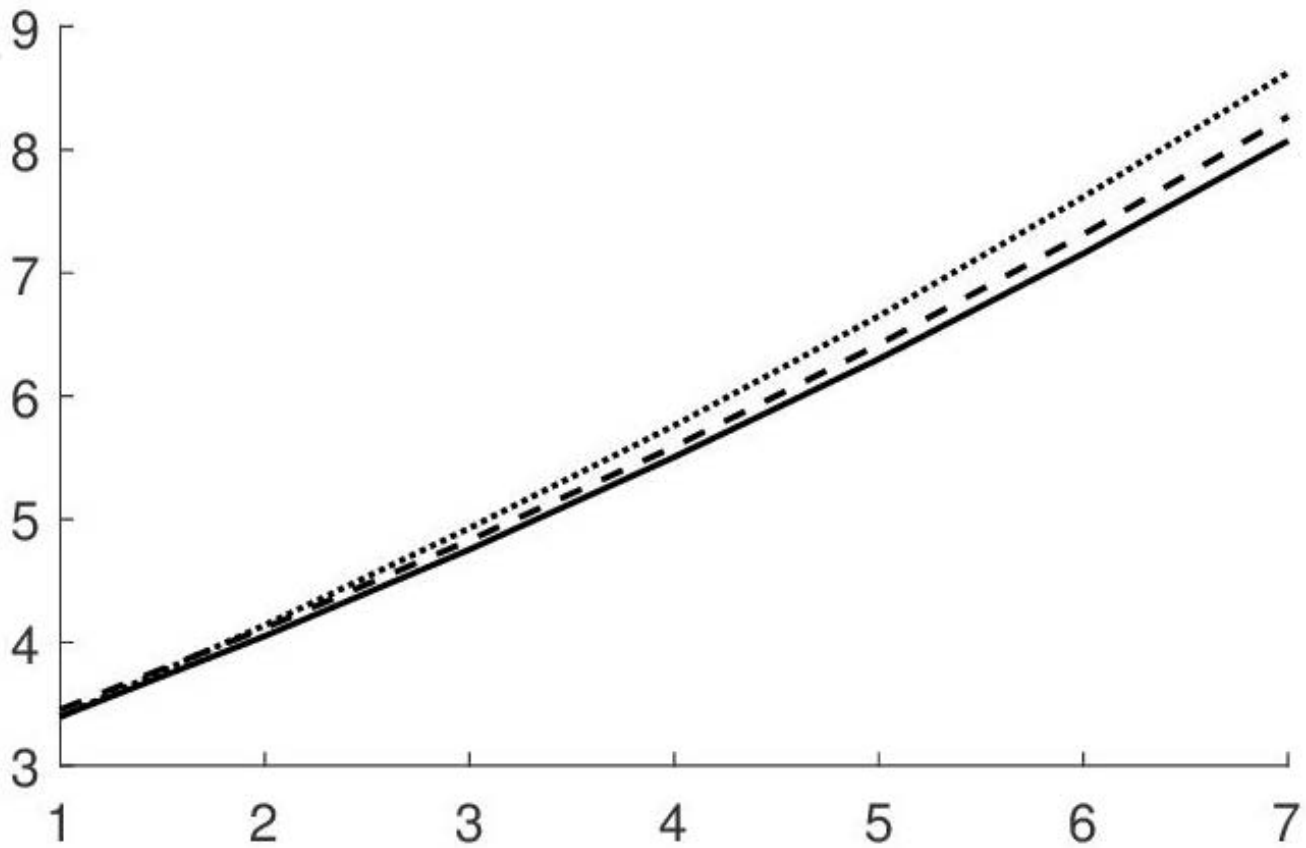
Options :

1. ✗ 1
2. ✓ 2
3. ✗ 3
4. ✗ 4

Question Number : 152 Question Id : 7079664177 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical



Identify the type of error the instrument shows as in the given figure.



x- axis : INPUT

y-axis : OUTPUT

Options :

1. ✘ Span Error
2. ✘ Hysteresis Error
3. ✘ Zero Error
4. ✔ Linearity Error

Question Number : 153 Question Id : 7079664178 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What happens when an alternator is said to be over excited?

Options :

1. ✘ Leading power factor
2. ✔ Lagging power factor
3. ✘ Unity power factor

4. ✘ Negative power factor

Question Number : 154 Question Id : 7079664179 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Which among the following starter CANNOT be used in DC motor?

Options :

1. ✘ Two point starter
2. ✘ Three point starter
3. ✘ Four point starter
4. ✔ Star delta starter

Question Number : 155 Question Id : 7079664180 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

The unit of lamp efficiency is:

Options :

1. ✔ Lumens/watt
2. ✘ Lux
3. ✘ Foot candle
4. ✘ lumen

Question Number : 156 Question Id : 7079664181 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

A coil is connected across a 100V, 50Hz supply. If the impedance of the circuit is 10 ohms, the current flowing through the circuit is \_\_\_\_\_.

Options :

1. ✘ 1A
2. ✔ 10A
3. ✘ 100A
4. ✘ 1000A

Question Number : 157 Question Id : 7079664182 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

If the resistance and impedance of the circuit is 10 ohms each, then its power factor is \_\_\_\_\_.

