First law of thermodynamics deals with

Options:
1. ✗ Conservation of heat
2. ✗ Conservation of momentum
3. **Conservation of mass**

4. ✔️ **Conservation of energy**

**Question Number : 2  Question Id : 902  Question Type : MCQ  Option Shuffling : No**

Correct : 1.0  Wrong : 0.33

An isothermal process is governed by

**Options :**

1. ✔️ Boyle's law
2. ✗ Charle's law
3. ✗ Gay-lussac's law
4. ✗ Avogadro's law

**Question Number : 3  Question Id : 903  Question Type : MCQ  Option Shuffling : No**

Correct : 1.0  Wrong : 0.33

A carburetor is used to supply

**Options :**

1. ✗ Petrol, air and lubricating oil
2. ✗ Air and diesel
3. ✗ Petrol and lubricating oil
4. ✔️ Petrol and air

**Question Number : 4  Question Id : 904  Question Type : MCQ  Option Shuffling : No**

Correct : 1.0  Wrong : 0.33

A diesel engine has compression ratio from

**Options :**

1. ✗ 6 to 10
2. ✔️ 10 to 15
3. ✗ 15 to 25
4. ✗ 25 to 40

**Question Number : 5  Question Id : 905  Question Type : MCQ  Option Shuffling : No**

Correct : 1.0  Wrong : 0.33

Heat is closely related with

**Options :**

1. ✗ Energy
2. ✔️ Temperature
3. ✗ Entropy
4. ✗ Enthalpy
 Metals are good conductor of heat because
Options:
1. ✓ Their atoms collide frequently
2. ✗ Their atoms are relatively far apart
3. ✗ They contain free electron
4. ✗ They have high density

Heat conduction in gases is due to
Options:
1. ✗ Electromagnetic waves
2. ✗ Motion of electrons
3. ✓ Mixing motion of the different layers of the gas
4. ✓ Elastic impact of molecules

In shielded arc welding
Options:
1. ✗ Large electrode is used
2. ✗ Welding rod coated with slag is used
   Welding rod coated with flux material is used
3. ✓ Welding rod is not used
4. ✗ Welding rod is not used

Oxyacetylene flame having more amount of C₂H₂ is called
Options:
1. ✓ Oxidizing flame
2. ✗ Neutral flame
3. ✓ Carburizing flame
4. ✗ Red flame
Nose radius is expressed in

Options:
1. Degree
2. Radian
3. mm
4. Steradian

Question Number : 11  Question Id : 911  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
An ideal tool material is the one which

Options:
1. Has very long life
2. Has same life at all cutting speed
3. Produces no heat during cutting
4. Produces smooth surface finish

Question Number : 12  Question Id : 912  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
Chills are used in casting moulds to

Options:
1. Achieve directional solidification
2. Reduce possibility of blow holes
3. Reduce the freezing time
4. Increase the smoothness of surface

Question Number : 13  Question Id : 913  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
The two parts of a sand casting mould are called

Options:
1. Gate and sprue
2. Upper and drag
3. Cope and drag
4. Cope and bottom

Question Number : 14  Question Id : 914  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
An engine operates between temperature limits of 900 K and T2; and another between T2 and 400 K. For both the engines to be equally efficient, T2 should be equal to

Options:
1. 600 K
2. 650 K
3. 625 K
4. 700 K

A network or circuit that does not contain any source of emf is known as

Options:
1. Active network
2. Linear circuit
3. Bilateral network
4. Passive network

The number of brushes in the commutator depends upon

Options:
1. speed of armature
2. type of winding
3. voltage
4. amount of current to be collected

The phenomenon of "crawling" in an induction motor occurs due to

Options:
1. improper design of machine
2. low voltage supply
3. high load
4. harmonics developed in the motor
Determine the speed control method for a DC motor shown in the following figure:

Options:

1. ✓ Field diverter method
2. ✗ Armature diverter method
3. ✗ Tapped Field Control
4. ✗ Resistance diverter control

Question Number: 19  Question Id: 919  Question Type: MCQ  Option Shuffling: No
Correct: 1.0  Wrong: 0.33

A no-load test is performed on a transformer to determine
Options:

1. ✗ magnetising current only
2. ✗ core losses only
3. ✗ efficiency
4. ✓ magnetising current and losses

Question Number: 20  Question Id: 920  Question Type: MCQ  Option Shuffling: No
Correct: 1.0  Wrong: 0.33

The ratio of secondary turns to primary in a transformer is 3. If the emf in the secondary coil is 600 V, emf in the primary will be
Options:

1. ✗ 1800 V
2. ✗ 900 V
3. ✓ 200 V
4. ✗ 600 V

Question Number: 21  Question Id: 921  Question Type: MCQ  Option Shuffling: No
Correct: 1.0  Wrong: 0.33

The shaded pole motor is used for
Options:
1. high starting torque
2. ✔️ low starting torque
3. ✗ medium starting torque
4. ✗ high starting torque

Question Number : 22  Question Id : 922  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
The equipment installed in power plants to reduce air pollution due to smoke is called
Options :
1. De superheaters
2. Economiser
3. Preheater
4. Electrostatic Precipitators

Question Number : 23  Question Id : 923  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
Which of the following is not a welding accessory?
Options :
1. ✗ Goggles
2. ✔️ Vacuum cleaner
3. ✗ Gloves
4. ✗ Electrode holder

Question Number : 24  Question Id : 924  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
The key job of the relay is to
Options :
1. ✗ increase voltage
2. ✔️ search the fault
3. ✗ reduce resistance
4. ✗ stop the current flow

Question Number : 25  Question Id : 925  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
100101₂ is equal to decimal number
Options :
1. ✔️ 47
2. 37
3. 21
4. 17

Question Number: 26  Question Id: 926  Question Type: MCQ  Option Shuffling: No
Correct: 1.0  Wrong: 0.33
A counter has \( N \) flip flops. The total number of states are
Options:
1. \( N \)
2. \( N^2 \)
3. \( 4N \)
4. \( 2^n \)

Question Number: 27  Question Id: 927  Question Type: MCQ  Option Shuffling: No
Correct: 1.0  Wrong: 0.33
In an n-p-n transistor, the majority carriers in the base are
Options:
1. holes
2. electrons
3. both holes and electrons
4. either electrons or holes

Question Number: 28  Question Id: 928  Question Type: MCQ  Option Shuffling: No
Correct: 1.0  Wrong: 0.33
Which of the following is used for generating time varying wave forms?
Options:
1. MOSFET
2. PIN diode
3. Tunnel diode
4. UJT

Question Number: 29  Question Id: 929  Question Type: MCQ  Option Shuffling: No
Correct: 1.0  Wrong: 0.33
The voltage across a zener diode
Options:
1. is constant in forward direction
2. is constant in reverse direction
3. is constant in both forward and reverse direction
is not constant

Question Number : 30  Question Id : 930  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33  
Which of these has highly doped p and n region?  
Options :  
1. PIN diode  
2. Tunnel diode  
3. Photodiode  
4. Schottky diode

Question Number : 31  Question Id : 931  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33  
At room temperature a semiconductor material is  
Options :  
1. perfect insulator  
2. superconducting  
3. conducting  
4. slightly conducting

Question Number : 32  Question Id : 932  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33  
Which of the following has highest conductivity?  
Options :  
1. Silver  
2. Aluminium  
3. Platinum  
4. Tin

Question Number : 33  Question Id : 933  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33  
In TV, an electrical disturbance (noise) affects  
Options :  
1. neither the video nor the audio signals  
2. only the audio signals  
3. both the video and audio signals  
4. only the video signals
In a mercury arc rectifier, characteristic blue luminosity is due to

Options:
1. high temperature
2. electron streams
3. ionization
4. colour of mercury

The stress below which a material has a high probability of not failing under reversal of stress is known as

Options:
1. Tolerance limit
2. Elastic limit
3. Proportional limit
4. Endurance limit

A pycnometer is used to determine

Options:
1. Water content and voids ratio
2. Specific gravity and dry density
3. Water content and specific gravity
4. voids ratio and dry density

For M20 grade of concrete, the maximum shear stress shall not exceed

Options:
1. 1.6 N/mm²
2. 1.9 N/mm²
3. 2.8 N/mm²
4. 2.2 N/mm²

For the above question, User had specified 'ignore' during keys upload.
Question Number : 38  Question Id : 938  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33

Lacings are subjected to

Options :
1. ✗ Transverse loading
2. ✗ Axial loading plus bending
3. ✗ Axial loading plus shear force
4. ✓ Axial loading only

Question Number : 39  Question Id : 939  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33

The flow profile of a fluid depends upon

Options :
1. ✗ Velocity of the fluid only
2. ✗ The diameter of the tube only
3. ✓ The Reynold number
4. ✗ The surface roughness

Question Number : 40  Question Id : 940  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33

In PERT analysis, event means

Options :
1. ✓ Start or finish of a task
2. ✗ Time taken for a task
3. ✗ End of an activity
4. ✗ Work involved in the project

Question Number : 41  Question Id : 941  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33

Plaster of paris is obtained by calcining

Options :
1. ✓ Gypsum
2. ✗ Bauxite
3. ✗ Lime stone
4. ✗ Kanker

Question Number : 42  Question Id : 942  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33
Plywood is obtained from

