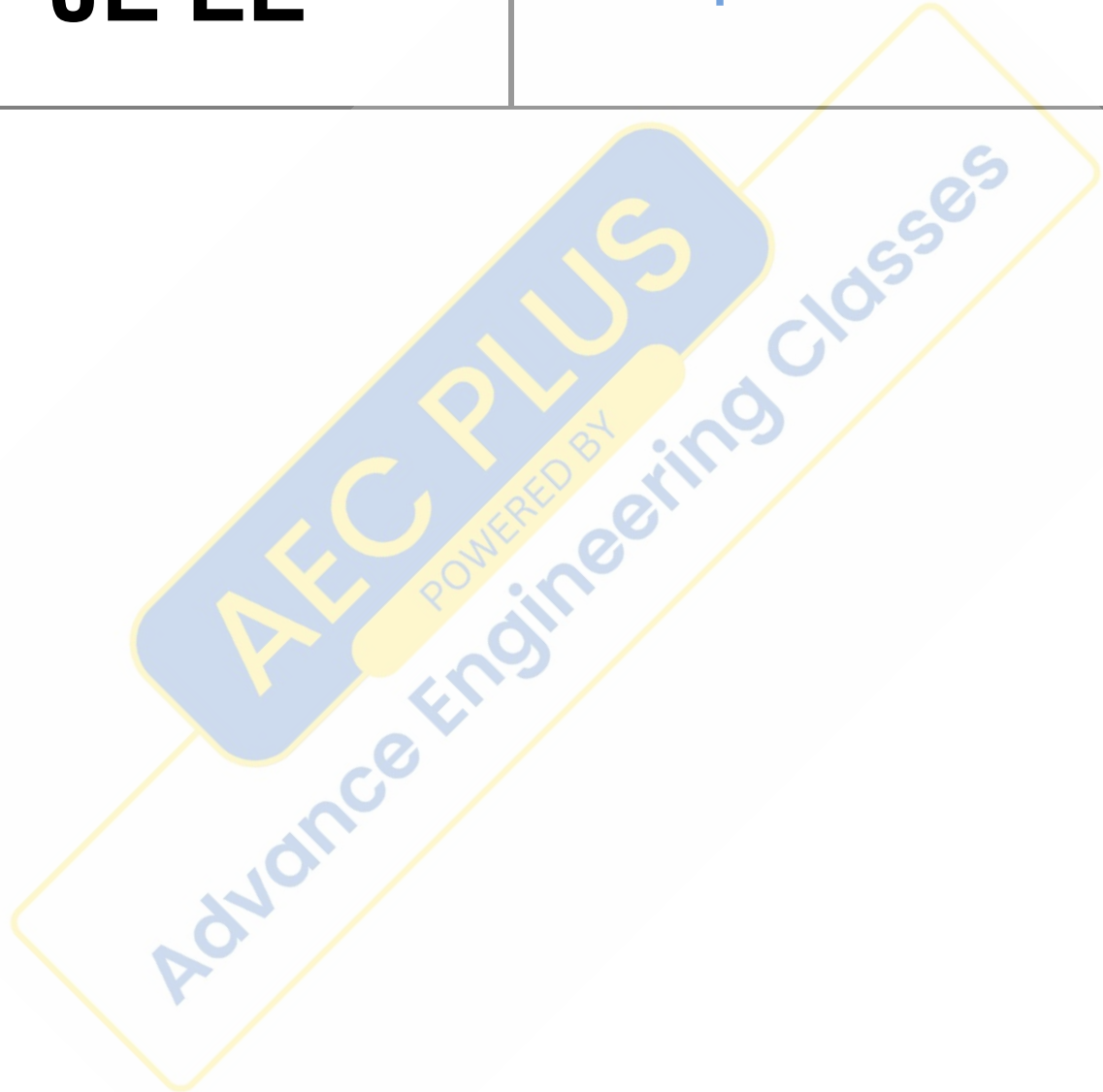


**RRB  
JE EE**

**Previous Year Paper  
2 Sept 2015 Shift 1**



## 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:** Senior Section Engineer 2nd Sep Shift 1 Actual  
**Subject Name:** Senior Section Engineer  
**Creation Date:** 2015-08-31 13:05:54.0  
**Cut Off:** 0  
**Duration:** 120  
**Number of Questions:** 150  
**Total Marks:** 150.0

Senior Section Engineer

Group Number : 1  
Group Id : 37  
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

Senior Section Engineer

Section Id : 37  
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: 37  
Question Shuffling Allowed : Yes

**Question Number : 1 Question Id : 6601 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33**

The efficiency of perpetual motion machine-II (PMM-II) is

- a. 0%
- b. 50%
- c. 75%
- d. 100%

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 2 Question Id : 6602 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A thermal energy reservoir that supplies the heat is known as

- a. Refrigerator
- b. Source
- c. Sink
- d. Heat engine

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 3 Question Id : 6603 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Thermal efficiency of heat engine may be defined as

- a.  $1 - (Q_2/Q_1)$
- b.  $1 - (Q_1/Q_2)$
- c.  $(Q_1/Q_2) - 1$
- d.  $(Q_2/Q_1) - 1$

Where,  $Q_1$  = magnitude of heat transfer between heat engine and source

$Q_2$  = magnitude of heat transfer between heat engine and sink.

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 4 Question Id : 6604 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

“Theoretical limits” for the performance of commonly used engineering systems is determined by

- Zeroth law of thermodynamics
- First law of thermodynamics
- Second law of thermodynamics
- Third law of thermodynamics

Options :

- a
- b
- c
- d

Question Number : 5 Question Id : 6605 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The radiation energy emitted by the Sun between the wavelength of  $0.4 \mu\text{m}$  to  $0.76 \mu\text{m}$  is known as

- ultraviolet radiation
- infrared radiation
- thermal radiation
- visible radiation

Options :

- a
- b
- c
- d

Question Number : 6 Question Id : 6606 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

To reduce the heat loss with insulation in sphere the following condition should be satisfied

- $r_{\text{insulation thickness}} \gg r_{\text{critical}}$
- $r_{\text{insulation thickness}} \ll r_{\text{critical}}$
- $r_{\text{insulation thickness}} = r_{\text{critical}}$
- $r_{\text{insulation thickness}} = 0$

Options :

- a
- b

3. ✘ c

4. ✘ d

Question Number : 7 Question Id : 6607 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The inner diameter of working cylinder of an IC engine is known as

- a. Stroke
- b. Bore
- c. Clearance
- d. Compression ratio

Options :

1. ✘ a

2. ✔ b

3. ✘ c

4. ✘ d

Question Number : 8 Question Id : 6608 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The distance travelled by the working piston which moves between two dead centres of an IC engine is known as

- a. Stroke
- b. Bore
- c. TDC
- d. BDC

Options :

1. ✔ a

2. ✘ b

3. ✘ c

4. ✘ d

Question Number : 9 Question Id : 6609 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The ratio of maximum value of cylinder volume to minimum value of cylinder volume is known as

- a. Clearance ratio
- b. Pressure ratio
- c. Volume ratio
- d. Compression ratio

Options :

1. ✘ a

2. ✘ b
3. ✘ c
4. ✔ d

Question Number : 10 Question Id : 6610 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Ratio of brake power to the indicated power is known as

- a. Thermal efficiency
- b. Mechanical efficiency
- c. Volumetric efficiency
- d. Relative efficiency

Options :

1. ✘ a
2. ✔ b
3. ✘ c
4. ✘ d

Question Number : 11 Question Id : 6611 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

NO<sub>x</sub> emission in petrol engine is minimum when the engine is

- a. Idling
- b. Accelerating
- c. Decelerating
- d. Crushing

Options :

1. ✔ a
2. ✘ b
3. ✘ c
4. ✘ d

Question Number : 12 Question Id : 6612 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The portion of gate assembly that connects the sprue to the casting is known as

- a. Riser
- b. Gate
- c. Runner
- d. Cope

Options :

1. ✘ a
2. ✘ b

3. ✓ c

4. ✗ d

Question Number : 13 Question Id : 6613 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The machine on which the job remains stationary and tool reciprocates is known as

- a. Shaper
- b. Planer
- c. Drilling
- d. Lathe

Options :

1. ✓ a

2. ✗ b

3. ✗ c

4. ✗ d

Question Number : 14 Question Id : 6614 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Oxi-acetylene flame is used in

- a. Arc welding
- b. Gas welding
- c. Resistance welding
- d. Brazing

Options :

1. ✗ a

2. ✓ b

3. ✗ c

4. ✗ d

Question Number : 15 Question Id : 6615 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Under the condition of resonance, RLC series circuit behaves as a,

- a. Purely resistive circuit.
- b. Purely inductive circuit.
- c. Capacitive circuit.
- d. Reactive circuit.

