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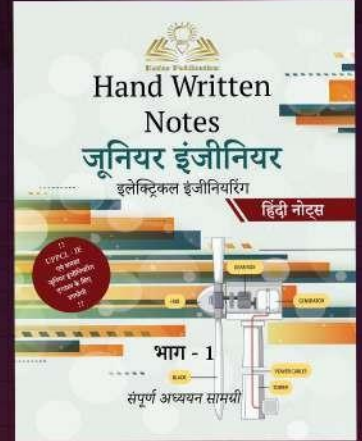
## Objective Book for

**Electrical-JE**

**Electronics-JE**

**ITI-Electrician**

**JE Short Notes**



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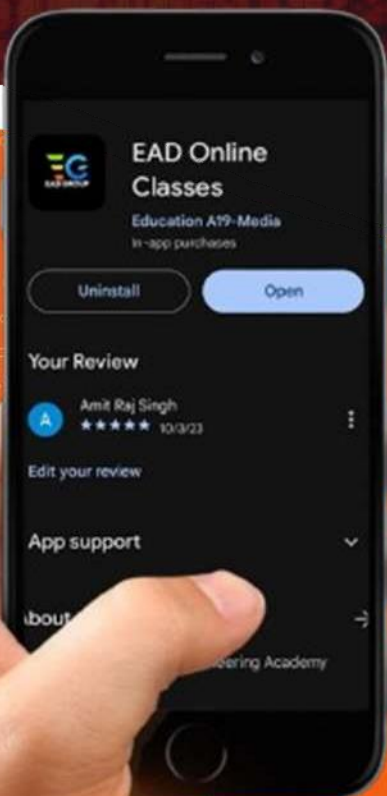
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**Raman sir**  
Electrical Engg. Expert



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# 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 3rd Sep Shift 1 Actual  
**Subject Name:** Senior Section Engineer  
**Creation Date:** 2015-08-31 13:37:26.0  
**Cut Off:** 0  
**Duration:** 120  
**Number of Questions:** 150  
**Total Marks:** 150.0

## Senior Section Engineer

Group Number : 1  
Group Id : 40  
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 : 40  
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: 40  
Question Shuffling Allowed : Yes

**Question Number : 1 Question Id : 7201 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33**

According to kinetic theory of heat

- a. temperature should rise during boiling
- b. temperature should fall during freezing
- c. at low temperature all bodies are in solid state
- d. at absolute zero there is absolutely no vibration of molecules

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 2 Question Id : 7202 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In a Carnot engine, when the working substance gives heat to the sink

- a. The temperature of the sink increases
- b. The temperature of the sink remains the same
- c. The temperature of the source decreases
- d. The temperatures of both the sink and the source decrease

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 3 Question Id : 7203 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Availability function is expressed as

- a.  $a = (u + p_0v - T_0s)$
- b.  $a = (u + p_0dv + T_0ds)$
- c.  $a = (du + p_0dv - T_0ds)$
- d.  $a = (u + p_0v + T_0s).$

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 4 Question Id : 7204 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The outer surface of a long cylinder is maintained at constant temperature. The cylinder does not have any heat source The temperature in the cylinder will

- a. increase linearly with radius
- b. decrease linearly with radius
- c. be independent of radius
- d. vary logarithmically, with radius

Options :

- 1. ✗ a
- 2. ✗ b
- 3. ✗ c
- 4. ✓ d

Question Number : 5 Question Id : 7205 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

What is the ratio of thermal conductivity to electrical conductivity equal to ?

- a. Prandtl number
- b. Schmidt number
- c. Lorenz number
- d. Lewis number

Options :

- ✘ a
- ✘ b
- ✔ c
- ✘ d

Question Number : 6 Question Id : 7206 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which is the most efficient of the following insulating materials ?

- Corkboard
- Glass fibre sheet
- Mineral fibre sheet
- Foamed urethane sheet

Options :

- ✘ a
- ✘ b
- ✘ c
- ✔ d

Question Number : 7 Question Id : 7207 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The compression ratio generally used in diesel engines is

- 7: 1
- 16: 1
- 30: 1
- 45: 1

Options :

- ✘ a
- ✔ b
- ✘ c
- ✘ d

Question Number : 8 Question Id : 7208 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

For each crankshaft revolution, the cam shaft revolves

- a. one-half turn
- b. two turns
- c. four turns
- d. as many turns as the number of valves in the engine

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 9 Question Id : 7209 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In a variable speed SI engine, the maximum torque occurs at the maximum

- a. volumetric efficiency
- b. brake power
- c. indicated power
- d. speed

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 10 Question Id : 7210 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

What is the material of connecting rod?