1. Bamboo
2. Teak wood
3. ✔ Structural timber
4. ✗ Commonly available timber

Question Number: 43  Question Id: 943  Question Type: MCQ  Option Shuffling: No
Correct: 1.0  Wrong: 0.33
Which of the following device is not used to measure the rate of flow

Options:
1. ✗ Venturimeter
2. ✔ Pitot tube
3. ✗ Orificemeter
4. ✗ Rotameter

Question Number: 44  Question Id: 944  Question Type: MCQ  Option Shuffling: No
Correct: 1.0  Wrong: 0.33
Intersection method of detailed plotting is most suitable for

Options:
1. ✗ Forests
2. ✗ Urban areas
3. ✔ Hilly areas
4. ✗ Plains

Question Number: 45  Question Id: 945  Question Type: MCQ  Option Shuffling: No
Correct: 1.0  Wrong: 0.33
Coarse grained soils are best compacted by a

Options:
1. ✗ Drum roller
2. ✗ Rubbed tyred roller
3. ✔ Sheep's foot roller
4. ✔ Vibratory roller

Question Number: 46  Question Id: 946  Question Type: MCQ  Option Shuffling: No
Correct: 1.0  Wrong: 0.33
Percentage of carbon content in mild steel is

Options:
1. ✓ Less than 0.25
2. ✗ Between 0.25 to 0.7
3. ✗ Between 0.7 to 1.5
4. ✗ Greater than 1.5

An induction meter can handle current upto

Options:
1. ✗ 10 A
2. ✗ 30 A
3. ✗ 60 A
4. ✓ 100 A

Question Number : 47  Question Id : 947  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33

Induction type single phase energy meters measure electric energy in

Options:
1. ✗ kW
2. ✗ Wh
3. ✓ kWh
4. ✗ VAR

Question Number : 48  Question Id : 948  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33

Which of the following is / are an essential part of a motor meter?

Options:
1. ✗ An operating torque system
2. ✗ A braking device
3. ✗ Revolution registering device
4. ✓ operating torque system, braking device and Revolution registering device

Question Number : 49  Question Id : 949  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33

---------- is an instrument which measures the insulation resistance of an electric circuit relative to earth and one another,

Options:
1. ✗ Tangent galvanometer
2. ✓ Meggar

Question Number : 50  Question Id : 950  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
3. **Current transformer**

4. **Thermistor**

**Question Number : 51  Question Id : 951  Question Type : MCQ  Option Shuffling : No**
Correct : 1.0  Wrong : 0.33

The household energy meter is

Options :

1. an indicating instrument
2. a recording instrument
3. **an integrating instrument**
4. **both integrating and indicating instrument**

**Question Number : 52  Question Id : 952  Question Type : MCQ  Option Shuffling : No**
Correct : 1.0  Wrong : 0.33

In house water connection, a ferrule is provided, which is a

Options :

1. **small sized curved pipe made of a flexible material**
2. **right angled sleeve made of brass or gun metal**
3. **galvanized iron pipe of size less than 50 mm diameter**
4. **flexible connection between the water main and the service pipe**

**Question Number : 53  Question Id : 953  Question Type : MCQ  Option Shuffling : No**
Correct : 1.0  Wrong : 0.33

The prescribed permissible limit of chloride in drinking water is

Options :

1. **150 mg/l**
2. 200 mg/l
3. **250 mg/l**
4. 300 mg/l

**Question Number : 54  Question Id : 954  Question Type : MCQ  Option Shuffling : No**
Correct : 1.0  Wrong : 0.33

The water treatment plants are generally designed for a period of

Options :

1. **50 years**
2. **30 years**
3. 40 years
4. 25 years
Question Number : 55  Question Id : 955  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33  
The oxides of nitrogen at higher concentration levels affect a fabric resulting its colour to change from  
Options :  
1. ✗ white to black  
2. ✗ white to grey  
3. ✔ white to yellow  
4. ✗ white to pink  

Question Number : 56  Question Id : 956  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33  
Two machines are working in a noisy environment. Machines are jointly producing 75 dBA noise level, however, the background noise level is also 75 dBA. The summation of these two noise levels is  
Options :  
1. ✗ 150 dBA  
2. ✗ 75 dBA  
3. ✔ 78 dBA  
4. ✗ 81 dBA  

Question Number : 57  Question Id : 957  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33  
In stratosphere, the ozone concentration  
Options :  
1. ✗ increases with altitude  
2. ✔ found maximum at mid and decreases either side  
3. ✗ decreases with altitude  
4. ✗ uniformly distributed within the sphere  

