

Railway Recruitment Board

Notations :

- Options shown in green color and with ✓ icon are correct.
- Options shown in red color and with ✘ icon are incorrect.

Question Paper Name: Junior Engineer 26th Aug Shift 1 Actual
Subject Name: Junior Engineer
Creation Date: 2015-08-18 12:50:20.0
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Duration: 120
Number of Questions: 150
Total Marks: 150.0

Junior Engineer

Group Number : 1
Group Id : 1
Group Maximum Duration : 0
Group Minimum Duration : 120
Revisit allowed for view? : No
Revisit allowed for edit? : No
Break time: 0
Group Marks: 150.0

Junior Engineer

Section Id : 1
Section Number : 1
Section type : Online
Mandatory or Optional: Mandatory
Number of Questions: 150
Number of Questions to be attempted: 150
Section Marks: 150.0

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

Question Number : 1 Question Id : 1 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Which of the following is an extensive property ?

Options :

- ✘ Pressure

2. ✓ Heat capacity
3. ✘ Temperature
4. ✘ Specific volume

Question Number : 2 Question Id : 2 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Kelvin Planck's law deals with

Options :

1. ✘ Conservation of work
2. ✘ Conservation of heat
3. ✓ Conservation of heat into work
4. ✘ Conservation of work into heat

Question Number : 3 Question Id : 3 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

In which of the following mechanisms, is heat conducted in liquid and gas

Options :

1. ✘ Lattice vibration
2. ✘ Transportation of free electrons
3. ✓ Collisions and diffusion
4. ✘ No heat conducted

Question Number : 4 Question Id : 4 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

An essential requirement for the transfer of heat from one body to another body is that

Options :

1. ✘ Both bodies must be solids
2. ✘ Both bodies must be in contact
3. ✓ Temperatures of the two bodies must be different
4. ✘ Temperatures of the two bodies must be same

Question Number : 5 Question Id : 5 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

The silencer of an

Options :

- Reduces noise
- Decreases break specific fuel consumption
- Increases break specific fuel consumption
- Has no effect on its efficiency

Question Number : 6 Question Id : 6 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Diesel engines are generally

Options :

- Quality governed
- Quantity governed
- Combination of quality and quantity governed
- Heat and mass governed

Question Number : 7 Question Id : 7 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The theoretically correct mixture of air and petrol is

Options :

- 10 : 1
- 15 : 1
- 20 : 1
- 25 : 1

Question Number : 8 Question Id : 8 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Trepanning operation is used for

Options :

- Bevelling the edges
- Finishing the ends of job
- Cutting grooves
- Producing large holes

Correct : 1.0 Wrong : 0.33

The gases used in TIG welding are

Options :

1. Helium and neon
2. Argon and helium
3. Ozone and neon
4. Carbondioxide and nitrogen

Question Number : 10 Question Id : 10 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In centrifugal casting, the cores are generally made of

Options :

1. Wax
2. Plastic
3. Plaster of Paris
4. Cores are not used

Question Number : 11 Question Id : 11 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Calculate the tail stock set over to turn a taper of 1 in 10 on a job of 60 mm length

Options :

1. 6 mm
2. 3 mm
3. 10 mm
4. 60 mm

Question Number : 12 Question Id : 12 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The maximum flame temperature occurs

Options :

1. At the outer cone
2. At the inner cone

3. Between the outer and inner cone

4. At the torch tip

Question Number : 13 Question Id : 13 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Down milling is also known as

Options :

1. Conventional milling

2. Climb milling

3. End milling

4. Face milling

Question Number : 14 Question Id : 14 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Bolt heads are manufactured by

Options :

1. Swagging

2. Roll forging

3. Tumbling

4. Upset forging

Question Number : 15 Question Id : 15 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The resistance of a conductor does not depend upon

Options :

1. Shape of cross section

2. Temperature

3. Material

4. Length

Question Number : 16 Question Id : 16 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

is not

Options :

1. Projection
2. Seam
3. Flash
4. Carbon arc

Question Number : 17 Question Id : 17 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Which of the following motors will have the highest "no load" speed?

Options :

1. Shunt motor
2. Series motor
3. Cumulative Compound motor
4. Differential Compound motor

Question Number : 18 Question Id : 18 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

In the DC motor, iron losses occur in

Options :

1. Field
2. Armature
3. Brushes
4. Commutator

Question Number : 19 Question Id : 19 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

The number of poles in a phase induction motor at 50 Hz and running at 1500 rpm will be

Options :

1. 2
2. 3
3. 4
4. 5

Correct : 1.0 Wrong : 0.33

A power plant usually works on

Options :

1. Otto cycle
2. Binary vapour cycle
3. Brayton cycle
4. Rankine cycle

Question Number : 21 Question Id : 21 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Turbine used for low head is

Options :

1. Kaplan turbine
2. Francis turbine
3. Pelton Wheel turbine
4. Propellerturbine

Question Number : 22 Question Id : 22 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Transformer ratings are usually expressed in

