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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:

1. ✗ Pressure
2. ✓ Heat capacity
   Temperature
   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 internal combustion engine
Options:
1. ✔ Reduces noise
2. ✗ Decreases break specific fuel consumption
3. ✗ Increases break specific fuel consumption
4. ✗ 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:
1. ✔ Quality governed
2. ✗ Quantity governed
3. ✗ Combination of quality and quantity governed
4. ✗ 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:
1. ✗ 10 : 1
2. ✔ 15 : 1
3. ✗ 20 : 1
4. ✗ 25 : 1

Question Number: 8 Question Id: 8 Question Type: MCQ Option Shuffling: No
Correct: 1.0 Wrong: 0.33

Trepnanning operation is used for

Options:
1. ✗ Bevelling the edges
2. ✗ Finishing the ends of job
3. ✗ Cutting grooves
4. ✔ Producing large holes

Question Number: 9 Question Id: 9 Question Type: MCQ Option Shuffling: No
The gases used in TIG welding are

Options:

1. * Helium and neon
2. ✓ Argon and helium
3. * Ozone and neon
4. * Carbon dioxide and nitrogen

In centrifugal casting, the cores are generally made of

Options:

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

Calculate the tailstock 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

The maximum flame temperature occurs

Options:

1. * At the outer cone
2. ✓ At the inner cone
Between the outer and inner cone
At the torch tip

Options:
1. Conventional milling
2. Climb milling
3. End milling
4. Face milling

Bolt heads are manufactured by

Options:
1. Swagging
2. Roll forging
3. Tumbling
4. Upset forging

The resistance of a conductor does not depend upon

Options:
1. Shape of cross section
2. Temperature
3. Material
4. Length

................. is not a resistance welding process.
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

Question Number: 20  Question Id: 20  Question Type: MCQ  Option Shuffling: No
A power plant usually works on

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

Transformer ratings are usually expressed in

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

A step up transformer increases

Options:
1. power
2. resistance
3. voltage
frequency

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

Options:
1. ✔️ Power factor
2. ✗ Form factor
3. ✗ Load factor
4. ✗ Diversity factor

Depletion layer is found in

Options:
1. ✗ p type semiconductors
2. ✗ n type semiconductors
3. ✔️ diodes
4. ✗ intrinsic semiconductors

The energy gap in a semiconductor is

Options:
1. ✗ zero
2. ✗ infinite
3. ✗ very high
4. ✔️ of the order of 1 eV

BJT stands for

Options:
1. ✔️ Binomial 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 :
1. 1
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

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

Options:
1. ✗ Homogeneous
2. ✓ Isotropic
3. ✗ Elastic
4. ✗ Orthotropic

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

Options:
1. ✗ Loess
2. ✗ Clayey silt
3. ✗ Silt
4. ✓ Sand

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
Fluid is a substance which offers no resistance to change of

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

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

Gantt chart provides information about

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

When water is added to cement

Options:
1. Chemical reaction starts
2. Heat is absorbed
3. Heat is generated
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 :**
Deodar

Chir

Shishum

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: MCQ  Option Shuffling: No
Correct: 1.0  Wrong: 0.33
The electrical power to a meggar is provided by

Options:
1. ✗ battery
2. ✔ permanent magnet D.C. generator
3. ✗ AC generator
4. ✗ 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:
1. ✗ spring
2. ✗ gravity
3. ✔ coil
4. ✗ 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:
1. ✗ 6 V
2. ✗ 12 V
3. ✗ 40 V
4. ✔ 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:
1. ✔ 135 litres per capita per day
2. ✗ 200 litres per capita per day
3. ✗ 150 litres per capita per day
4. ✗ 180 litres per capita per day

Question Number : 53  Question Id : 53  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
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

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

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

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
The percentage contribution of CO₂ to green house effect is

Options:
1. ✔ 50
2. * 30
3. * 18
4. * 10

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

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

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. * (110011.10)₂
2. ✓ (110011.01)₂
3. * (110101.10)₂
4. * (100011.11)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
Question Number : 64  Question Id : 64  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33

The 2’s complement of the binary number \((11001001)_2\) is

Options :

1. \(\boxed{(00110110)_2}\)
2. \(\boxed{(00111111)_2}\)
3. \(\boxed{(00110111)_2}\)
4. \(\boxed{(10110111)_2}\)

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. \(\boxed{\text{Mac OS X}}\)
2. \(\boxed{\text{Linux}}\)
3. \(\boxed{\text{Windows 7}}\)
4. \(\boxed{\text{Windows CE}}\)

Question Number : 66  Question Id : 66  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33

Class ‘A’ IP addresses use \(\boxed{8}\) bits for Network ID.