Question Number : 58  Question Id : 958  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33  
Mouse is a(an) ________________  
Options :  
1. ✔ Input device  
2. ✗ Output device  
3. ✗ Storage device
Both input and output device

Question Number : 59  Question Id : 959  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
Which of the following is not true about EEPROM?
Options:
1. Random access memory
   Electrically erasable programmable read
2. Only memory
3. Non-volatile memory
4. Sequential access memory

Question Number : 60  Question Id : 960  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
Which of the following is not a valid category of “system bus” in a computer system?
Options:
1. Data bus
2. Control bus
3. Address bus
4. Memory bus

Question Number : 61  Question Id : 961  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
EBCDIC stands for ____________________
Options:
   Extended Binary Coded Data Interchange
1. Code
   Expanded Binary Coded Decimal
2. Interchange Code
   Expanded Binary Coded Decimal
3. Interchange Code
   Expanded Binary Coded Data Interchange
4. Code

Question Number : 62  Question Id : 962  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
The octal representation of 195.25 is ________________
Options:
1. (303.20)$
2. (303.02)$
Question Number : 63  Question Id : 963  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
Considering X as a binary variable, the Boolean expression X + X' is equivalent to
Options :
1. X
2. ✓ 1
3. X
4. X'

Question Number : 64  Question Id : 964  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
The 2's compliment of the binary number (1111111)_2 is
Options :
1. (10000000)_2
2. (00000000)_2
3. ✓ (00000001)_2
4. (01010101)_2

Question Number : 65  Question Id : 965  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
Which of the following operating systems is case sensitive?
Options :
1. ✓ Unix
2. MS-DOS
3. MS-Windows
4. Mac OS X

Question Number : 66  Question Id : 966  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
Class 'C' IP addresses use ____________ bits for Host ID.
Options :
1. ✓ 8
2. 16
3. 24
4. 32
Question Number : 67  Question Id : 967  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
Which of the following is not an e-mail protocol?

Options :
1. POP
2. IMAP
3. SMTP
4. FTP

Question Number : 68  Question Id : 968  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
The diagonal scale is used to represent

Options :
1. three consecutive units
2. two consecutive units
3. diagonal of square
4. diagonal of rectangle

Question Number : 69  Question Id : 969  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 true length will be seen in

Options :
1. Front view
2. Top view
3. Side view
4. Both front and top views

Question Number : 70  Question Id : 970  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
If both the front and top views of a plane are straight lines, it may be

Options :
1. perpendicular to both horizontal and vertical planes
2. parallel to horizontal plane and perpendicular to vertical plane
3. perpendicular to horizontal plane and parallel to vertical plane
4. parallel to both horizontal and vertical planes

Question Number : 71  Question Id : 971  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
For orthographic projections, BIS recommends the following projections.

Options :
1. Fourth-angle projection
2. Third-angle projection
3. First-angle projection
4. Second-angle projection

Question Number : 72  Question Id : 972  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
A square lamina perpendicular to the H.P. and inclined to V.P. Its

Options :
1. V.T. will be perpendicular to the reference line
2. H.T. will be parallel to the reference line
3. V.T. will be parallel to the reference line
4. V.T. will be inclined to the reference line

Question Number : 73  Question Id : 973  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
A force gives a certain mass an acceleration a. If the force is doubled and the mass is reduced to half of its original value, the acceleration becomes

Options :
1. a
2. 2a
3. 4a
4. 6a.

Question Number : 74  Question Id : 974  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
Let F1 and F2 be the force between two bodies separated by a distance d and 2d respectively. Then F2 / F1 is

Options :
1. 2
2. $\frac{1}{2}$
3. $4$
4. $\frac{1}{4}$.

Question Number : 75  Question Id : 975  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33 
The time taken to perform 320 J of work at a rate of 64 W is
Options :
1. $0.2$ s
2. $5$ s
3. $10$ s
4. $64$ s.

Question Number : 76  Question Id : 976  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33 
Radha uses a source A of frequency $f$ and Meera uses another source B of frequency $2f$ to produce sound waves in a school science laboratory. Let $\lambda_A$ and $\lambda_B$ represent the wavelength of waves produced by the sources A and B respectively. Then $\lambda_B / \lambda_A$ is
Options :
1. $1$
2. $2$
3. $0.5$
4. $4$.

Question Number : 77  Question Id : 977  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33 
An object is placed at a distance less than one focal length from a thin convex lens. Which of the following best describes the image formed?
Options :
1. $\checkmark$ Erect, virtual and enlarged
2. $\times$ Erect, virtual and diminished
3. $\times$ Inverted, real and enlarged
4. $\times$ Inverted, real and diminished.