Options :

1. kVA
2. kW
3. kWh
4. kVAR

Question Number : 23 Question Id : 23 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A step up transformer increases

Options :

1. power
2. resistance
3. voltage

4. ✖ frequency

Question Number : 24 Question Id : 24 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

In an AC circuit, the ratio of kW / kVA represents

Options :

1. ✔ Power factor
2. ✖ Form factor
3. ✖ Load factor
4. ✖ Diversity factor

Question Number : 25 Question Id : 25 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Depletion layer is found in

Options :

1. ✖ p type semiconductors
2. ✖ n type semiconductors
3. ✔ diodes
4. ✖ intrinsic semiconductors

Question Number : 26 Question Id : 26 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

The energy gap in a semiconductor is

Options :

1. ✖ zero
2. ✖ infinite
3. ✖ very high
4. ✔ of the order of 1 eV

Question Number : 27 Question Id : 27 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

BJT stands for

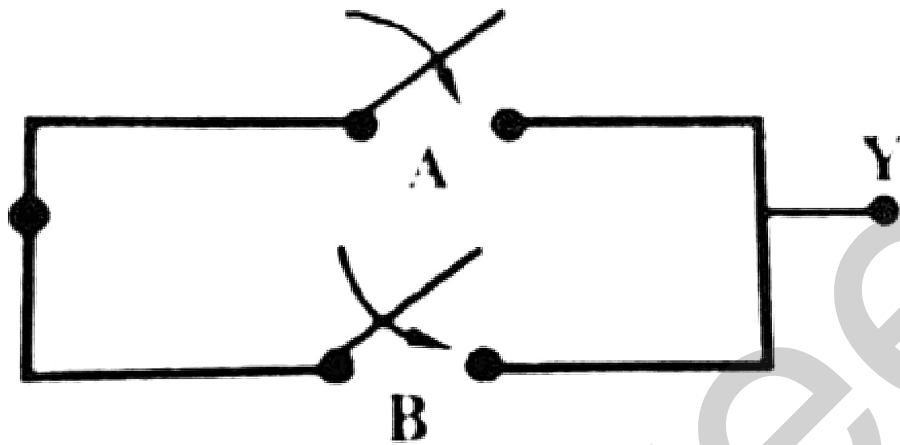
Options :

Binomial function

- 2. ✓ Bipolar Junction Transistor
- 3. ✘ Binomial Junction Transistor
- 4. ✘ Bipolar Junction Terminal

Question Number : 28 Question Id : 28 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

The following figure is an electrical equivalent of



Options :

- 1. ✘ NOT gate
- 2. ✓ OR gate
- 3. ✘ NOR gate
- 4. ✘ NAND gate

Question Number : 29 Question Id : 29 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

The hexadecimal equivalent of the decimal number 210 is

Options :

- 1. ✘ H1
- 2. ✘ F2
- 3. ✓ D2
- 4. ✘ H2

Question Number : 30 Question Id : 30 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

The number of atoms in a body centred unit cell is

Options :

- 2. ✓ 2
- 3. ✘ 3
- 4. ✘ 4

Question Number : 31 Question Id : 31 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Ideal operational amplifier has input impedance of

- Options :
- 1. ✘ zero
 - 2. ✓ infinity
 - 3. ✘ 1 ohm
 - 4. ✘ 0.1 ohm

Question Number : 32 Question Id : 32 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Theoretically, a bridge rectifier has a maximum efficiency of

- Options :
- 1. ✘ 84%
 - 2. ✘ 48.2%
 - 3. ✘ 82.2%
 - 4. ✓ 81.2%

Question Number : 33 Question Id : 33 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Avalanche breakdown is primarily dependent on the phenomenon of

- Options :
- 1. ✘ Doping
 - 2. ✘ Collision
 - 3. ✘ Ionisation
 - 4. ✓ Recombination

Question Number : 34 Question Id : 34 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

A UJT contains

Options :

1. 4 pn junctions
2. 3 pn junctions
3. 2 pn junctions
4. 1 pn junction

Question Number : 35 Question Id : 35 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If a material has identical properties in all directions, it is said to be

Options :

1. Homogeneous
2. Isotropic
3. Elastic
4. Orthotropic

Question Number : 36 Question Id : 36 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If the plasticity index of a soil mass is zero, the soil is

Options :

1. Loess
2. Clayey silt
3. Silt
4. Sand

Question Number : 37 Question Id : 37 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In RCC beams, as the percentage area of tensile steel increases

Options :

1. Depth of neutral axis increases
2. Depth of neutral axis decreases
3. Depth of neutral axis does not change
4. Lever arm increases

Question Number : 38 Question Id : 38 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Fluid is a substance which offers no resistance to change of

Options :

1. Volume
2. Pressure
3. Shape
4. Flow

Question Number : 39 Question Id : 39 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The invar tape is made of an alloy of

Options :