Options :

1. ✓ a

2. ✗ b

3. ✗ c

4. ✗ d

Question Number : 16 Question Id : 6616 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The crawling in an induction motor is caused by

- Improper design of the machine
- Low voltage supply.
- High loads.
- Harmonics developed in the motor

Options :

- a
- b
- c
- d

Question Number : 17 Question Id : 6617 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The unit of inductance is

- Ohm.
- Mho.
- Farad.
- Henry.

Options :

- a
- b
- c
- d

Question Number : 18 Question Id : 6618 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Thevenin's equivalent circuit consists of \_\_\_\_\_.

- Series combination of  $R_{Th}$ ,  $E_{Th}$  and  $R_L$ .
- Series combination of  $R_{Th}$ ,  $E_{Th}$ .
- Parallel combination of  $R_{Th}$ ,  $E_{Th}$ .
- Parallel combination of  $R_{Th}$ ,  $E_{Th}$  and  $R_L$

Options :

- a
- b
- c
- d

Question Number : 19 Question Id : 6619 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33



The frequency of AC supply in India

- a. 20 Hz
- b. 40 Hz
- c. 55 Hz
- d. 50 Hz

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 20 Question Id : 6620 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The starting torque of a 1-phase induction motor is

- a. High.
- b. Moderate.
- c. Low.
- d. Zero.

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 21 Question Id : 6621 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

An electric motor in which rotor and stator fields rotate simultaneously is called a \_\_\_\_\_ motor.

- a. DC
- b. Induction
- c. Synchronous
- d. Universal

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 22 Question Id : 6622 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A battery is a source of

- a. DC voltage.
- b. 1  $\phi$  AC voltage.
- c. 3  $\phi$  AC voltage.
- d. AC or DC voltage

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 23 Question Id : 6623 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which of the following protection is normally not provided on small distribution transformers?

- a. Overfluxing protection
- b. Buchholz relay
- c. Overcurrent protection
- d. Instantaneous relay

Options :

- 1. ✗ a
- 2. ✓ b
- 3. ✗ c
- 4. ✗ d

Question Number : 24 Question Id : 6624 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The Q- factor of a coil is given by

- a. Its power factor  $\cos \phi$ .
- b. Ratio of max. energy stored & energy dissipated per cycle.
- c. Reciprocal of its power factor.
- d. Ratio  $R/Z$ .

Options :

- 1. ✗ a
- 2. ✗ b
- 3. ✓ c
- 4. ✗ d

Question Number : 25 Question Id : 6625 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which of the following statement is not correct?

- a.  $X + \bar{X}Y = X$
- b.  $X \cdot (\bar{X} + Y) = XY$
- c.  $X + X\bar{Y} = X$
- d.  $ZX + Z\bar{X}Y = ZX + ZY$

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 26 Question Id : 6626 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Generally bridge rectifiers are preferred because

- a. They have less peak inverse voltage.
- b. They require small transformer.
- c. They have low ripple factor.
- d. Both a and b.

Options :

- 1. ✗ a
- 2. ✗ b
- 3. ✗ c
- 4. ✓ d

Question Number : 27 Question Id : 6627 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

In a P-type semiconductor, Fermi-level is close to\_\_\_\_\_.

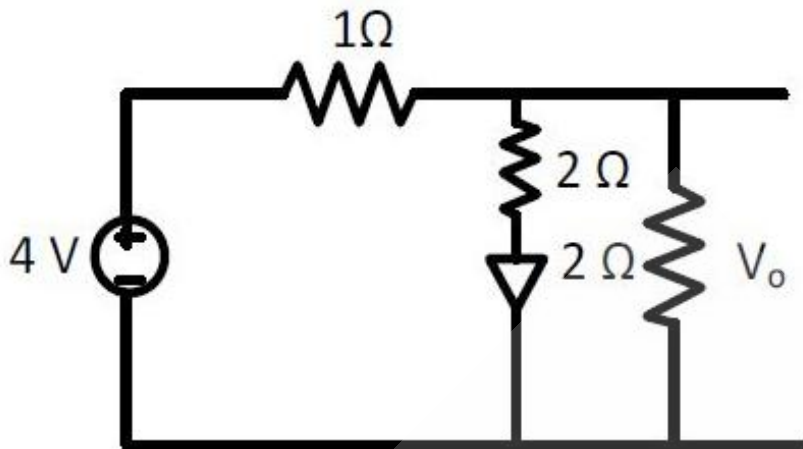
- a. The bottom of the valence band
- b. The top of the valence band
- c. The top of the conduction band
- d. The bottom of the conduction band

Options :

- 1. ✗ a
- 2. ✓ b
- 3. ✗ c
- 4. ✗ d

Question Number : 28 Question Id : 6628 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Assuming that diode in the given circuit is ideal, the voltage  $V_o$  is



- a. 2 V
- b. 3 V
- c. 3.5 V
- d. 1V

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 29 Question Id : 6629 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The Darlington pair is mainly used for

- a. Reducing distortion
- b. Power amplification
- c. Wideband voltage amplification
- d. Impedance matching

Options :

- 1. ✗ a
- 2. ✗ b
- 3. ✗ c
- 4. ✓ d

Question Number : 30 Question Id : 6630 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Transistors are mostly used as

- a. Rectifier
- b. Voltage regulator
- c. Oscillator
- d. Amplifier

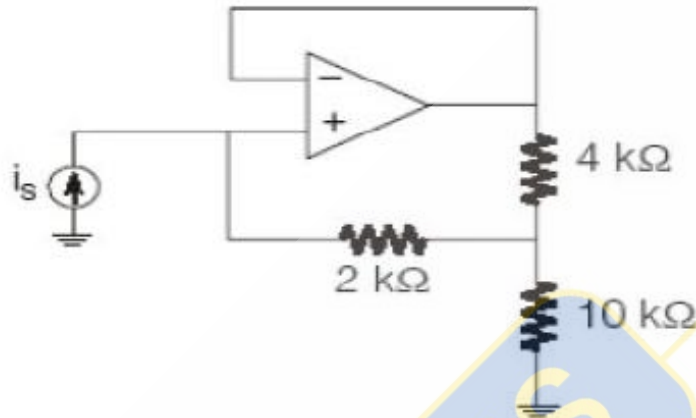
Options :

- 1. ✗ a

- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 31 Question Id : 6631 Question Type : MCQ Option Shuffling : No  
 Correct : 1.0 Wrong : 0.33

For the circuit shown below the input resistance is \_\_\_ k $\Omega$ .



- a. 20 k $\Omega$
- b. 17 k $\Omega$
- c. 22 k $\Omega$
- d. 23 k $\Omega$

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 32 Question Id : 6632 Question Type : MCQ Option Shuffling : No  
 Correct : 1.0 Wrong : 0.33

In active filter which element is absent?

- a. Resister
- b. Inductor
- c. Capacitor
- d. Both inductor and capacitor

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 33 Question Id : 6633 Question Type : MCQ Option Shuffling : No  
 Correct : 1.0 Wrong : 0.33

For an AM signal, the bandwidth is 6 kHz and the highest frequency component present is 600 kHz.  
The carrier frequency used for this AM signal is

- a. 600 kHz
- b. 603 kHz
- c. 597 kHz
- d. 606 kHz

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 34 Question Id : 6634 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

\_\_\_\_\_ is digital modulating system.

- a. PCM
- b. PPM
- c. PFM
- d. PWM

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 35 Question Id : 6635 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Capillarity of liquid in small-diameter tubes is due to molecular attraction. In case of Mercury, the following occurs in terms of capillarity

- a. Capillary rise
- b. Capillary depression
- c. Capillary flattening
- d. Compressibility

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 36 Question Id : 6636 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

According to IS 456, nominal mix concrete can be used upto which of the following grade

- a. 10
- b. 15
- c. 20
- d. 25

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 37 Question Id : 6637 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A tight knot free from decay, which is solid across its face, and at least as hard as the surrounding wood.