Question Number : 78  Question Id : 978  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33
When two identical resistors are connected in series across a battery, the power dissipated is 10 W. If these resistors are connected in parallel across the same battery, the total power dissipated will be

Options:
1. * 10 W
2. * 20 W
3. ✓ 40 W
4. * 80 W

Which of the following chemical equation represents the reaction of roasting process?

Options:
1. ✓ ZnCO₃ ----> ZnO + CO₂
2. * ZnO + C ----> Zn + CO
3. ✓ 2 CuS + O₂ ----> 2CuO + 2SO₂
4. * Cu + O₂ ----> 2CuO

The charges on aluminum and sulphate ions are +3 and -2 respectively. The correct molecular formula of aluminum sulphate is

Options:
1. ✓ Al₂(SO₄)₃
2. * Al₃(SO₄)₂
3. * Al₂(SO₄)₃
4. ✓ Al₂(SO₄)₃

Corrosion of iron is

Options:
1. ✓ Protection of its surface from atmospheric gases
2. * A physical change
3. ✓ a process of oxidation
4. * a process of Reduction
Which one of the following set of elements is written in increasing order of their atomic radii?
Options:
1. K Na Li
2. Br F Cl
3. O F Cl
4. N P

Which one of the following is an amphoteric oxide?
Options:
1. Na₂O
2. SO₃
3. Ag₂O
4. ZnO

Which reaction of an alcohol would produce a sweet smelling compound?
Options:
1. Esterification
2. Addition
3. Decomposition
4. Dehydration

Which statement about viruses is not true?
Options:
1. Contain DNA
2. Are used for Genetic Engineering
3. Some cause diseases
4. Are living organisms

From which chamber of the heart does Pulmonary artery carry blood to the lungs?
A layer of gas prevents solar radiations to go back into space and causes Global Warming. Which gas is it?

Options:
1. Oxygen
2. Carbon dioxide
3. Sulphur dioxide
4. Nitrogen

Who gave the ‘Laws of Inheritance’ and is considered as’ The Father of Genetics’?

Options:
1. Gregor Johann Mendel
2. Charles Darwin
3. Isaac Newton
4. James Watson

The time taken by the fetus (developing embryo) to complete development inside the mother’s womb is approximately

Options:
1. 6 months
2. 8 months 10 days
3. 280 days
4. 320 days
After food is synthesized by the leaves of the plant, it reaches other parts of the plant through

Options:

1. * Xylem
2. ✓ Phloem
3. * cell to cell by osmosis
4. * cell to cell by diffusion

The HCF of two numbers is 12 and their LCM is 72. If one number is 48, the other number is

Options:

1. * 18
2. * 24
3. * 36
4. ✓ Data is inconsistent

The largest number which divides by 125 and 187, leaving remainders 5 and 7 respectively is

Options:

1. ✓ 60
2. * 30
3. * 20
4. * 10

If a : b = 5 : 12 and b : c = 8 : 5, then a : c is

Options:

1. * 3 : 2
2. ✓ 2 : 3
3. * 1 : 1
4. * 4 : 5
Question Number : 94  Question Id : 994  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
If 27, 12, 24, x are in proportion, then x is equal to
Options :
1. ✓ 9
2. 30
3. 54
4. 60
For the above question, User had specified 'ignore' during keys upload.

Question Number : 95  Question Id : 995  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
Successive discounts of 30% and 20% are equivalent to a single discount of
Options :
1. ✓ 40%
2. 44%
3. 45%
4. 50%

Question Number : 96  Question Id : 996  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
In how many years rupees 500 will amount to rupees 800 at simple interest of 10 % per year?
Options :
1. ✓ 6
2. 8
3. 10
4. 16

Question Number : 97  Question Id : 997  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
Compound interest on ₹ 16000 for 1 year at 10% per annum compounded half yearly is
Options :
1. ✓ 1600
2. 1640
3. 1680
4. 3360
If C.P. of 15 articles is equal to S.P. of 12 articles, then in the whole transaction there is a

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

To gain 20% after allowing a discount of 5%, the shopkeeper should mark the price of the article which cost him ₹ 950 as

Options:
1. ₹ 1000
2. ₹ 1100
3. ₹ 1200
4. ₹ 1300

A shopkeeper mixes 60 kg of sugar which costs him ₹ 20 per kg with 40 kg of sugar which costs him ₹ 25 per kg. He sells the mixture at ₹ 26 per kg. His gain percent is

Options:
1. $\frac{200}{11}\%$
2. $\frac{300}{11}\%$
3. $\frac{200}{13}\%$
4. $\frac{300}{13}\%$