1. Copper and steel
2. Brass and nickel
3. Brass and steel
4. Nickel and steel

Question Number : 40 Question Id : 40 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Gantt chart provides information about

Options :

1. Break even point analysis
2. Production schedule
3. Material handling layout
4. Determining selling price

Question Number : 41 Question Id : 41 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

When water is added to cement

Options :

1. Chemical reaction starts
2. Heat is absorbed

4. ❌ Impurities are washed out

Question Number : 42 Question Id : 42 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Pascal-second is the unit of

Options :

1. ❌ Pressure
2. ❌ Kinematic viscosity
3. ✔️ Dynamic viscosity
4. ❌ Surface tension

Question Number : 43 Question Id : 43 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Which of the following is not used in measuring perpendicular offsets?

Options :

1. ✔️ Line ranger
2. ❌ Steel tape
3. ❌ Optical square
4. ❌ Cross staff

Question Number : 44 Question Id : 44 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

A fully saturated soil is said to be

Options :

1. ❌ One phase system
2. ❌ Two phase system with soil and air
3. ✔️ Two phase system with soil and water
4. ❌ Three phase system

Question Number : 45 Question Id : 45 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Which of the following trees yields hard wood?

Options :



1. ❌ Deodar
2. ❌ Chir
3. ✔️ Shishum
4. ❌ Pine

Question Number : 46 Question Id : 46 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

IS 800 : 2007 is based on

Options :

1. ❌ Elastic design method
2. ❌ Ultimate load method
3. ❌ Working stress method
4. ✔️ Limit state method

Question Number : 47 Question Id : 47 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

An ohmmeter is a

Options :

1. ❌ moving iron instrument
2. ✔️ moving coil instrument
3. ❌ dynamometer instrument
4. ❌ hot wire meter

Question Number : 48 Question Id : 48 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

For measuring a very high resistance we should use

Options :

1. ❌ Kelvin's double bridge
2. ❌ Wheat stone bridge
3. ✔️ Meggar
4. ❌ Schering bridge

Question Number : 49 Question Id : 49 Question Type : MCO Option Shuffling : No
Correct : 1.0 Wrong : 0.33

The electrical power to a meggar is provided by

Options :

- battery
- permanent magnet D.C. generator
- AC generator
- either AC or DC generator

Question Number : 50 Question Id : 50 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In a meggar, controlling torque is provided by

Options :

- spring
- gravity
- coil
- eddy current

Question Number : 51 Question Id : 51 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The operating voltage of a meggar is about

Options :

- 6 V
- 12 V
- 40 V
- 100 V

Question Number : 52 Question Id : 52 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The prescribed per capita water demand for small cities and towns is

Options :

- 135 litres per capita per day
- 200 litres per capita per day
- 150 litres per capita per day
- 180 litres per capita per day

Question Number : 53 Question

The spacing between two bars in medium size screen ranges from

Options :

1. 20 – 50 mm
2. 20 – 40 mm
3. 10 – 20 mm
4. 10 – 30 mm

Question Number : 54 Question Id : 54 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

In small water supplies such as army troops, private plants and swimming pools, the most common disinfectants used are

Options :

1. chlorine dioxide and potassium permanganate
2. ozone and uv rays
3. iodine and bromine
4. chlorine and bromine

Question Number : 55 Question Id : 55 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

The air pollution control device, cyclone is used for the removal of

Options :

1. 100 μm particles
2. 10 μm particles
3. 50 μm particles
4. 2.5 μm particles

Question Number : 56 Question Id : 56 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

The 20 dBA noise level is how many times more powerful than 1 dBA noise level?

Options :

1. 10 times
2. 20 times
3. 100 times

4. ✘ 200 times

Question Number : 57 Question Id : 57 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

The percentage contribution of CO₂ to green house effect is

Options :

- 1. ✔ 50
- 2. ✘ 30
- 3. ✘ 18
- 4. ✘ 10

Question Number : 58 Question Id : 58 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Which of the following is not a valid category of impact printers?

Options :

- 1. ✘ Dot-matrix printers
- 2. ✘ Line printers
- 3. ✘ Drum printers
- 4. ✔ Ink-jet printers

Question Number : 59 Question Id : 59 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Which of the following is not true about RAM?

Options :

- 1. ✘ Random access memory
- 2. ✘ Read write memory
- 3. ✘ Volatile memory
- 4. ✔ Sequential access memory

Question Number : 60 Question Id : 60 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Which of the following is not a component of Central Processing Unit (CPU)?