- a. mild steel
- b. forged steel
- c. tool steel
- d. cast iron

Options :

- 1. ✗ a
- 2. ✓ b
- 3. ✗ c
- 4. ✗ d

Question Number : 11 Question Id : 7211 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

One of the important advantages of metal patterns over wooden patterns is that

- a. it is readily available
- b. it is easy to make
- c. it is useful in machine moulding
- d. it is less costly

Options :

1. ✘ a

2. ✘ b

3. ✔ c

4. ✘ d

Question Number : 12 Question Id : 7212 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In milling operations

- a. the work is fed against a reciprocating tool
- b. the work is fed against a rotating multipoint cutter
- c. the tool is fed against a rotating work
- d. the tool is fed against a reciprocating work

Options :

1. ✘ a

2. ✔ b

3. ✘ c

4. ✘ d

Question Number : 13 Question Id : 7213 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The cold chisels are made by

- a. drawing
- b. rolling
- c. piercing
- d. forging

Options :

1. ✘ a

2. ✘ b



3. ✘ c

4. ✔ d

Question Number : 14 Question Id : 7214 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Weaving in arc welding refers to.....

- a. side to side motion of electrode at right angles to the direction of the welding
- b. side to side motion of the electrode along the direction of the welding
- c. spiral motion given to electrode
- d. a technique of striking the arc

Options :

1. ✔ a

2. ✘ b

3. ✘ c

4. ✘ d

Question Number : 15 Question Id : 7215 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A certain appliance uses 350 W. If it is allowed to run continuously for 24 days, how many kilowatt-hours of energy does it consume?

- a. 20.16 kWh
- b. 201.6 kWh
- c. 2.01 kWh
- d. 8.4 kWh

Options :

1. ✘ a

2. ✔ b

3. ✘ c

4. ✘ d

Question Number : 16 Question Id : 7216 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A given power supply is capable of providing 6 A for 3.5 h. Its ampere-hour rating is

- a. 0.58 Ah
- b. 2.1Ah
- c. 21 Ah
- d. 58 Ah

Options :

1. ✘ a

2. ✘ b

3. ✔ c

4. ✘ d

Question Number : 17 Question Id : 7217 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If you used 400 W of power for 30 h, you have used

- a. 1.3 kWh
- b. 13.3 kWh
- c. 1.2 kWh
- d. 12 kWh

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 18 Question Id : 7218 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Best protection is provided by HRC fuses in case of

- a. Open circuits
- b. Short circuits
- c. Overloads
- d. Parallel circuit

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 19 Question Id : 7219 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A relay used for protection of motors against overload is

- a. Impedance relay
- b. Electromagnetic attraction type
- c. Thermal relay
- d. Buchholz's relay

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 20 Question Id : 7220 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The acting contacts for a circuit breakers are made of

- a. Stainless steel
- b. Hard pressed carbon
- c. Porcelain
- d. Copper tungsten alloy

Options :

1. ✘ a
2. ✘ b
3. ✘ c
4. ✔ d

Question Number : 21 Question Id : 7221 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Fuse wire, protection, system is usually not used beyond

- a. 10 A
- b. 25 A
- c. 50 A
- d. 100A

Options :

1. ✘ a
2. ✘ b
3. ✘ c
4. ✔ d

Question Number : 22 Question Id : 7222 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A fuse wire should have

- a. Low specific resistance and high melting point
- b. Low specific resistance and low melting point
- c. High specific resistance and high melting point
- d. High specific resistance and low melting point

Options :

1. ✘ a
2. ✘ b
3. ✘ c
4. ✔ d

Question Number : 23 Question Id : 7223 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Out of the following which one is not a unconventional source of energy ?