Options :

1.  unity
2.  leading
3.  lagging
4.  zero

Question Number : 158 Question Id : 7079664183 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

The speed of a squirrel cage motor \_\_\_\_\_.

Options :

1.  is changed by changing the number of stator poles
2.  is changed by changing the rotor pole
3.  varies as per the stator line current
4.  incorporates the resistance of rotor circuit

Question Number : 159 Question Id : 7079664184 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

The frequency necessary to operate an electric stove is:

Options :

1.  10 Hz
2.  20Hz
3.  40Hz
4.  50Hz

Question Number : 160 Question Id : 7079664185 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

What is the name of the temperature-regulating component of an automatic electric iron?

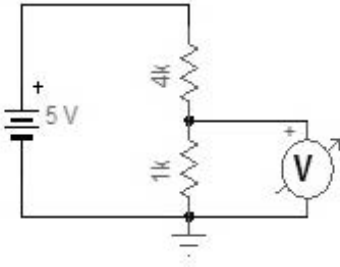
Options :

1.  Pressure plate
2.  Thermostat
3.  Solid plate

4. ✘ Heating element

Question Number : 161 Question Id : 7079664186 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the value displayed by the voltmeter in the given picture?



Options :

- 1. ✘ 1A
- 2. ✔ 1V
- 3. ✘ 4V
- 4. ✘ 4A

Question Number : 162 Question Id : 7079664187 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The inductive and capacitive reactances of an AC circuit are rated in \_\_\_\_\_.

Options :

- 1. ✘ amperes
- 2. ✔ ohms
- 3. ✘ volt ampere reactive(var)
- 4. ✘ watt

Question Number : 163 Question Id : 7079664188 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The pipe earthing resistance can be regulated by \_\_\_\_\_.

Options :

- 1. ✘ adding a Copper rod
- 2. ✔ adding salt and water
- 3. ✘ replacing the conductor

4. ✘ replacing the earthing rod

Question Number : 164 Question Id : 7079664189 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Which of the following electrodes is used for pipe earthing?

Options :

1. ✘ Copper solid rod

2. ✘ Copper plate

3. ✔ Hollow GI rod

4. ✘ Solid GI rod

Question Number : 165 Question Id : 7079664190 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

What will be the backup time of a UPS if it is backed by 150Ah, 12V battery driving a load of 150 W?

Options :

1. ✘ 10 h

2. ✔ 12 h

3. ✘ 14 h

4. ✘ 16 h

Question Number : 166 Question Id : 7079664191 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

A three Input NOR gate gives high O/P when \_\_\_\_\_ .

Options :

1. ✘ one I/P is high

2. ✘ one I/P is low

3. ✔ all I/P are low

4. ✘ all I/P are high

Question Number : 167 Question Id : 7079664192 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

\_\_\_\_\_ type of relay is preferred for phase fault on short transmission line.

Options :



1. ✘ Induction type
2. ✔ Reactance type
3. ✘ Impedance type
4. ✘ Reluctance type

Question Number : 168 Question Id : 7079664193 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Which of the given motors has the poorest speed control?

Options :

1. ✘ Differential compound motor
2. ✔ Series motor
3. ✘ Shunt motor
4. ✘ Cumulative compound motor

Question Number : 169 Question Id : 7079664194 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Insulator rings used for electricity delivery poles are made of \_\_\_\_\_.

Options :

1. ✘ Carbon Fiber
2. ✘ Bakelite
3. ✘ Epoxy
4. ✔ Ceramic

Question Number : 170 Question Id : 7079664195 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Among the following, which meter is regarded as insulation tester?

Options :

1. ✔ Megger
2. ✘ Insulator
3. ✘ Frequency meter

4. ✘ Wattmeter

Question Number : 171 Question Id : 7079664196 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

What should be the insulation resistance between the body of the electrical water heater and the connecting cable as per ISI?

Options :

1. ✘ 0.01 mega  $\Omega$

2. ✔ 1.00 mega  $\Omega$

3. ✘ 1.00 kilo  $\Omega$

4. ✘ 0.01 kilo  $\Omega$

Question Number : 172 Question Id : 7079664197 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

The function of thermostat in an electric oven is to control the \_\_\_\_\_.

Options :

1. ✘ voltage

2. ✔ temperature

3. ✘ frequency

4. ✘ power

Question Number : 173 Question Id : 7079664198 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Transformers of rating above 500 KVA are called

Options :

1. ✘ Varistor

2. ✘ Step-Up Transformer

3. ✘ Dimmer-Stat

4. ✔ Distribution Transformers

Question Number : 174 Question Id : 7079664199 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

During installation of a generator, one must carefully ensure that the generator terminals and all control wirings are correct so that the order of \_\_\_\_\_ matches the system.

Options :

1. ✓ Phase sequence
2. ✗ Frequency sequence
3. ✗ Power sequence
4. ✗ Amplitude sequence

Question Number : 175 Question Id : 7079664200 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Which of the following method CANNOT be used to reduce earth's resistance?

Options :

1. ✓ use of small size earth plates
2. ✗ use of large size earth plates
3. ✗ burying the earth plate deep
4. ✗ use of mixture of powder, charcoal and salt