Options :

- 1. ✘ Arithmetic and Logic Unit (ALU)

2. ❌ Control Unit (CU)
3. ❌ Registers
4. ✔️ Random Access Memory (RAM)

Question Number : 61 Question Id : 61 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

ASCII stands for _____

Options :

1. ❌ American Standard Code for Immediate Interchange
2. ❌ American Standard Code for Immediate Information
3. ✔️ American Standard Code for Information Interchange
4. ❌ Australian Standard Code for Information Interchange

Question Number : 62 Question Id : 62 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

The binary representation of 99.25 is _____

Options :

1. ❌ $(1100011.10)_2$
2. ✔️ $(1100011.01)_2$
3. ❌ $(1101011.10)_2$
4. ❌ $(1000011.11)_2$

Question Number : 63 Question Id : 63 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Considering X as a binary variable, the Boolean expression $X + 1$ is equivalent to

Options :

1. ❌ X
2. ✔️ 1
3. ❌ 0

4. ✖ X'

Question Number : 64 Question Id : 64 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The 2's compliment of the binary number $(11001001)_2$ is

Options :

1. ✖ $(00110110)_2$

2. ✖ $(00111111)_2$

3. ✔ $(00110111)_2$

4. ✖ $(10110111)_2$

Question Number : 65 Question Id : 65 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which of the following is a real-time operating system?

Options :

1. ✖ Mac OS X

2. ✖ Linux

3. ✖ Windows 7

4. ✔ Windows CE

Question Number : 66 Question Id : 66 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Class 'A' IP addresses use _____ bits for Network ID.

Options :

1. ✔ 8

2. ✖ 16

3. ✖ 24

4. ✖ 32

Question Number : 67 Question Id : 67 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which of the following is not a Web browser?

Options :

1. ✖ Chrome

Internet Expld _____

- 3. ✘ Opera
- 4. ✔ Hadoop

Question Number : 68 Question Id : 68 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

An area of 64 square kilometre is represented by 256 square centimetre on a map. The R. F. of the scale is

Options :

- 1. ✘ $1/4$
- 2. ✔ $1/50000$
- 3. ✘ $1/2$
- 4. ✘ $1/5000$

Question Number : 69 Question Id : 69 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

An involute profile is used in

Options :

- 1. ✘ pulleys
- 2. ✘ cams
- 3. ✘ chains
- 4. ✔ gears

Question Number : 70 Question Id : 70 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If a line is parallel to H.P. and inclined to V.P., its front view will be

Options :

- 1. ✔ a line of smaller dimension
- 2. ✘ a line of larger dimension
- 3. ✘ a line of same dimension
- 4. ✘ a point

Question Number : 71 Question Id : 71 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In multi-view projections, the xy line is known as

Options :



- horizontal line
- vertical line
- traces
- reference line

Question Number : 72 Question Id : 72 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Isometric drawings fall into the category of

Options :

- multi-view drawings
- oblique drawings
- axonometric drawings
- perspective drawings

Question Number : 73 Question Id : 73 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

An object of weight 49 N is accelerated across a level surface at 0.20 m/s^2 . The net force acting on the object is ($g = 9.8 \text{ m/s}^2$)

Options :

- 9.8 N
- 1.0 N
- 5.0 N
- 0.5 N.

Question Number : 74 Question Id : 74 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

The weight of an object on the surface of Earth is 60 N. On the surface of Moon, its weight will be

Options :

- 10 N
- 30 N
- 60 N
- 360 N.

Question Number : 75 Question

Shyam pushes a box 10 m on a horizontal surface by applying a 30 N force parallel to the surface. The work done is

Options :

1. 3 J
2. 30 J
3. 300 J
4. 0.3 J

Question Number : 76 Question Id : 76 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A sound wave passes a point of observation. At this point, the time interval between two successive crests is 0.02 s. Which of the following statements about the wave is correct?

Options :

1. The wavelength is 50 m
2. The wavelength is 0.02 m
3. The velocity of propagation is 50 m/s
4. The frequency is 50 Hz

Question Number : 77 Question Id : 77 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A ray is incident on a plane mirror. As the angle of incidence is increased, the angle between the incident and reflected rays ultimately approaches the value

Options :

1. 90°
2. 180°
3. 45°
4. zero

Question Number : 78 Question Id : 78 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Two resistors of $3\ \Omega$ and $6\ \Omega$ are connected in parallel. This combination in turn is connected in series with a $2\ \Omega$ resistor and a 6 V battery. The current in the $2\ \Omega$ resistor is

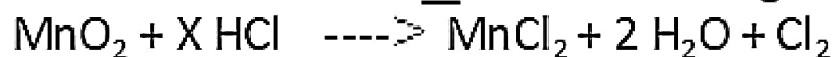
Options :

1. 3.7 A
2. 5.4 A
3. 1.5 A
4. 3.0 A

Question Number : 79 Question Id : 79 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

What is the value of X in the following equation?



Options :

1. 2
2. 3
3. 4
4. 5

Question Number : 80 Question Id : 80 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which of the following element is lustrous in nature?

Options :

1. Carbon
2. Iodine
3. Sulphur
4. Nitrogen

Question Number : 81 Question Id : 81 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In Modern Periodic Table, the electronegativity of elements

Options :

1. Increases down the group
2. Increases in moving from left to right in a period
3. Decreases in moving from left to right in a period
4. Does not follow any regular trend in a group or a period

Question Number : 82 Question Id : 82 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A trivalent metal "M" was made to react with nitrogen to yield 0.5 mole of metal nitride. Which of the following is a correct statement about the product of this reaction?