- a. Tidal power
- b. Geothermal energy
- c. Nuclear energy
- d. Wind power

Options :

1. ✘ a
2. ✘ b
3. ✔ c
4. ✘ d

Question Number : 24 Question Id : 7224 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which of the following 3-phase connection of a transformer causes interference with the neighbouring communication lines:

- a. Delta-star
- b. Star-delta
- c. Star-star
- d. Delta-delta

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 25 Question Id : 7225 Question Type : MCQ Option Shuffling : No Correct : 1.0 Wrong : 0.33

To increase the voltage output, several cells are connected in:

- a. parallel
- b. series-parallel
- c. resonance
- d. series

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 26 Question Id : 7226 Question Type : MCQ Option Shuffling : No Correct : 1.0 Wrong : 0.33

What does the fourth color band on a resistor mean?

- a. The value of the resistor in ohms
- b. The power rating in watts
- c. The resistance material
- d. The resistance tolerance in percent

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 27 Question Id : 7227 Question Type : MCQ Option Shuffling : No Correct : 1.0 Wrong : 0.33

A current of one quarter ampere may be written as:

- a. 0.5 amperes
- b. 0.25 milliamperes
- c. 250 microampere
- d. 250 milliamperes

Options :

1. ✘ a
2. ✘ b
3. ✘ c
4. ✔ d

Question Number : 28 Question Id : 7228 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Why do resistors sometimes get hot when in use?

- a. Their reactance makes them heat up
- b. Hotter circuit components nearby heat them up
- c. Some electrical energy passing through them is lost as heat
- d. They absorb magnetic energy which makes them hot

Options :

1. ✘ a
2. ✘ b
3. ✔ c
4. ✘ d

Question Number : 29 Question Id : 7229 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The reciprocal of resistance is:

- a. conductance
- b. reactance
- c. reluctance
- d. permeability

Options :

1. ✔ a
2. ✘ b
3. ✘ c
4. ✘ d

Question Number : 30 Question Id : 7230 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

What term means the number of times per second that an alternating current flows back and forth?

- a. Speed
- b. Pulse rate
- c. Frequency
- d. Inductance

Options :

1. ✘ a
2. ✘ b
3. ✔ c
4. ✘ d

Question Number : 31 Question Id : 7231 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A signal is composed of a fundamental frequency of 2 kHz and another of 4 kHz. This 4kHz signal is referred to as:

- a fundamental of the 2 kHz signal
- the DC component of the main signal
- a dielectric signal of the main signal
- a harmonic of the 2 kHz signal

Options :

- a
- b
- c
- d

Question Number : 32 Question Id : 7232 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In measuring volts and amperes, the connections should be made with:

- the voltmeter in series and ammeter in parallel
- the voltmeter in parallel and ammeter in series
- both voltmeter and ammeter in series
- both voltmeter and ammeter in parallel

Options :

- a
- b
- c
- d

Question Number : 33 Question Id : 7233 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A resistor in a circuit becomes very hot and starts to burn. This is because the resistor is dissipating too much:

- voltage
- resistance
- current
- power

Options :

- a
- b
- c
- d

Question Number : 34 Question Id : 7234 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In a parallel circuit with a voltage source and several branch resistors, how is the total current related to the current in the branch resistors?

- a. It equals the sum of the branch current through each resistor
- b. It equals the average of the branch current through each resistor
- c. It decreases as more parallel resistors are added to the circuit
- d. It is the sum of each resistor's voltage drop multiplied by the total number of resistors

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 35 Question Id : 7235 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Regarding the idealization of support to a structural system, which of the following is false

- a. Roller supports are free to rotate and translate along the surface upon which the roller rests.
- b. A pinned support can resist both vertical and horizontal forces but not a moment
- c. Fixed supports can resist vertical and horizontal forces as well as a moment.
- d. Rigid supports can resist translation, but not the moments

Options :

- 1. ✗ a
- 2. ✗ b
- 3. ✗ c
- 4. ✓ d

Question Number : 36 Question Id : 7236 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A condition of timber during seasoning in which the different layers of wood are under stress by being under compression across the grain (usually due to rapid surface drying in the kiln).