- a. Punk knot
- b. Pith knot
- c. Loose knot
- d. Sound knot

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 38 Question Id : 6638 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which of the following is not a method used for plane table surveying

- a. Radiation method
- b. Traversing method
- c. Intersection method
- d. Backscattering method

Options :

- 1. ✘ a
- 2. ✘ b

3. ✘ c

4. ✔ d

Question Number : 39 Question Id : 6639 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The batching tolerance for cement as per IS 456 is

- a.  $\pm 1\%$
- b.  $\pm 1.5\%$
- c.  $\pm 2\%$
- d.  $\pm 3\%$

Options :

1. ✘ a

2. ✘ b

3. ✔ c

4. ✘ d

Question Number : 40 Question Id : 6640 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

In the design of steel structures, the ratio of the effective length of a member to the radius of gyration of the cross-section about the axis under consideration is called as

- a. Modulus of elasticity
- b. Slenderness ratio
- c. Stress ratio
- d. Aspect ratio

Options :

1. ✘ a

2. ✔ b

3. ✘ c

4. ✘ d

Question Number : 41 Question Id : 6641 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A line which shows the water content dry density relation for the compacted soil containing no air voids is known as

- a. Azimuth
- b. Zero-air voids line
- c. Proctor curve
- d. Constant density line



Options :

1. ✘ a
2. ✔ b
3. ✘ c
4. ✘ d

Question Number : 42 Question Id : 6642 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

According to IS 1200, brickwork is usually measured in

- a. wall thickness
- b. cubic meter
- c. square meter
- d. linear meter

Options :

1. ✘ a
2. ✔ b
3. ✘ c
4. ✘ d

Question Number : 43 Question Id : 6643 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The point where the bending moment is zero is called as

- a. Point of contraflexure
- b. Yield point
- c. Plastic hinge
- d. Limit of elasticity

Options :

1. ✔ a
2. ✘ b
3. ✘ c
4. ✘ d

Question Number : 44 Question Id : 6644 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

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Free float is the amount of time that a task in a project network can be delayed without causing a delay to the

- a. Subsequent tasks
- b. Milestone completion date
- c. Project completion date
- d. Subsequent project

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 45 Question Id : 6645 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which of the following list of pile types is not a representation based on the functioning of the pile

- a. End-bearing pile
- b. Friction pile
- c. Anchor pile
- d. H-pile

Options :

- 1. ✗ a
- 2. ✗ b
- 3. ✗ c
- 4. ✓ d

Question Number : 46 Question Id : 6646 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The excessive amount of expansion due to unsound cement is usually related to

- a. Magnesia
- b. Iron oxide
- c. Alkalies
- d. Water

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c

4. ✘ d

Question Number : 47 Question Id : 6647 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The damping force acts on the moving system of an indicating instrument only when it is

- a. Moving
- b. Stationary
- c. Near its full deflection
- d. Just starting to move

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 48 Question Id : 6648 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The hot wire ammeter:

- a. Is used only for dc circuits
- b. High precision instrument
- c. Used only for ac circuit
- d. Reads equally well on dc and ac circuit

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 49 Question Id : 6649 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Damping of deflecting type instruments is done to

- a. Reduce the oscillation of the pointer in the final deflected position
- b. Make the moving system slow
- c. Make the moving system fast
- d. Reduce the angle of deflection of the pointer on the graduated scale

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 50 Question Id : 6650 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

To increase the sensitivity of a deflecting type instrument

- a. Torque/weight ratio should be high
- b. Torque/weight ratio should be low
- c. It should be lightly damped
- d. Control torque must be reduced

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 51 Question Id : 6651 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A voltmeter must have very high internal resistance so that

- a. Accuracy is high
- b. Resolution is high
- c. Draws small amount of current
- d. Creates high loading effect of the circuit

Options :

- 1. ✗ a
- 2. ✗ b
- 3. ✓ c
- 4. ✗ d

Question Number : 52 Question Id : 6652 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Identify the incorrect statement

Food chains and food webs play a very important role in the ecosystem because

- a. energy flow takes place through them
- b. nutrient cycle takes place through them
- c. it helps to maintain ecological balance
- d. it shows biological magnifications of all chemicals

Options :

- 1. ✗ a
- 2. ✗ b
- 3. ✗ c
- 4. ✓ d

Question Number : 53 Question Id : 6653 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The backpackers disease in humans is caused by the microorganism, which is known as

- a. shigella
- b. schistosoma
- c. giardia lamblia
- d. francisella

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 54 Question Id : 6654 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

In the determination of total dissolved solids, the water sample is dried at the temperature of

- a.  $150 \pm 5^\circ\text{C}$
- b.  $180^\circ\text{C}$
- c.  $105 \pm 5^\circ\text{C}$
- d.  $550 \pm 5^\circ\text{C}$

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 55 Question Id : 6655 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The continuous exposure of high concentration of respirable suspended particulate matter may cause

- a. eye irritation
- b. kidney damage
- c. failure of respiratory system
- d. cardiac disease

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 56 Question Id : 6656 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The prescribed permissible noise level, Leq for commercial area at night time is

- a. 45 dBA
- b. 65 dBA
- c. 50 dBA
- d. 55 dBA

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 57 Question Id : 6657 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The pH of acid rain should always be less than

- a. 5.6 even after precipitation
- b. 7.0 after precipitation
- c. 6.5 after precipitation
- d. 4.2 after precipitation

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 58 Question Id : 6658 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

MODEM stands for

- a. Modulator Demodulator
- b. Modular Demography
- c. Model Demodulation
- d. Modulation Demodulation

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 59 Question Id : 6659 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Unix is a/an \_\_\_\_\_

- a. Application software
- b. Word processor
- c. Database management system
- d. System software

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 60 Question Id : 6660 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Considering 1's complement representation for negative numbers, -85 will be stored into an 8-bit memory space as

- a. 10101010
- b. 10111111
- c. 10100110
- d. 11101001

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 61 Question Id : 6661 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Considering X and Y as binary variables, the equivalent Boolean expression for  $X + XY$  is

- a. X
- b. Y
- c. XY
- d.  $X + Y$

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 62 Question Id : 6662 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

'FORTRAN' is a \_\_\_\_\_

- a. Low-level programming language
- b. High-level programming language
- c. Assembly language
- d. Machine language

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 63 Question Id : 6663 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which of the following statements about High-Level language is not correct?

- a. High-Level language is machine dependent
- b. High-Level language programs use interpreter
- c. High-Level language programs use compiler
- d. High-Level language is machine independent

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 64 Question Id : 6664 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

HTML stands for

- a. HyperText Markup Language
- b. HyperText Manipulation Language
- c. HyperText Management Language
- d. HyperText Maintenance Language

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 65 Question Id : 6665 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33



Which of the following viruses generally found in the hard disk's root directory, but it keeps on changing location?

- a. Trj.Reboot
- b. Vienna
- c. Way
- d. Trivial.88.D

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 66 Question Id : 6666 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which of the following memory has highest access speed?

- a. Hard Disk
- b. RAM
- c. ROM
- d. Cache memory

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 67 Question Id : 6667 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The 8's complement of the octal number  $(4060)_8$  is

- a.  $(3720)_8$
- b.  $(3717)_8$
- c.  $(4020)_8$
- d.  $(4720)_8$

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 68 Question Id : 6668 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A map of 10 cm x10 cm represents an area of 40000 square Metre of a field. The R. F. Of the scale is

- a. 1/400
- b. 1/4000000
- c. 1/2000
- d. 1/200

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 69 Question Id : 6669 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If a line rotates in a plane about one of its ends and at the same time, if a point moves along the line continuously in one direction then the curve traced out by the moving point is called

- a. epicycloid
- b. helix
- c. involute
- d. spiral

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 70 Question Id : 6670 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The point at which line intersects the H.P., if extended, is known as

- a. Horizontal trace
- b. Profile trace
- c. Auxiliary trace
- d. Vertical trace

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 71 Question Id : 6671 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which of the following describes the theory of orthographic projection?

- a. Projectors parallel to each other and oblique to the plane of projection
- b. Projectors parallel to each other and perpendicular to the plane of projection
- c. Projectors parallel to each other and parallel to the plane of projection
- d. Projectors perpendicular to each other and parallel to the plane of projection

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 72 Question Id : 6672 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

In isometric projection, a circle appears as

- a. an ellipse
- b. an involute
- c. a cycloid
- d. a circle

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 73 Question Id : 6673 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A seasoned cricketer draws in his hands backward in act of catching a ball. It hurts the hands less because this

- a. makes the momentum change less
- b. makes the kinetic energy change less
- c. makes the time interval for stopping more
- d. increases the impulse of the collision.

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 74 Question Id : 6674 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

For a geostationary satellite, the time period is

- a. 6 h
- b. 12 h
- c. 18 h
- d. 24 h.

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 75 Question Id : 6675 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Radha and Mohan move identical boxes equal distances in a horizontal direction. Radha slides the box on a surface that is frictionless. Mohan lifts the box, carries it that distance and sets it down again.

- a. Radha does more work than Mohan
- b. Radha does less work than Mohan
- c. Neither Radha nor Mohan do any work
- d. The amount of work done by each depends on the time taken.

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 76 Question Id : 6676 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Following equations represent four travelling waves. Which one has the maximum speed?

- a.  $y = 3.2 \sin(5x - 2t)$
- b.  $y = 4.3 \sin(1.5x - 3.1t)$
- c.  $y = 2.1 \sin(7x - 8t)$
- d.  $y = 1.5 \sin(2.5x - 1.25t)$ .