The reaction product contains

Options :

1. 3.0165×10^{23} molecules of oxide of formula MN

2. 3.0165×10^{23} molecules of oxide of formula M_3N

3. $3.0165 \times 10^{11.5}$ molecules of oxide of formula M_3N

4. $3.0165 \times 10^{11.5}$ molecules of oxide of formula MN

Question Number : 83 Question Id : 83 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

How many C-H bonds are there in a molecule of ethanoic acid?

Options :

1. 6

2. 5

3. 4

4. 3

Question Number : 84 Question Id : 84 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

49 mL of 0.1 M sodium hydroxide solution is added to 50 mL of 0.1 M solution of nitric acid. Approximate pH of the resulting solution will be

Options :

1. 3

2. 7

3. 8

4. 13

Question Number : 85 Question Id : 85 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Substances enter cells through processes given below. For which process is energy required?

Options :

1. Diffusion

2. Absorption of diffusible particles

3. Osmosis

4. Active transport

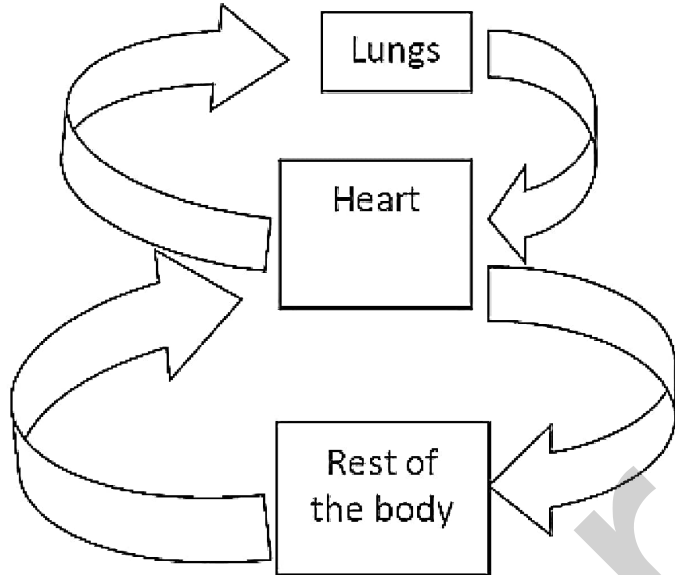
Question Number : 86 Question Id : 86 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Skin colour, eye colour, shape of nose and some other features are caused by

1. ✓ genes
2. ✘ environment
3. ✘ genes and environment
4. ✘ specific number of chromosomes

Question Number : 87 Question Id : 87 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33



The above diagram is a simplified outline of which physiological function of the body?

Options :

1. ✘ Respiration and gaseous exchange
2. ✘ Digestion of ingested food
3. ✓ Circulation of blood
4. ✘ Removal of urine

Question Number : 88 Question Id : 88 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

A plant remained in the dark for several days and died because it could not

Options :

1. ✘ breathe
2. ✓ photosynthesize
3. ✘ remove waste
4. ✘ reproduce

Question Number : 89 Question Id : 89 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

The brain is made

Options :

- neurons
- nephrons
- cytons
- virions

Question Number : 90 Question Id : 90 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

What kind of reproduction is it when sperm and ovum fuse to form a zygote?

Options :

- Asexual
- Sexual
- Budding
- Binary fission

Question Number : 91 Question Id : 91 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The HCF of two numbers is 6 and their LCM is 72. If one number is 24, the other number is

Options :

- 12
- 18
- 36
- 72

Question Number : 92 Question Id : 92 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The largest number which divides by 72 and 125, leaving remainders 7 and 8 respectively is

Options :

- 13
- 56
- 65
- 900

Question Number : 93 Question Id : 93 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If $a : b = 2 : 5$ and

Options :

1. ✖ 3 : 2
2. ✔ 2 : 5
3. ✖ 5 : 2
4. ✖ 5 : 8

Question Number : 94 Question Id : 94 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Which of the following numbers are in proportion

Options :

1. ✖ 12, 27, 54, 24
2. ✖ 27, 12, 24, 54
3. ✔ 12, 27, 24, 54
4. ✖ 54, 24, 12, 27

Question Number : 95 Question Id : 95 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Successive discounts of 20% and 10% are equivalent to a single discount of

Options :

1. ✖ 25%
2. ✖ 26%
3. ✔ 28%
4. ✖ 30%

Question Number : 96 Question Id : 96 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

If ₹ 200 becomes ₹ 240 in 4 years, then the rate of simple interest per annum is

Options :

1. ✖ $\frac{25}{6}$ %
2. ✖ $\frac{25}{3}$ %
3. ✖ $\frac{25}{2}$ %
4. ✔ 5%

Question Number : 97 Question Id : 97 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A sum of money doubles itself in 5 years when the interest is compounded annually. The number of years when it will become eight times is