- a. Case hardening
- b. Air seasoning
- c. Air drying
- d. Strain softening

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 37 Question Id : 7237 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The load at which an element, a member or a structure as a whole, either collapses in service or buckles in a load test and develops excessive lateral (out of plane) deformation or instability is called as

- a. Buckling load
- b. Yielding load
- c. Eccentric load
- d. Failure load

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 38 Question Id : 7238 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

According to IS 456, the modulus of elasticity of steel can be assumed as

- a. 200 kN/mm<sup>2</sup>
- b. 225 kN/mm<sup>2</sup>
- c. 250 kN/mm<sup>2</sup>
- d. 300 kN/mm<sup>2</sup>

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 39 Question Id : 7239 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The recommended slump for pumped concrete is

- a. 1-2 inches
- b. 2-4 inches
- c. 3-4 inches
- d. 4-6 inches

Options :

- 1. ✗ a



2. ✘ b
3. ✘ c
4. ✔ d

Question Number : 40 Question Id : 7240 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The point at which both foresight and back sight are taken during the course of levelling is called as

- a. Intermediate site
- b. Benchmark
- c. Station
- d. Change point

Options :

1. ✘ a
2. ✘ b
3. ✘ c
4. ✔ d

Question Number : 41 Question Id : 7241 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which of the following is not true for the direct and indirect methods of contouring?

- a. Direct method is most accurate but is slow
- b. Indirect method is less accurate but is faster
- c. Direct method is expensive
- d. Indirect method is relatively more expensive

Options :

1. ✘ a
2. ✘ b
3. ✘ c
4. ✔ d

Question Number : 42 Question Id : 7242 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

According to IS 1200, the metal sheet roofing shall be described in terms of

- a. meter
- b. cubic meter
- c. square meter
- d. Thickness

Options :

1. ✘ a
2. ✘ b
3. ✘ c
4. ✔ d

Question Number : 43 Question Id : 7243 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The property of a soil which allows it to be deformed rapidly, without rupture, without elastic rebound and without volume changes is called as

- a. Yielding
- b. Strain softening
- c. Strain hardening
- d. Plasticity

Options :

1. ✘ a
2. ✘ b
3. ✘ c
4. ✔ d

Question Number : 44 Question Id : 7244 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If the water table is likely to permanently remain at or below a depth of sum of the depth and width of the foundation beneath the ground level supporting the footing, then the water table correction used in the Bearing capacity equation is

- a. 1
- b. 0
- c. 0.5
- d. 0.75

Options :

1. ✔ a
2. ✘ b
3. ✘ c
4. ✘ d

Question Number : 45 Question Id : 7245 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If a substance resists shear stress by elastic deformation, then the substance is

- a. Fluid
- b. Liquid
- c. Solid
- d. Gas

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 46 Question Id : 7246 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The piezometric head in a stationary and static liquid

- a. remains constant only on the horizontal plane
- b. increases non-linearly with depth below the surface
- c. increases linearly with depth below the surface
- d. remains constant at all the points in the fluid

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 47 Question Id : 7247 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Most common form of A.C. meters met with in every day domestic and industrial installations are

- a. mercury motor meters
- b. commutator motor meters
- c. induction type single phase energy meters
- d. either mercury motor meters or commutator motor meters

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 48 Question Id : 7248 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which of the following meters are not used on D.C. circuit Mercury motor meters

- a. Commutator motor meters
- b. Mercury motor meters
- c. Induction meters
- d. Integrating and recording meters

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 49 Question Id : 7249 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The pointer of an indicating instrument should be

- a. very light
- b. very weighty
- c. light
- d. weighty

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 50 Question Id : 7250 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In a portable instrument, the controlling torque is provided by

- a. Spring
- b. Gravity
- c. eddy currents
- d. damping friction

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 51 Question Id : 7251 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The multiplier and the meter coil in a voltmeter are in

- a. Series
- b. Parallel
- c. series-parallel
- d. bi-junction mode

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 52 Question Id : 7252 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In troposphere gaseous mixture containing oxygen, nitrogen and carbon dioxide cycle in nature through

- a. biogeochemical cycle
- b. physico-chemical cycle
- c. bio-decomposition
- d. biological cycle

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 53 Question Id : 7253 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The major portion of the alkalinity in natural water is caused by

- a. hydroxyl , carbonate and sulphate ions
- b. hydroxyl , carbonate and bicarbonate ions
- c. hydroxyl , carbonate and ammonium ions
- d. hydroxyl , carbonate and phosphate ions