Options :

1. \(\boxed{8}\)
2. \(\boxed{16}\)
3. \(\boxed{24}\)
4. \(\boxed{32}\)

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. \(\boxed{\text{Chrome}}\)
2. \(\boxed{\text{Internet Explorer}}\)
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 :
1. horizontal line
2. vertical line
3. traces
4. reference line

Isometric drawings fall into the category of

Options:
1. multi-view drawings
2. oblique drawings
3. axonometric drawings
4. perspective drawings

An object of weight 49 N is accelerated across a level surface at 0.20 m/s². The net force acting on the object is (g = 9.8 m/s²)

Options:
1. 9.8 N
2. ✓ 1.0 N
3. 5.0 N
4. 0.5 N.

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

Options:
1. ✓ 10 N
2. 30 N
3. 60 N
4. 360 N.
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
What is the value of $X$ in the following equation?

$\text{MnO}_2 + X \text{HCl} \rightarrow \text{MnCl}_2 + 2 \text{H}_2\text{O} + \text{Cl}_2$

Options:
1. 2
2. 3
3. 4
4. 5

Which of the following elements is lustrous in nature?

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

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

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. $3.0165 \times 10^{23}$ molecules of oxide of formula MN
2. \(3.0165 \times 10^{23}\) 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

Options :
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 of cells known as
1. ✔ neurons
2. ✗ nephrons
3. ✗ cytons
4. ✗ 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 :
1. ✗ Asexual
2. ✔ Sexual
3. ✗ Budding
4. ✗ 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 :
1. ✗ 12
2. ✔ 18
3. ✗ 36
4. ✗ 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 :
1. ✔ 13
2. ✗ 56
3. ✗ 65
4. ✗ 900

Question Number : 93  Question Id : 93  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
If a : b = 3 : 5 and b : c = 2 : 3, then a : c is
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. ✗ 3 : 2
2. ✓ 2 : 5
3. ✗ 5 : 2
4. ✗ 5 : 8

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\%
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

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%

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

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
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

Options :
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} \text{ m}
2. * 10\sqrt{3} \text{ m}
3. * 15 \text{ m}
4. * 6 \text{ m}

For the above question, User had specified 'ignore' during keys upload.
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. $4(\sqrt{3} - 1) \text{ m}$
2. $2(2\sqrt{3} - 1) \text{ m}$
3. $4(\sqrt{3} + 1) \text{ m}$
4. $2(2\sqrt{3} + 1) \text{ m}$

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

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

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

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

Options:
1. $k > 6$
2. \[ k \geq 6 \]
6 \leq k \leq -6
3. \[ -6 \leq k \leq 6 \]

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

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

The UN Public service 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

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 even with arms
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

**Question :** 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

**Question :** 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

**Question :** 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

**Question :** One of the following is not a ‘social insect’

**Options :**
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:
1. Charles Darwin
2. Bertrand Russell
3. JBS Haldane
4. 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:
1. Capital amount
2. Current amount
3. Balance of payment
4. 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:
1. the best club in Soccer
2. best player of team in Basket ball
3. maximum goal maker in Hockey
4. 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
Options:
1. Ball hits leg before bat
   Keeper removes the bail
2. Bat hits any fielder
3. 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 :
1. nephew
2. niece
3. sister-in-law
4. 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 :
1. 56
2. 59
3. 63
4. 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 :
1. 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.
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.
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 ‘RIDTCENO!’ , then ‘INTRODUCE’ would be coded as:
Options :
1. ✗ TNI DROEUC
2. ✓ TNI DORECU
3. ✗ ECU DORTNI
4. ✓ TNI DOREUC

**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?

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>27</td>
<td>9</td>
</tr>
<tr>
<td>8</td>
<td>28</td>
<td>7</td>
</tr>
<tr>
<td>11</td>
<td>?</td>
<td>4</td>
</tr>
</tbody>
</table>

Options:

1. ✗ 33
2. ✗ 29
3. ✓ 22
4. ✗ 31