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 77 Question Id : 6677 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Four identical thin convex lenses of same power  $P$  are placed in contact so that their optic axes coincide. The net power of the combination is

- a.  $P/4$
- b.  $P$
- c.  $2P$
- d.  $4P$ .

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 78 Question Id : 6678 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Consider the electric field between two parallel plates of a charged capacitor. The electric field is

- a. strongest in magnitude near the positive plate
- b. strongest in magnitude near the negative plate
- c. strongest in magnitude midway between the plates
- d. constant throughout the space between the plates.

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 79 Question Id : 6679 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

What is the molality of the solution which contains 11.70 grams of sodium chloride dissolved in 2.0 Kg of water?

- a. 5.85
- b. 0.1
- c. 0.2
- d. 0.001

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c

4. ✘ d

Question Number : 80 Question Id : 6680 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

For the reaction  $\text{N}_2(\text{g}) + 3\text{H}_2(\text{g}) \rightleftharpoons 2\text{NH}_3(\text{g})$ , the units of  $K_p$  are

- a. Atm
- b.  $\text{Atm}^2$
- c.  $\text{Atm}^{-1}$
- d.  $\text{Atm}^{-2}$

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 81 Question Id : 6681 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The general electronic configuration of elements placed in a group in the modern periodic table is  $ns^2 np^4$ . In which group of the periodic table are the elements placed?

- a. 16
- b. 15
- c. 14
- d. 13

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 82 Question Id : 6682 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The primary alcohol  $\text{C}_4\text{H}_9\text{OH}$  is oxidized using acidified  $\text{K}_2\text{Cr}_2\text{O}_7$ . The molecular formula of the possible product is

- a.  $\text{C}_4\text{H}_6\text{O}$
- b.  $\text{C}_4\text{H}_8\text{O}$
- c.  $\text{C}_4\text{H}_6\text{O}_2$
- d.  $\text{C}_4\text{H}_8\text{O}_2$

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 83 Question Id : 6683 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which one of the following aldehydes will undergo Cannizzaro's reaction when treated with concentrated solution of potassium hydroxide in water?

- Ethanal
- 2-(p-Hydroxyphenyl) ethanal
- 2,2-Dimethyl-2-phenylethanal
- 2-Phenylethanal

Options :

- a
- b
- c
- d

Question Number : 84 Question Id : 6684 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Given below are the electronic configurations of transition elements. Which one of these elements is paramagnetic in nature?

- $3d^5 4s^2$
- $3d^7 4s^2$
- $3d^8 4s^2$
- $3d^1 4s^2$

Options :

- a
- b
- c
- d

Question Number : 85 Question Id : 6685 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which one of the following is not a reptile?

- Frog
- Snake
- Tortoise
- Dinosaurs

Options :

- a
- b
- c
- d

Question Number : 86 Question Id : 6686 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Why does pepsin secreted by stomach not digest the cells of wall of the stomach which have protein? Because

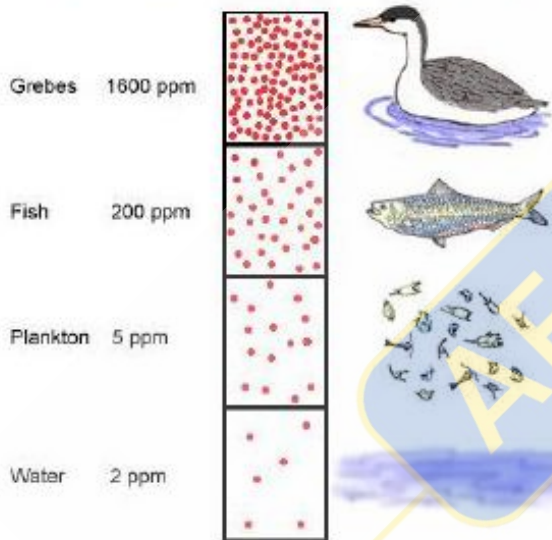
- a. pepsin is secreted in inactive form and needs to be activated for digestion of protein
- b. the cells of the wall are protected by carbohydrates and fatty acids
- c. stomach secretes Hydrochloric acid
- d. stomach wall is thick

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 87 Question Id : 6687 Question Type : MCQ Option Shuffling : No Correct : 1.0 Wrong : 0.33

The picture shows accumulation of pesticide increasing with higher trophic levels in the food chain. Which phenomenon does the picture depict?



- a. Eutrophication
- b. Biomagnification
- c. Bioaccumulation
- d. Biological accumulation

Options :

- 1. ✗ a
- 2. ✓ b
- 3. ✗ c
- 4. ✗ d

Question Number : 88 Question Id : 6688 Question Type : MCQ Option Shuffling : No Correct : 1.0 Wrong : 0.33



Which one cannot be grouped with others in same taxonomic category?

- a. Mushroom
- b. Cucumber
- c. Peas
- d. Potato

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 89 Question Id : 6689 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Plants look green due to presence of Chlorophyll. In which part of the plant is this green pigment present in abundance?

- a. Roots
- b. Shoot
- c. Flowers
- d. Leaves

Options :

- 1. ✗ a
- 2. ✗ b
- 3. ✗ c
- 4. ✓ d

Question Number : 90 Question Id : 6690 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

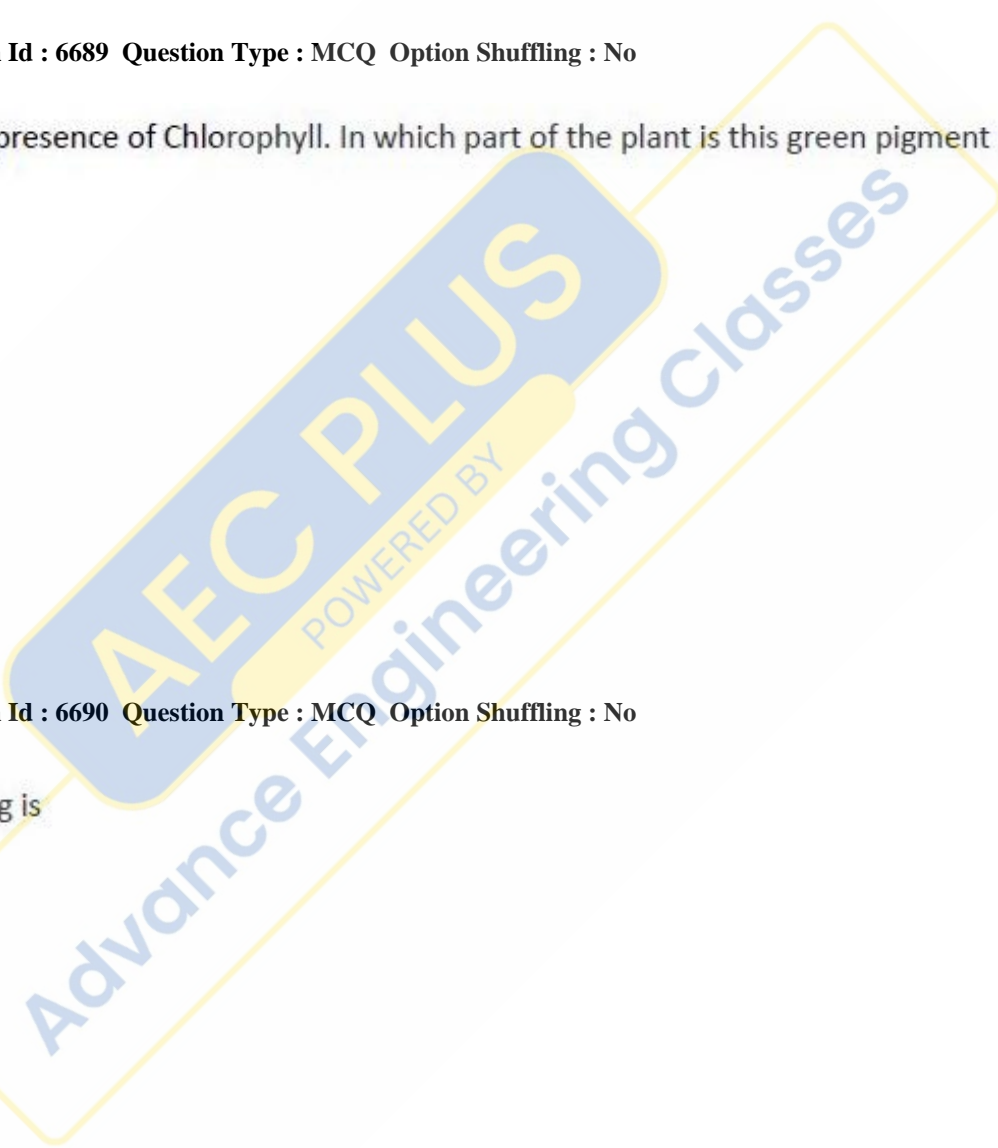
The technical word for egg is

- a. Ovum
- b. Oocyte
- c. Oocyst
- d. Ootid

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 91 Question Id : 6691 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33