Options :

1. 10
2. 12
3. 15
4. 20

Question Number : 98 Question Id : 98 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If CP of 10 articles is equal to SP of 8 articles, then in the whole transaction there is a

Options :

1. Profit of 20%
2. Loss of 20%
3. Loss of 25%
4. Profit of 25%

Question Number : 99 Question Id : 99 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

To gain 25% after allowing a discount of 10%, the shopkeeper should mark the price of the article which cost him ₹360 as

Options :

1. ₹ 450
2. ₹ 460
3. ₹ 486
4. ₹ 500

Question Number : 100 Question Id : 100 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A shopkeeper mixes 26 kg of tea which costs him ₹ 800 per kg with 30 kg of tea which costs him ₹ 1440 per kg. He sells the mixed tea at ₹ 1200 per kg. His gain is

Options :

1. 5%

2. ✖ 8%

3. ✖ 9%

4. ✖ 10%

Question Number : 101 Question Id : 101 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In two vessels A and B, milk and water are in the ratio of 4 : 3 and 3 : 5 respectively.

The ratio in which these are to be mixed to obtain new mixture which contains half milk and half water is

Options :

1. ✔ 7 : 4

2. ✖ 7 : 8

3. ✖ 1 : 2

4. ✖ 4 : 5

Question Number : 102 Question Id : 102 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Speed of a boat in still water is 3 km/hr. the speed of the stream is 2 km/hr. The time taken to go 4 km downstream in minutes is

Options :

1. ✖ 120

2. ✖ 96

3. ✖ 80

4. ✔ 48

Question Number : 103 Question Id : 103 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A train 100 m long is moving at 68 km/h. The time in seconds, it will take to pass another train 150 m long which is moving at 50 km/h in the same direction from the moment they meet is

Options :

1. ✖ 20

2. ✖ 30

3. ✔ 50

4. ✖ 70

Question Number : 104 Question Id : 104 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A and B can do a piece of work in 8 days. A alone can do the same work in 12 days.

The number of days in which B alone can do the same work is

Options :

1. ✖ 20

2. ✔ 24

3. ✖ 40

4. ✖ 48

Question Number : 105 Question Id : 105 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

P and Q can do a piece of work in 12 days, Q and R in 15 days and R and P in 20 days.

In how many days P alone can do the same work?

Options :

1. ✖ 15

2. ✔ 30

3. ✖ 23.5

4. ✖ 35

Question Number : 106 Question Id : 106 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The average of 5 numbers is 40. If one number is excluded then the average becomes 38. The excluded number is

Options :

1. ✔ 48

2. ✖ 58

3. ✖ 60

4. ✖ 78

Question Number : 107 Question Id : 107 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The average of 35 observations is 30. Out of these observations the average of first 18 observations is 30 and the last 18 observations is 40. The 18th observation is

1. ✖ 180
2. ✖ 190
3. ✖ 200
4. ✔ 210

Question Number : 108 Question Id : 108 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The 18th term of the A.P. whose first two terms are -3 and 4 respectively is

Options :

1. ✖ 14
2. ✔ 116
3. ✖ 122
4. ✖ - 122

Question Number : 109 Question Id : 109 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The third term of a G.P. is 2. The product of its first five terms is

Options :

1. ✖ 2^6
2. ✔ 2^5
3. ✖ 2^4
4. ✖ 2^3

Question Number : 110 Question Id : 110 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A tower stands vertically on the ground. From a point on the ground which is 30 m away from the foot of the tower, the angle of elevation of the top of the tower is 60° . The height of the tower is

Options :

1. ✔ $30\sqrt{3}$ m
2. ✖ $10\sqrt{3}$ m
3. ✖ 15 m
4. ✖ 6 m

For the above question, User ha

Question Number : 111 Question Id : 111 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

From a point on the bridge across a river the angles of depression of the banks on the opposite side of the river are 30° and 45° respectively. If the bridge is at a height of 4m from the bank, the width of the river is

Options :

1. $4(\sqrt{3} - 1)$ m
2. $2(2\sqrt{3} - 1)$ m
3. $4(\sqrt{3} + 1)$ m
4. $2(2\sqrt{3} + 1)$ m

Question Number : 112 Question Id : 112 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If $(x + 1)$ is a factor of $x^4 - ax^3 + 2x^2 - 3x + 1$, then a is equal to

Options :

1. 4
2. 3
3. -3
4. -7

Question Number : 113 Question Id : 113 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

One of the factor of $(25x^2 - 1) + (1 + 5x)^2$ is

Options :

1. $10x$
2. $5 + x$
3. $5 - x$
4. $5x - 1$

Question Number : 114 Question Id : 114 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

All values of k for which $x^2 + kx + 9 = 0$ has real roots is

Options :

1. $k > 6$

2. ✘ $k \geq 6$

3. ✔ $6 \leq k \leq -6$

4. ✘ $-6 \leq k \leq 6$

Question Number : 115 Question Id : 115 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The sum and product of the roots of the equation $x^2 - 4x + 3 = 0$ are respectively

Options :

1. ✘ 3, -4

2. ✘ 4, -3

3. ✘ -4, -3

4. ✔ 4, 3

Question Number : 116 Question Id : 116 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The first capital of British Colonial India was

Options :

1. ✘ Delhi

2. ✘ Mumbai

3. ✔ Kolkata

4. ✘ Madras

Question Number : 117 Question Id : 117 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

What was unexpected at the end of the battle of Waterloo?