Options :

- 1. ✗ a
- 2. ✓ b
- 3. ✗ c
- 4. ✗ d

Question Number : 54 Question Id : 7254 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The total coliform bacteria are reported as most probable number (MPN) per

- a. 10 ml of water
- b. 1000 ml of water
- c. 100 ml of water
- d. 1 ml of water

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 55 Question Id : 7255 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The anthropogenic sources of air pollution in well planned city is

- a. construction activities, road traffics, rail traffic, fugitive emissions
- b. construction activities, road traffic, domestic burning
- c. construction activities, road traffics, bursting of crackers, dust storms
- d. construction activities, road traffics, domestic burning, industrial emissions

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 56 Question Id : 7256 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

When the measured and standard reference pressure level becomes equal, the sound pressure level (SPL) is equivalent to

- a. 1 dBA
- b. 10 dBA
- c. 0 dBA
- d. 1.012 dBA

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 57 Question Id : 7257 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The major green house gases contributing in global warming are

- a. carbon dioxide, nitrous oxide, methane and water vapours
- b. carbon dioxide, sulphur dioxide, water vapours and chlorofluorocarbons
- c. carbon monoxide, nitrous oxide, methane and, hydro-chlorofluorocarbons
- d. carbon dioxide, nitrogen dioxide, water vapours , methane and ozone

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 58 Question Id : 7258 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Program Counter (PC) register stores the

- a. Address of the first memory block
- b. Address of the last memory block
- c. Address of the next instruction to be executed
- d. Size of the primary memory

Options :

- 1. ✗ a
- 2. ✗ b
- 3. ✓ c
- 4. ✗ d

Question Number : 59 Question Id : 7259 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Number of bits needed to code 64 operations is

- a. 4
- b. 6
- c. 8
- d. 16

Options :

- 1. ✗ a
- 2. ✓ b
- 3. ✗ c
- 4. ✗ d

Question Number : 60 Question Id : 7260 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

BIOS, which is a part of operating systems of PCs, is stored in

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

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 61 Question Id : 7261 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

For a memory of size 64K words with each word storing 8 bits, the size of Memory Data Register (MDR) is

- a. 8 bits
- b. 16 bits
- c. 32 bits
- d. 64 bits

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 62 Question Id : 7262 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which of the following doesn't support WYSIWYG (what you see is what you get) display facility for documents?

- a. MS-Word
- b. Latex Editor
- c. NotePad
- d. WordPad

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 63 Question Id : 7263 Question Type : MCQ Option Shuffling : No



Correct : 1.0 Wrong : 0.33

Logic programming language is also known as

- a. Procedural language
- b. Low-level language
- c. Imperative language
- d. Non-procedural language

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 64 Question Id : 7264 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Unicode uses \_\_\_\_\_ bits to code a large number of characters, including various special characters.

- a. 8
- b. 16
- c. 24
- d. 32

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 65 Question Id : 7265 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In Boolean Algebra,  $AB + AB'$  is equivalent to

- a. 0
- b. 1
- c. A
- d. B

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 66 Question Id : 7266 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In decimal-dotted notation of an IP address, the maximum value of each component can be

- a. 255
- b. 256
- c. 512
- d. 1024

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 67 Question Id : 7267 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Uniform Resource Locator (URL) is a(an) \_\_\_\_\_ scheme, which WWW browsers use to locate sites on the internet.

- a. Addressing
- b. Paging
- c. Data management
- d. Ranking

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 68 Question Id : 7268 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

. One end of a line rests on VP and the other on HP. It is inclined to VP and HP at  $30^\circ$   $60^\circ$  respectively. Its "true length" will be visible in:

- a. Plan
- b. Profile
- c. Elevation
- d. Its true length will not be visible in any of the orthographic views.