LCM of two positive integers is 28 times their HCF. The sum of their LCM and HCF is 2320. If one of these numbers is 320, then the sum of digits of the other number is

- a. 9
- b. 10
- c. 11
- d. 12

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 92 Question Id : 6692 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Let  $p=5^{32} \times 7^{12} \times 11^{11}$ ,  $q=11^{12} \times 5^{29} \times 7^{13}$   
 $r=7^{13} \times 5^{33} \times 11^{12}$  and  $s=5^{33} \times 11^{13} \times 7^{10}$

HCF of p,q,r and s is

- a.  $5^{33} \times 7^{12} \times 11^{13}$
- b.  $5^{29} \times 7^{13} \times 11^{11}$
- c.  $5^{29} \times 7^{10} \times 11^{11}$
- d.  $5^{33} \times 7^{13} \times 11^{13}$

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 93 Question Id : 6693 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

If the number obtained on increasing 30 by x% is the same as decreasing 50 by x% , what is x% of  $(80+4x)$ ?

- a. 30
- b. 45
- c. 25
- d. 20

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 94 Question Id : 6694 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A sum of Rs.16500 is to be divided among A, B, C and D in such a way that the ratio of shares of A and B is 3:4, that of B and C is 1:3 and that of C and D is 6:7. Sum of shares of A and D is

- a. Rs.8000
- b. Rs.7500
- c. Rs.8500
- d. Rs.9000

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 95 Question Id : 6695 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Incomes of A, B and C are in the ratio 7: 8:9 and their respective expenditures are in the ratio 8:9:10 . If A saves 20% of his income, then the ratio of savings of A,B, and C is

- a. 14:17:20
- b. 17:14:20
- c. 14:17:10
- d. 17:14:10

Options :

- 1. ✔ a
- 2. ✘ b
- 4. ✘ d





Question Number : 96 Question Id : 6696 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A jar contain a mixture of acid and water in which acid is 80%. From this jar, 10 liters of the mixture is taken out and 10 liters of water was poured into the jar, then water in the resulting mixture is 60%. The quantity (in liter) of acid in the jar initially was

- a. 12
- b. 16
- c. 20
- d. 24

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 97 Question Id : 6697 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Two vessels A and B contain solutions of three liquids p,q and r in the ratio 5:8:3 and 3:2:5 respectively. They are mixed together in the ratio of 2:3. Percentage of liquid q in the resulting solution is

- a. 30.5
- b. 32
- c. 35
- d. 37.5

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 98 Question Id : 6698 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A person borrowed some money on compound interest and returned it in three years in equal annual installments. If the rate of interest is 15% per annum and the annual installment is Rs.48668, then the sum borrowed was(in Rs.)

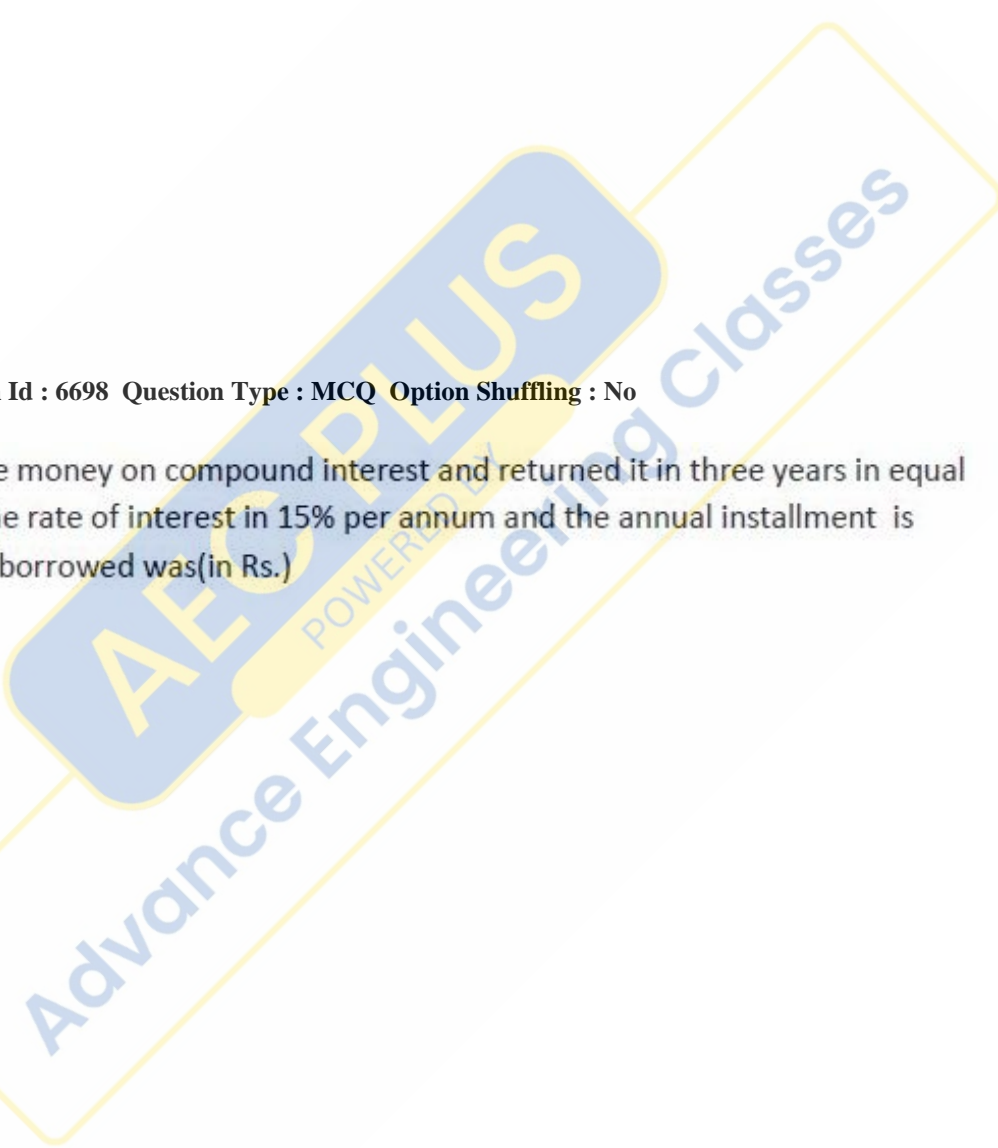
- a. 101020
- b. 111050
- c. 111120
- d. 146004

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 99 Question Id : 6699 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33



A sum of Rs.  $x$  at simple interest amounts to Rs.14160 in 3 years. If the rate of interest is increased by 25 % the same sum amounts to Rs.14700 in the same time. The value of  $x$  is

- a. 12000
- b. 12400
- c. 13000
- d. 13400

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 100 Question Id : 6700 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A shopkeeper marks his goods at such a price that after allowing a discount of 15% on the marked price, he still earns a profit of 15 %. The marked price of an article which costs him Rs.8500 is

- a. Rs.11000
- b. Rs.11500
- c. Rs.12000
- d. Rs.12500

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 101 Question Id : 6701 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A train covered a certain distance at a uniform speed. If the train had been 6 km/hour faster, it would have taken 4 hours less than the scheduled time. If the train were slower by 6 km/hour, it would have taken 6 hours more than the scheduled time. The length of journey , in km, is

- a. 360
- b. 450
- c. 720
- d. 900

Options :

1.  a
2.  b
3.  c
4.  d

Question Number : 102 Question Id : 6702 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A person travelled 120 km by steamer, 450 km by train and 60 km by car. It took him  $13\frac{1}{2}$  hours.

If the speed of train is three times that of car and  $1\frac{1}{2}$  times that of steamer, than the speed of steamer in km/hour, was

- a. 20
- b. 30
- c. 40
- d. 60

Options :

1.  a
2.  b
3.  c
4.  d

Question Number : 103 Question Id : 6703 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

To do a certain piece of work B takes four times as long as A and C together and C takes three times as long as A and B together . If all the three working together complete the work in 12 days, how long (in days) would A alone take to complete the work?

- a.  $21\frac{9}{11}$
- b.  $26\frac{2}{3}$
- c. 48
- d. 60

Options :

1.  a
2.  b
3.  c

4.  d

Question Number : 104 Question Id : 6704 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If 6 men and 8 women can do a piece of work in 10 days while 5 men and 15 women can do the same work in 8 days? In how many days will 15 men and 20 women do the same work?