A. Duke of Wellington lost

B. Napoleon Bonaparte won

C. Duke of wellington won

D. Napoleon Bonaparte lost

The correct response would be

Options :

1. ✘ A

2. ✘ B

3. ✖ B and C

4. ✔ C and D

Question Number : 118 Question Id : 118 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Who founded the Indian National congress?

Options :

1. ✔ Allan Octavian Hume

2. ✖ Womesh Chandra Banerji

3. ✖ Gopal Krishna Gokhale

4. ✖ Rash Behari Bose

Question Number : 119 Question Id : 119 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

What are plate tectonics?

Options :

1. ✔ Movement of plates supporting the continents

2. ✖ Volcanic eruptions

3. ✖ Term for erosion of land in the Himalayan region

4. ✖ Mountain formation due to collision of plates

Question Number : 120 Question Id : 120 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

One region of India with high railway density is from Chhattisgarh to Jharkhand because of

Options :

1. ✖ Industrialization

2. ✖ Agricultural produce

3. ✔ Mineral deposits

4. ✖ Large population

Question Number : 121 Question Id : 121 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

What Saraswati river is to the Triveni Sangam or confluence of rivers at Allahabad, _____ is to confluence of rivers at Coorg.

Mark the option which can fill the blank in the statement.

Options :

1. Shujyothi
2. Krishna
3. Godavari
4. Meghna

Question Number : 122 Question Id : 122 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

What is meant by secularism?

Having

Options :

1. an elected person as head of state
2. a culture of equal treatment to all without discrimination
3. a government of the people, by the people and for the people
4. the freedom to preach, practice and profess any religion

Question Number : 123 Question Id : 123 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The UN Publicservice award 2015 for eliminating open defecation has been given to

Options :

1. Surat in Gujarat
2. Gorakhpur in Uttar Pradesh
3. Nadia in West Bengal
4. Mahabaleshwar in Maharashtra

Question Number : 124 Question Id : 124 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A freedom not granted to citizens by the Indian Constitution is

Options :

1. to reside and settle in any part of India
2. move freely throughout Indian territory
3. assemble peacefully with arms

4. ❌ form associations and Unions

Question Number : 125 Question Id : 125 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In PM Narendra Modi's recent visit to Korea, one important issue of discussion with their president was

Options :

1. ✔ building a variety of skills in the youth
2. ❌ building bridges across rivers
3. ❌ developing international understanding
4. ❌ exploring natural resources

Question Number : 126 Question Id : 126 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

At the airport, a suitcase was offloaded from a trolley and lay there till someone came and pushed it away. Which one of Newton's Laws of motion explains this?

Options :

1. ✔ Newton's first law of motion
2. ❌ Newton's second law of motion
3. ❌ Newton's third law of motion
4. ❌ Partially the second and partially the third law

Question Number : 127 Question Id : 127 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Eclipse happens because light

Options :

1. ❌ travels in waves
2. ✔ travels in straight lines
3. ❌ travels with great speed
4. ❌ rays are static

Question Number : 128 Question Id : 128 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A magnet attracts filings made of

Options :

1. ❌ Only Iron

2. Iron and Steel
3. Brass and Iron
4. Brass, Iron and Steel

Question Number : 129 Question Id : 129 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Bleaching powder is manufactured through a reaction between

Options :

1. Flaked lime and chlorine
2. Quick lime and chlorine
3. Washing soda and ammonia
4. Baking soda and iodine

Question Number : 130 Question Id : 130 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

What is likely to happen if the supply of coffee goes up?

Options :

1. The demand for tea goes up
2. The price of coffee goes down
3. There is no change in the demand for tea
4. Demand for tea escalates and price of coffee diminishes

Question Number : 131 Question Id : 131 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

It is possible to make LPG available in a cylinder because of its

Options :

1. Inflammability
2. Dispersibility
3. Compressibility
4. Diffusability

Question Number : 132 Question Id : 132 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

If you uproot a cucumber plant, what kind of a change will it be?

Options :

1. Physical only
2. Chemical only
3. Both physical and chemical change
4. Neither physical nor chemical just organic

Question Number : 133 Question Id : 133 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

What is PPP (Purchasing Power Parity)?