In two vessels A and B, the spirit and water are in the ratio of 7 : 2 and 5 : 3 respectively. The ratio in which these are mixed to obtain new mixture which contains spirit and water in the ratio 5 : 2 is

Options:
Question Number : 102  Question Id : 1002  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
Options :  
1. ✗ 20  
2. ✔ 30  
3. ✗ 24  
4. ✗ 25  

Question Number : 103  Question Id : 1003  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
A train 120 m long is moving at 40 km/h. The time in seconds, it will take to pass another train 100 m long which is moving at 32 km/h in the opposite direction from the moment they meet is  
Options :  
1. ✔ 11  
2. ✗ 22  
3. ✗ 44  
4. ✗ 88  

Question Number : 104  Question Id : 1004  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
A can do a piece of work in 20 day and B can do the same work in 30 days. If they work together, the number of days required to do the same work is  
Options :  
1. ✗ 18  
2. ✗ 16  
3. ✗ 14  
4. ✔ 12  

Question Number : 105  Question Id : 1005  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
P and Q can do a piece of work in 10 days, Q and R in 12 days and R and P in 15 days. In how many days R alone can do the same work?
Question Number : 106  Question Id : 1006  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33

The average of squares of first five whole numbers is

Options :
1. ✔ 6
2. ✗ 7.5
3. ✗ 9
4. ✗ 11

Question Number : 107  Question Id : 1007  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33

The average of 21 observations is 40. Out of these observations the average of first 11 observations is 38 and the last 11 observations is 41. The 11th observation is

Options :
1. ✗ 19
2. ✔ 20
3. ✔ 29
4. ✗ 39

Question Number : 108  Question Id : 1008  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33

The first term of an AP is 18 and third term is 10. Its 21st term is

Options :
1. ✔ 98
2. ✗ 62
3. ✗ − 98
4. ✔ − 62

Question Number : 109  Question Id : 1009  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33

The third term of a G.P. is 16 and sixth term is − 128. The common ratio of the G.P. is

Options :
1. ✗ 2
2. ✔ − 2
3. \( \times 4 \)
4. \( \times -4 \)

Question Number : 110  Question Id : 1010  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33

The angle of elevation of the top of a tower from a point on the ground which is 30 m away from the foot of the tower is 45\(^\circ\). The height of the tower is

Options :
1. \( \times 15 \) m
2. \( \times 10\sqrt{3} \) m
3. \( \checkmark \) 30 m
4. \( \times 30\sqrt{3} \) m

Question Number : 111  Question Id : 1011  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33

From a point on the bridge across a river the angle of depressions of the bank on the opposite side of the river are 30\(^\circ\) and 60\(^\circ\) respectively. If the bridge is at a height of 3 m from the bank, the width of the river is

Options :
1. \( \checkmark \) 4\(\sqrt{3} \) m
2. \( \times 2(\sqrt{3} + 1) \) m
3. \( \times 2(\sqrt{3} + 3) \) m
4. \( \times 2\sqrt{3} \) m

Question Number : 112  Question Id : 1012  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33

If \((x + 2)\) is a factor of \(x^4 - 4x^2 + 3ax - 12\), then \(a\) is equal to

Options :
1. \( \times 2 \)
2. \( \checkmark \) \(-2\)
3. \( \frac{10}{3} \)
4. \( \frac{-10}{3} \)

Question Number : 113  Question Id : 1013  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33

One of the factor of \((121x^2 - 1) + (1 + 11x)^2\) is

Options :
1. \( \times (11 + x) \)
2. \((11 - x)\)  
3. \((11x - 1)\)  
4. \(22x\)

Question Number : 114  Question Id : 1014  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33  
All values of \(k\) for which \(x^2 + kx + 25 = 0\) has real roots is  
Options :
1. \(5 \leq k \leq -5\)  
2. \(-5 \leq k \leq 5\)  
3. \(k \geq 5\)  
4. \(k \geq -5\)

Question Number : 115  Question Id : 1015  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33  
The sum and product of the roots of the equation \(x^2 - x - 4 = 0\) are  
respectively  
Options :
1. \(4, 1\)  
2. \(1, 4\)  
3. \(-4, 1\)  
4. \(1, -4\)

Question Number : 116  Question Id : 1016  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33  
With which game is the Ranji Trophy associated?  
Options :
1. Football  
2. Hockey  
3. Cricket  
4. Basketball

Question Number : 117  Question Id : 1017  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33  
In women’s tennis records, which of the following is an unmatched pair of champion and championship Trophy won by her  
Options :
1. Li Na : Wimbledon
Serene Williams: Australian Open
Maria Sharapova: French Open
Samantha Stosur: US Open