- a. 2
- b. 3
- c. 4
- d. 5

Options :

1.  a

2.  b

3.  c

4.  d

Question Number : 105 Question Id : 6705 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A person bought an article at  $\frac{4}{5}$  of its selling price and sold at 10% more than its original selling price. His gain percent is

- a. 20
- b. 10
- c. 18.75
- d. 37.5

Options :

1.  a

2.  b

3.  c

4.  d

Question Number : 106 Question Id : 6706 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Average score of girls of class x in an examination is 73 and that of boys is 71. If the average score of both boys and girls is 71.8, thus percentage of boys in the class is

- a. 35
- b. 40
- c. 60
- d. 80

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 107 Question Id : 6707 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A man drives 150 km to a place X in 3 hours 20 minutes and returns from X to the starting point in 4 hours and 10 minutes. If  $r$  is the average speed for the entire trip and  $s$  is the average speed going to X, then  $s-r$  (in km/hour) is equal to

- a. 3
- b. 4
- c. 5
- d. More than 5

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 108 Question Id : 6708 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If the equations  $3x^2-2x+p=0$  and  $6x^2-17x+12=0$  have a common root, then the sum of the values of  $p$  is

- a.  $-\frac{11}{4}$
- b.  $\frac{11}{4}$
- c.  $\frac{77}{12}$
- d.  $-\frac{77}{12}$



Options :

1.  a
2.  b
3.  c
4.  d

Question Number : 109 Question Id : 6709 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The quadratic equation where roots are negative of the roots of  $7x^2+16x-20=0$  is

- a.  $7x^2+16x+20=0$
- b.  $7x^2-16x+20=0$
- c.  $7x^2-16x-20=0$
- d.  $20x^2+16x-7=0$

Options :

1.  a
2.  b
3.  c
4.  d

Question Number : 110 Question Id : 6710 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

One of the factors of  $(x-2a)(x-5a)(x-8a)(x-11a)+81a^4$  is

- a.  $x^2-13a+31a^2$
- b.  $x^2+13a+31a^2$
- c.  $x^2+18a-31a^2$
- d.  $x^2-18a+31a^2$

Options :

1.  a
2.  b
3.  c
4.  d

Question Number : 111 Question Id : 6711 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Factorization of  $3x^3+10x^2-14x+4$  is

- a.  $(3x+2)(x^2+4x+2)$
- b.  $(3x-2)(x^2+4x-2)$
- c.  $(3x+4)(x^2+4x+1)$
- d.  $(3x-4)(x^2+4x-1)$

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 112 Question Id : 6712 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

In an arithmetic progression,  $m^{\text{th}}$  term is  $\frac{1}{n}$  and  $n^{\text{th}}$  term is  $\frac{1}{m}$ . Its  $(mn)^{\text{th}}$  term will be

- a.  $\frac{1}{mn}$
- b.  $mn$
- c. 0
- d. 1

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 113 Question Id : 6713 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

If  $y=1+x+x^2+x^3+\dots$  to  $\infty$ ,  $|x|<1$ ,

Then x is equal to

- a.  $\frac{y}{y-1}$
- b.  $\frac{y}{y+1}$
- c.  $\frac{y+1}{y}$
- d.  $\frac{y-1}{y}$

Options :

1.  a
2.  b
3.  c
4.  d

Question Number : 114 Question Id : 6714 Question Type : MCQ Option Shuffling : No  
 Correct : 1.0 Wrong : 0.33

If  $x = (1 + \cot\theta - \operatorname{cosec}\theta)(1 + \tan\theta + \sec\theta)$ ,  
 $0^\circ < \theta < 90^\circ$ , then the value of x is

- a. -2
- b. -1
- c. 1
- d. 2

Options :

1.  a
2.  b
3.  c
4.  d

Question Number : 115 Question Id : 6715 Question Type : MCQ Option Shuffling : No  
 Correct : 1.0 Wrong : 0.33

The angle of elevation of the top of an unfinished tower at a point 20m away from its base is  $45^\circ$ .  
 How much higher must the tower be raised so that its angle of elevation of the top at the same point be  $60^\circ$

- a.  $20\sqrt{3}$  m
- b.  $20\sqrt{3} + 1$  m
- c.  $20\sqrt{3} - 1$  m
- d.  $\frac{20}{3}(\sqrt{3} + 1)$  m

Options :

1.  a
2.  b
3.  c





4.  d

Question Number : 116 Question Id : 6716 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Paintings of which animal is most common in Rock paintings ?

- a. bison, tiger, rhinoceros, wild boar, elephants, monkeys,
- b. Domesticated cattle, dogs, cows and Goats.
- c. Lions, butterflies, worms and snakes
- d. Rats, Bison, Deer

Options :





- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 117 Question Id : 6717 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

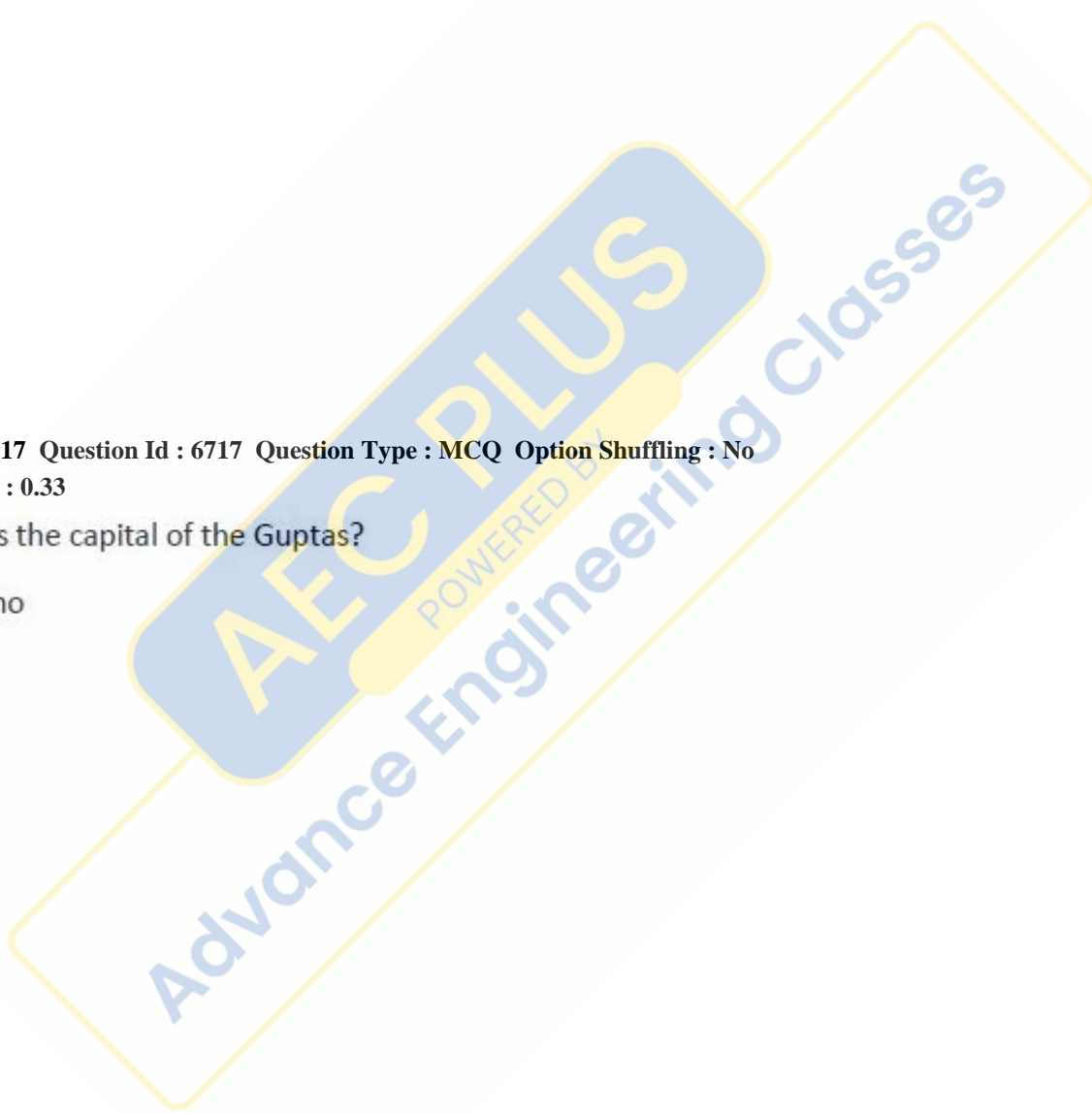
Which town was the capital of the Guptas?

- a. Khajuraho
- b. Patna
- c. Ujjain
- d. Prayag

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 118 Question Id : 6718 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33



When all the leaders were arrested, what was the source of news on how to follow up the Quit India Movement?