Options :

1. Method of measuring relative purchasing power of currencies of different countries
2. Ability to purchase commodities by citizens of different states of a country
3. A measure of socioeconomic development of a nation
4. An index for purchasing power of citizens of neighbouring countries.

Question Number : 134 Question Id : 134 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Which nationalized bank presently has a Woman as its CEO?

Options :

1. Indian Overseas Bank
2. State Bank of India
3. Punjab National Bank
4. Central Bank on India

Question Number : 135 Question Id : 135 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

RuBP enzyme is required for

Options :

1. Photosynthesis
2. Chemosynthesis
3. Both Photosynthesis and Chemosynthesis
4. Excretion of urea

Question Number : 136 Question Id : 136 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

One of the follow

- Ant
- Beetle
- Termite
- Wasp

Question Number : 137 Question Id : 137 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Who coined the phrase 'Survival of the fittest' to mean Natural Selection?

Options :

- Charles Darwin
- Bertrand Russell
- JBS Haldane
- Herbert Spencer

Question Number : 138 Question Id : 138 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

The record of a country's transaction in goods and assets with the rest of the world is its

Options :

- Capital amount
- Current amount
- Balance of payment
- Balance of trade

Question Number : 139 Question Id : 139 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

The Champion's League Trophy is given for

Options :

- the best club in Soccer
- best player of team in Basket ball
- maximum goal maker in Hockey
- man of the match in Cricket

Question Number : 140 Question Id : 140 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Cricket batsman has to leave the field for "hit wicket" when

- Ball hits leg before bat
- Keeper removes the bail
- Bat hits any fielder
- Wicket is touched by bat or body of the batsman

Question Number : 141 Question Id : 141 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

C is married to A, sister of D. B is the father of E, who is the son of D. G is the sister of E. How is G related to C?

Options :

- nephew
- niece
- sister-in-law
- sister

Question Number : 142 Question Id : 142 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

The first two numbers on the left of the sign '::' are related in a certain way. The same relationship holds for the second pair of numbers on the right side of the sign '::' of which one is missing. Find the missing one from the alternatives.

14 : 49 :: 18 : ?

Options :

- 56
- 59
- 63
- 85

Question Number : 143 Question Id : 143 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

The two words on the left side of the sign '::' are related in a certain way. The same relationship holds for the second pair of words on the right side of the sign '::' of which one is missing. Find the missing one from the alternatives.

East : North-West :: North : ?

Options :

- West

- 2. ✖ South-East
- 3. ✖ North-East
- 4. ✔ South-West

Question Number : 144 Question Id : 144 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Among six objects, B weighs half as much as E. F weighs two and half times as much as C. A weighs half as much as D and twice as much as C. D weighs three times as much as E. Which is the correct sequence of weights in descending order?

Options :

- 1. ✔ DFAECB
- 2. ✖ DAFECB
- 3. ✖ BCEAFD
- 4. ✖ DFACEB

Question Number : 145 Question Id : 145 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

Arrange the following words in a meaningful logical sequence and choose the appropriate number sequence from the alternatives.

1. Education 2. Salary 3. Child 4. Apply 5. Infant 6. Employment

Options :

- 1. ✖ 5, 3, 1, 4, 2, 6
- 2. ✖ 5, 3, 1, 6, 2, 4
- 3. ✖ 3, 5, 1, 4, 6, 2
- 4. ✔ 5, 3, 1, 4, 6, 2

Question Number : 146 Question Id : 146 Question Type : MCQ Option Shuffling : No
Correct : 1.0 Wrong : 0.33

The numbers in each group are related in a certain way. Choose the correct number from among the alternatives that will replace the question mark.

- (3 [9] 6) (7 [25] 12) (11 [?] 15)

Options :

- 1. ✖ 28
- 2. ✔ 16
- 3. ✖ 32

4. ❌ 36

Question Number : 147 Question Id : 147 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In a certain language, '792' means 'God is good'; '847' means 'rose is beautiful'; and '546' means 'children are beautiful'. Which digit means 'rose' in that language?

Options :

1. ✓ 8

2. ❌ 7

3. ❌ 2

4. ❌ 9

Question Number : 148 Question Id : 148 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If 'DIRECTION' is coded as 'RIDTCENOI', then 'INTRODUCE' would be coded as:

Options :

1. ❌ TNIDROEUC

2. ✓ TNIDORECU

3. ❌ ECUDORTNI

4. ❌ TNIDOREUC

Question Number : 149 Question Id : 149 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A clock is placed on the table in such a way that at 5.15 pm, the minute hand points to South. In which direction, the hour hand will point at 7.30 pm?

Options :

1. ✓ North-West

2. ❌ North-East

3. ❌ West

4. ❌ South-East

Question Number : 150 Question Id : 150 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The numbers in the matrix given below follow a certain trend row-wise and and/or column wise. Study the trend and choose the number which will replace the question mark?

6	27	9
8	28	7
11	?	4

Options :

1. 33
2. 29
3. 22
4. 31

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