Question Number: 118  Question Id: 1018  Question Type: MCQ  Option Shuffling: No
Correct: 1.0  Wrong: 0.33
How many states does India have, and which is the last one to get statehood?
Options:
1. ✔️ 29: Telengana
2. 24: Delhi
3. 22: Lakshadweep
4. 30: Uttarakhand

Question Number: 119  Question Id: 1019  Question Type: MCQ  Option Shuffling: No
Correct: 1.0  Wrong: 0.33
Of which political party is Mamata Banerjee the leader?
Options:
1. ✔️ Bahujan Samaj Party
2. ✔️ Trinamool Congress
3. ✔️ Forward Block
4. ✔️ Communist Party (Marxist)

Question Number: 120  Question Id: 1020  Question Type: MCQ  Option Shuffling: No
Correct: 1.0  Wrong: 0.33
Which of the following statement is not true regarding the second five year plan of India?
Options:
1. The plan was based on the Mahalanobis model of economic development, the architect of which was the Indian statistician PC Mahalanobis
2. The second five year plan was operational from 1956 -1961
   The plan assumed a closed economy in which the main trading activity would be centered around importing capital goods
3. The plan also focused on agriculture, that being the main sector on which the largest chunk of our population depended
4. ✔️

Question Number: 121  Question Id: 1021  Question Type: MCQ  Option Shuffling: No
Correct: 1.0  Wrong: 0.33
What is 'The Euro?'
Question Number : 122  Question Id : 1022  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
To abide by the Constitution and respect its ideals and institutions is a
Options :
1. ✔ Fundamental Right
2. ✗ Fundamental duty
3. ✗ Human Right
4. ✗ Natural desire

Question Number : 123  Question Id : 1023  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
What does Universal Adult Franchise mean?
Options :
1. ✗ All adults who have completed 21 years of age have the right to participate in the
electoral process
2. ✗ Candidate aspiring to be member of legislative assembly should at least be 25
   years old
3. ✗ A girl cannot marry till she attains age of 18 and boy till he is 21
4. ✔ Any citizen of India 18 years of age or above can vote irrespective of race, caste,
   religion, sex, place of birth

Question Number : 124  Question Id : 1024  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
Decibel is the unit of
Options :
1. ✗ Speed of light
2. ✗ Intensity of heat
3. ✔ Intensity of sound
4. ✗ Quantum of mass

Question Number : 125  Question Id : 1025  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
One early morning, with no traffic on roads, Rahul while cycling down from Red Fort to his residence noted the distance covered and the total time taken to reach home. What can he calculate from this data?

Options:
1. Velocity
2. Speed
3. Acceleration
4. Displacement

Who founded the Ramakrishna Mission?

Options:
1. Ramakrishna Paramahansa
2. Saradamani
3. Swami Vivekananda
4. Rani Rashmoni

Which pair out of the following is radioactive as available abundantly?

Options:
1. Lead & Mercury
2. Radium & Uranium
3. Sodium & Potassium
4. Carbon & Silicon

Sun’s energy does not get converted into

Options:
1. biomass
2. wind power
3. nuclear energy
4. energy from oceanic waves
The unit for measurement of energy is
Options:
1. Pascal
2. ✓ Joule
3. ✗ Calorie
4. ✗ Horse power

Question Number : 130  Question Id : 1030  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33

After First World War political movement named fascism arose. Out of the following statements which one is not true of fascism
Options:
1. ✗ Dictatorship introduced in Italy by Mussolini is called fascism
2. ✓ German version of fascism is referred to as Nazism
3. ✓ Fascists were not hostile to democracy and socialism
4. ✗ Adolf Hitler was a fascist

Question Number : 131  Question Id : 1031  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33

Energy experts predict that many countries will face severe electricity blackouts very soon because
Options:
1. ✓ Demand would surpass supply
2. ✗ World’s natural oil supply is fixed
3. ✗ Electrical supply is fast being eroded by terrorists in many parts of the world
4. ✓ Greater demand for energy and extreme depletion of oil and natural gas

Question Number : 132  Question Id : 1032  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33

Which is the correct difference between topography and landscape
Options:
1. ✓ Topography is natural, landscape is the handiwork of humans
2. ✗ Topography is of diverse kinds, landscaping is not
3. ✗ Landscape is determined by nature, topography by humans
4. ✗ Himalayas and Thar desert are part of landscape of India, sea beach is topographical
When both kidneys in a patient fail to work, he/she may survive by undergoing

Options:
1. Kidney transplant only
2. Dialysis only
3. Dialysis or Kidney Transplant
4. It is not possible to survive if kidneys fail

How can a food chain comprising grass, goat and humans be correctly represented?