- a. Newspapers like The Hindu
- b. Congress Radio on 42.34 metres
- c. Pamphlets and Handouts
- d. Congress workers campaigns

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 119 Question Id : 6719 Question Type : MCQ Option Shuffling : No Correct : 1.0 Wrong : 0.33

Which of one of these features are found only in the upper course of the river?

- a. Meander
- b. Channel bar
- c. Waterfall
- d. Alluvial fan

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 120 Question Id : 6720 Question Type : MCQ Option Shuffling : No Correct : 1.0 Wrong : 0.33

Why does coastal Pakistan and the Oman coast not get cyclones?

- a. The track of the cyclone is land ward
- b. Cyclones dissipate over the ocean itself
- c. Warm oceans prevent the cyclone from moving
- d. Off shore trade wind blows away the cyclones.

Options :

- 1.  a

2.  b

3.  c

4.  d

Question Number : 121 Question Id : 6721 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which new policy in India today allows the expansion of cold storages , increased production of organic manure , research into hybrid seeds and employment ?

- a. Foreign direct investment in Horticulture.
- b. Direct subsidy to farmers for orchards.
- c. State farms to act as models for farmers.
- d. Increased education in farming techniques

Options :

1.  a

2.  b

3.  c

4.  d

Question Number : 122 Question Id : 6722 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which Directive Principle of State Policy has become enforceable by a law ?

- a. Care of Cultural Heritage .
- b. Prohibition of intoxicating drinks
- c. Care of Natural Heritage
- d. Equal pay for equal work

Options :

1.  a

2.  b

3.  c

4.  d

Question Number : 123 Question Id : 6723 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

What is the special feature of the Fundamental Rights ?

- a. All the rights are for the individual citizen and not for the State
- b. Some are positive and others are negative statements.
- c. Rights are only for the Indian citizens living in India .
- d. Rights can be changed by the law of the land.

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 124 Question Id : 6724 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

What indicator is more suitable for finding the economic development of a country?

- a. Human Development Index
- b. Gross Domestic Product
- c. Consumption Level
- d. Income Level

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 125 Question Id : 6725 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

In which four States are there mega solar power generation facilities proposed to be developed?

- a. Manipur, Meghalaya, Jammu & Kashmir, and Bihar
- b. Punjab, Haryana , Delhi, Tamilnadu
- c. Jammu & Kashmir, Gujarat, Tamilnadu, Rajasthan
- d. Nagaland, Mizoram, Manipur, Assam

Options :

- 1.  a

2.  b

3.  c

4.  d

Question Number : 126 Question Id : 6726 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which traditional communication agency in India is now looking forward to providing e-commerce facilities ?

- a. Radio Broadcast
- b. Television Broadcast
- c. Courier
- d. Post offices

Options :

1.  a

2.  b

3.  c

4.  d

Question Number : 127 Question Id : 6727 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which international sports event will be held in Gold Coast, Queensland, Australia in 2018?

- a. Asian Games
- b. Common wealth Games
- c. Asia Pacific Games
- d. Winter Olympics.

Options :

1.  a

2.  b

3.  c

4.  d

Question Number : 128 Question Id : 6728 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33



Why is the period 1928 to 1956, considered the Golden period of Indian Hockey?

- a. All the players were from the State of Punjab and Haryana.
- b. India defeated Pakistan in all these matches
- c. India had players with the same name for the 5 players
- d. India won 6 Gold medals each consecutive year in the Olympics.

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 129 Question Id : 6729 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

What are the two towns across the Line of Control in Jammu and Kashmir across which trade was opened after 60 years in 2004?

- a. Islamabad and Muzaffarabad
- b. Chakothi and Srinagar
- c. Srinagar and Islamabad
- d. Islamabad to Chakothi

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 130 Question Id : 6730 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

What is the main aim of developing Smart cities?

- a. Increase internet connectivity, make work places near homes, use real time data for supply of goods.
- b. To build satellite towns near existing urban areas, upgrade existing mid-sized cities, and to build settlements along industrial corridors.
- c. Increase the number of industries in cities, widen the employment opportunities.
- d. Decongest the metropolitan cities, develop large city regions with rail connectivity.

Options :

1.  a
2.  b
3.  c
4.  d

Question Number : 131 Question Id : 6731 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

For which project in 2015 was the Space Pioneer award presented to ISRO by the National Space Agency U.S.A?

- a. Lunar Probe Mission
- b. Remote Sensing maps of land use
- c. Indian Monsoon study Satellite
- d. Mars Orbiter Mission

Options :

1.  a
2.  b
3.  c
4.  d

Question Number : 132 Question Id : 6732 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A body is floating in a liquid which has a density equal to that of the body. .What will happen if the body is slightly pressed down and released?

- a. Sink to the bottom and rise up again slowly.
- b. Come back to the same position immediately
- c. Come back to the same position slowly.
- d. it will start shaking

Options :

1.  a
2.  b
3.  c
4.  d

Question Number : 133 Question Id : 6733 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which instrument is used both as a measuring device and for predictive purposes?

- a. Barometer
- b. Thermometer
- c. Voltmeter
- d. Lactometer

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 134 Question Id : 6734 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

What is the effect of the rotation of the earth on the direction of movement of ships?

- a. Ships slow down when they move from the Poles towards the Equator.
- b. Ships travelling west are more affected by the speed and direction of winds and ocean currents
- c. Ships move faster when they travel from the Equator Poleward due to gravity
- d. Ships slow down when moving eastward, as gravity seemed to fade away a little.

Options :





- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 135 Question Id : 6735 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

In the environment pollution is caused by fuels. Among the following fuels which one causes minimum pollution?

- a. Kerosene
- b. Hydrogen
- c. Diesel
- d. Coal

Options :





- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 136 Question Id : 6736 Question Type : MCQ Option Shuffling : No Correct : 1.0 Wrong : 0.33

What does gobar gas mostly contain?

- a. Methane
- b. Carbon Mono oxide
- c. Hydrogen
- d. Ethane

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 137 Question Id : 6737 Question Type : MCQ Option Shuffling : No Correct : 1.0 Wrong : 0.33

The sun generates its energy from the nuclear fusion of

- a. Oxygen and Hydrogen
- b. Helium and Oxygen
- c. Helium, Hydrogen and Oxygen
- d. Hydrogen and Helium

Options :

- 1.  a

- 2.  b
- 3.  c
- 4.  d

Question Number : 138 Question Id : 6738 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

What is the cause of colour blindness?

- a. Male gene being dominant
- b. Dominant alleles in a gene of one parent.
- c. Blood groups of the parents.
- d. Recessive alleles in a genes of both parents .

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 139 Question Id : 6739 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

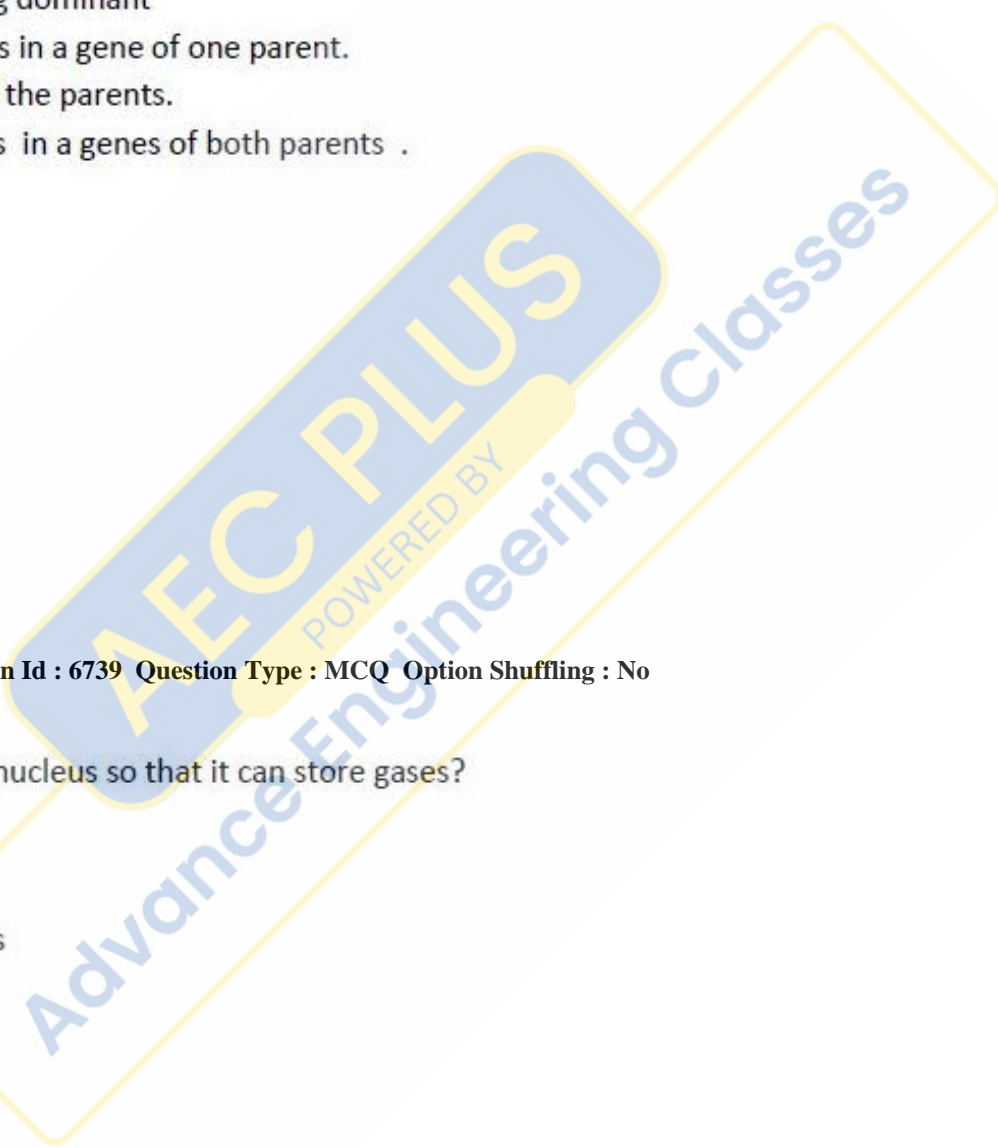
Which blood cell has no nucleus so that it can store gases?