Options :

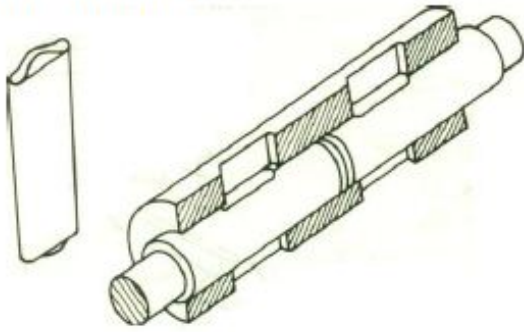
- 1. ✗ a
- 2. ✓ b
- 3. ✗ c

4. ✘ d

Question Number : 69 Question Id : 7269 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The joint shown below represents a:



- a. Spigot joint,
- b. cotter joint,
- c. knuckle joint,
- d. keyed coupling.

Options :

1. ✘ a

2. ✔ b

3. ✘ c

4. ✘ d

Question Number : 70 Question Id : 7270 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The most commonly used term "R.F." of a scale is:

- a. Reprographic Factor
- b. Refractive Factor,
- c. Representative Fraction,
- d. Reducing Fraction.

Options :

1. ✘ a

2. ✘ b

3. ✔ c

4. ✘ d

Question Number : 71 Question Id : 7271 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The asymptote of a hyperbola is the one:

- a. which passes through its focus and is normal to its axis,
- b. it joins focus to its vertex,
- c. it joins focus to its centre
- d. will be tangent to it at infinity.

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 72 Question Id : 7272 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

When drawing "isometric view" of an object its horizontal edges are drawn along *iso-axes* which are inclined to horizontal at:

- a.  $30^\circ$
- b.  $90^\circ$
- c.  $15^\circ$
- d.  $75^\circ$

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 73 Question Id : 7273 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

P and Q are two points at same distance from the Centre of a short electric dipole on axial line and equatorial line respectively.  $V_1$  and  $V_2$  are the resultant electric potential due to the dipole at P and Q . The only correct condition for  $V_1$  and  $V_2$  for this situation is

- a.  $V_1 = 2V_2$
- b.  $V_2 = 2V_1$
- c.  $V_1 = 0 ; V_2 \neq 0$
- d.  $V_2 = 0 ; V_1 \neq 0$

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c

4. ✓ d

Question Number : 74 Question Id : 7274 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Kirchhoff's junction rule and loop rule for an electrical network are respectively based on

- Conservation of energy, Conservation of charge
- Conservation of charge, conservation of momentum
- Conservation of energy, conservation of momentum
- Conservation of charge, conservation of energy

Options :

1. ✗ a

2. ✗ b

3. ✗ c

4. ✓ d

Question Number : 75 Question Id : 7275 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which one of the following is the correct statement for a photon of blue and red light of electromagnetic spectrum?

- Blue light and red light have equal energy and equal momentum.
- Blue light has higher momentum than red light.
- Red light has higher momentum than blue light.
- Red light has higher energy than blue light.

Options :

1. ✗ a

2. ✓ b

3. ✗ c

4. ✗ d

Question Number : 76 Question Id : 7276 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A double convex lens of focal length  $f$  is cut into two exactly similar parts in two different ways, once along the vertical line and second time along the horizontal line. The focal length of each part after cutting in two cases respectively will be

- $\frac{f}{2}; \frac{f}{2}$
- $\frac{f}{2}; f$
- $2f; \frac{f}{2}$
- $2f; f$

Options :

1. ✗ a

2. ✘ b
3. ✘ c
4. ✔ d

Question Number : 77 Question Id : 7277 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

$N_s$  and  $N_p$  represent the number of turns,  $E_s$  and  $E_p$  represent e.m.f and  $I_s$  and  $I_p$  represent current for the secondary coil and primary coil of an ideal transformer respectively. The completely correct relation between these quantities is

- a.  $\frac{N_s}{N_p} = \frac{E_s}{E_p} = \frac{I_s}{I_p}$
- b.  $\frac{N_s}{N_p} = \frac{E_p}{E_s} = \frac{I_p}{I_s}$
- c.  $\frac{N_s}{N_p} = \frac{E_s}{E_p} = \frac{I_p}{I_s}$
- d.  $\frac{N_s}{N_p} = \frac{E_p}{E_s} = \frac{I_s}{I_p}$

Options :

1. ✘ a
2. ✘ b
3. ✔ c
4. ✘ d

Question Number : 78 Question Id : 7278 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

While conducting an experiment on photo – electric effect, the incident radiations of yellow light are replaced with radiations of violet light, keeping the same intensity. This will result in