Options:
1. Grass → goat ← humans
2. Grass ← goat ← humans
3. Grass → goat → humans
4. Humans → goat → grass

Every cell of human body has a nucleus except

Options:
1. Liver cells
2. Kidney cells
3. Red blood corpuscles
4. Brain cells

Many ancient monuments have been spoilt by acid rain which is

Options:
1. Rain water containing nitrogenous compounds like ammonia
2. Rain water with pH 8
3. Rain drops which are corrosive due to presence of Hydrochloric acid
4. Rain with highly acidic pH due to presence of pollutants like oxides of Nitrogen and Sulphur
Question Number : 137  Question Id : 1037  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
What is not true about the Jan Dhan Yojana of PM Narendra Modi?
Options :
1. ✗ It is a scheme aiming to accomplishing the objective of providing banking accounts with a debit card
2. ✔ Scheme of opening ATM banking for all accounts new and old
3. ✗ It has the facility of overdraft upto Rs. 5000/- for Aadhar Card linked accounts
4. ✗ It has inbuilt accident insurance

Question Number : 138  Question Id : 1038  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
Select the appropriate information about cartels.
Options :
1. ✔ Cartels are group of nations getting together to decide on price & quantity of a commodity.
2. ✗ Every country has many cartels.
3. ✗ Group of individuals can also form cartels.
4. ✗ Cartels can also be formed by a group of industries

Question Number : 139  Question Id : 1039  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
What is meant by ‘Wholesale Price’?
Options :
1. ✔ Price of goods at factory gate
2. ✗ Price of a basket of goods and services
3. ✗ Minimum price fixed for import of a commodity
4. ✗ Maximum price fixed for export of a commodity

Question Number : 140  Question Id : 1040  Question Type : MCQ  Option Shuffling : No
Correct : 1.0  Wrong : 0.33
Which Mughal emperor proclaimed Deen-e-Ilahi or Divine Faith?
Options :
1. ✗ Babar
2. ✗ Humayun
3. ✗ Shahjahan
4. ✔ Akbar

Question Number : 141  Question Id : 1041  Question Type : MCQ  Option Shuffling : No
B is married to D who is the daughter of C. C is the father of E who is the brother of A.
How is B related to A?

Options:
1. ✓ brother-in-law
2. ✗ cousin
3. ✗ father-in-law
4. ✗ uncle

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.
60 : 120 :: 210 : ?

Options:
1. ✗ 316
2. ✗ 327
3. ✓ 336
4. ✗ 430

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.
Students : Classroom :: Athletes : ?

Options:
1. ✗ Team
2. ✓ Stadium
3. ✗ Track
4. ✗ Sports
Four boys A, B, C and D and four girls E, F, G and H are sitting around a round table. No two girls are sitting next to each other. D is sitting next to F and is facing A. B is between F and G who is facing H.

Who among the following are sitting next to each other?

Options:
1. HA
2. AF
3. DG
4. EC

Question Number : 145  Question Id : 1045  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. 4, 2, 5, 6, 3, 1
2. 4, 2, 6, 5, 1, 3
3. ✔ 4, 2, 5, 6, 1, 3
4. ✗ 2, 5, 4, 1, 6, 3

Question Number : 146  Question Id : 1046  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.

(2 [8] 4)  (7 [27] 10)  (5 [?] 9)

Options:
1. ✔ 64
2. ✗ 55
3. ✗ 25
4. ✗ 16

Question Number : 147  Question Id : 1047  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33

In a certain language, ‘732’ means ‘go to school’; ‘4693’ means ‘school celebrates national days’; and ‘19584’ means ‘national days are country’s pride’. Which digit means ‘celebrates’ in that language?

Options:
1. ✗ 3
2. ✔ 6
Question Number : 148  Question Id : 1048  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33  
If ‘POSTER’ is coded as ‘SDSRNO’, then ‘DIRECT’ will be coded as:  
Options :  
1. SBDQCH  
2. CHQDBS  
3. UDFSJE  
4. SBDQHC  

Question Number : 149  Question Id : 1049  Question Type : MCQ  Option Shuffling : No  
Correct : 1.0  Wrong : 0.33  
Praakash walks 4 km towards West, turns left and walks 5 km. He then turns right and walks 8 km. Finally he turns right and walks 10 km. How far is he from the starting point?  
Options :  
1. 5 km  
2. 13 km  
3. 15 km  
4. 17 km  

Question Number : 150  Question Id : 1050  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?  

<table>
<thead>
<tr>
<th>3</th>
<th>5</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>15</td>
<td>28</td>
</tr>
<tr>
<td>18</td>
<td>60</td>
<td>?</td>
</tr>
</tbody>
</table>

Options :  
1. 102  
2. 112  
3. 140  
4. 196