- a. Lymphocytes
- b. Red blood cells
- c. White blood cells
- d. Platelets

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d





Question Number : 140 Question Id : 6740 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33



What does the metal copper, do to help our body?

- a. Makes the brain improve memory.
- b. Reduces anxiety and stress.
- c. Strengthens blood vessels and tendons
- d. Increases energy levels

Options :





- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 141 Question Id : 6741 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A woman reading the newspaper said 'There is a picture of the husband of my sister's brother's mother's brother's wife here'. She is the .... of that person.

- a. Wife
- b. Niece
- c. Cousin
- d. Aunt

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 142 Question Id : 6742 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

DEAL : MFBE :: TRAM : ?

The letters of the word DEAL are related to those of MFBE in a certain way. The same relationship holds for the second pair of terms on the right side of the :: sign of which one is missing. Find the missing one from the alternatives.

- a. ADRU
- b. PCSU
- c. PFBD
- d. NBSU

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 143 Question Id : 6743 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

What should be the next term in the following number series?  
1, 5, 13, 25, 41, 61

- a. 85
- b. 83
- c. 91
- d. 95

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

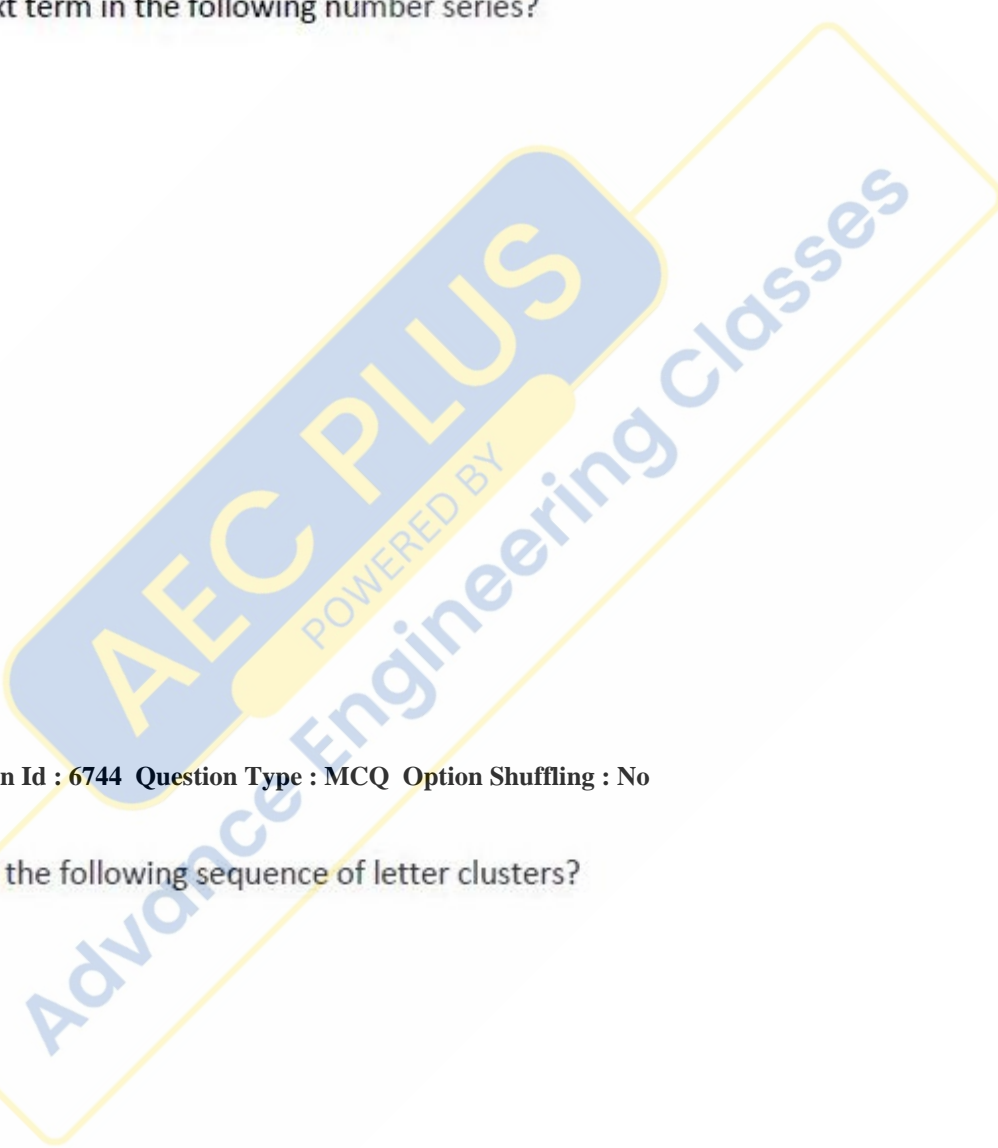
Question Number : 144 Question Id : 6744 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which is the next term in the following sequence of letter clusters?  
ACF, FHK, KMP, PRU

- a. VWZ
- b. UVW
- c. UWZ
- d. UWX

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d



Question Number : 145 Question Id : 6745 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which is the odd number-pair?

- a. 49 – 56
- b. 25 – 65
- c. 81 – 96
- d. 16 – 35

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 146 Question Id : 6746 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

In a code, LABORATORY is coded as KEAUQESUQX. In that code, what will be the code for ANALYTICAL?

- a. BMBKXSObBK
- b. EMEKXSObEK
- c. ELEKXSObEK
- d. BMBKXSObEK

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 147 Question Id : 6747 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

If, in a certain code language, FUME is written as 4673 and NAVY is written as 1589, in that code language, MANE will be written as:

- a. 1573
- b. 7153
- c. 5173
- d. 7513

Options :



- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 148 Question Id : 6748 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

When my uncle, a NASA scientist associated with moon-landing on 20 July 1969, died before the end of the last century, his age was  $\frac{1}{32}$  of the year of his birth. How old was he in 1969?

- a. 49
- b. 51
- c. 50
- d. 48

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 149 Question Id : 6749 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A girl sets out from her home, walks 0.2 km to the east, turns left and walks 0.3 km, and turning right, walks 0.5 km. She turns right again and starts walking. In which direction is she walking now?

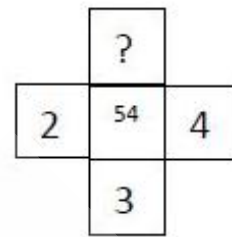
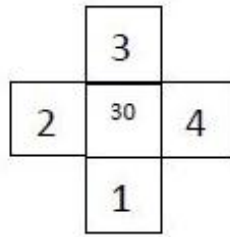
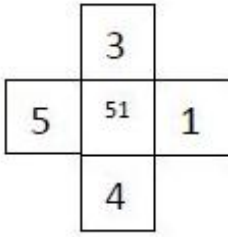
- a. North
- b. South
- c. East
- d. West

Options :

- 1.  a
- 2.  b
- 3.  c
- 4.  d

Question Number : 150 Question Id : 6750 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Choose the number missing in the third cross:



- a. 0
- b. 1
- c. 5
- d. 3

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

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