- a. increase in photo electric current without any change in the kinetic energy of emitted electrons
- b. Decrease in kinetic energy of the emitted electrons without any change in the photo electric current.
- c. Increase in kinetic energy of the emitted electrons without any change in photoelectric current
- d. Decrease in photo electric current and increase in kinetic energy of the emitted electrons

Options :

1. ✘ a
2. ✘ b
3. ✔ c
4. ✘ d

Question Number : 79 Question Id : 7279 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The molecules of elements and compounds exist in different structures .The molecule which is linear, is

- a. NO<sub>2</sub>
- b. SO<sub>2</sub>
- c. CO<sub>2</sub>
- d. ClO<sub>2</sub>

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 80 Question Id : 7280 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The correct order of first ionization enthalpy of the elements of oxygen family in the periodic table is

- a. O > S > Se
- b. S > O > Se
- c. S > Se > O
- d. Se > O > S

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 81 Question Id : 7281 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In a volumetric analysis, KMnO<sub>4</sub> reacts with oxalic acid according to the following equation,



According to the above equation, 20mL of 0.1M KMnO<sub>4</sub> will be equivalent to

- a. 120 mL of 0.25M H<sub>2</sub>C<sub>2</sub>O<sub>4</sub>
- b. 150mL of 0.10M H<sub>2</sub>C<sub>2</sub>O<sub>4</sub>
- c. 50mL of 0.10 M H<sub>2</sub>C<sub>2</sub>O<sub>4</sub>
- d. 50 mL of 0.2 M H<sub>2</sub>C<sub>2</sub>O<sub>4</sub>

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 82 Question Id : 7282 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Correct formula of the conjugate acid for each of the following Bronsted bases,

$\text{HO}_2^-$ ,  $\text{SO}_4^{2-}$ ,  $\text{NH}_2^-$  and  $\text{NH}_3$  will be respectively ,

- $\text{H}_3^+\text{O}$ ,  $\text{H}_2\text{SO}_4$ ,  $\text{NH}^-$  and  $\text{NH}_3$
- $\text{H}_2\text{O}_2$ ,  $\text{HSO}_4^-$ ,  $\text{NH}_3$  and  $\text{NH}_4^+$
- $\text{H}_2\text{O}$ ,  $\text{HSO}_3^-$ ,  $\text{NH}_4^+$  and  $\text{NH}_2^{2-}$
- $\text{H}_3\text{O}^+$ ,  $\text{SO}_3^{2-}$ ,  $\text{NH}_3$  and  $\text{NH}_2^{2-}$

Options :

- a
- b
- c
- d

Question Number : 83 Question Id : 7283 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

$\text{Cr}_2\text{O}_3$  can be converted into Cr by reduction with

- CO
- Carbon
- Hydrogen
- Aluminum

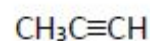
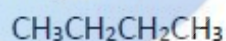
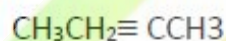
Options :

- a
- b
- c
- d

Question Number : 84 Question Id : 7284 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Consider the following compounds:



Which reagent will you use to distinguish compound IV from the rest of compounds?

- $\text{Br}_2/\text{CCl}_4$
- Ammonia Cal  $\text{AgNO}_3$
- Cold Alkaline  $\text{KMnO}_4$
- $\text{Br}_2/\text{Acetic acid}$

Options :

- a
- b
- c
- d



Question Number : 85 Question Id : 7285 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The largest gland in the body, the liver, is not responsible for one function mentioned below.

The liver

- a. protects the gallbladder
- b. removes certain wastes from the body
- c. stores glycogen
- d. produces bile

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 86 Question Id : 7286 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In plants, which hormones can promote growth of plant parts?

- a. Cytokinin
- b. Only Auxin
- c. Only gibberellin
- d. Both auxin and gibberellin

Options :

- 1. ✗ a
- 2. ✗ b
- 3. ✗ c
- 4. ✓ d

Question Number : 87 Question Id : 7287 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which of the following are commonly called warm blooded?

- a. Invertebrates and Fish
- b. Amphibian and Reptiles
- c. Reptiles and Birds
- d. Birds and Mammals

Options :

- 1. ✗ a
- 2. ✗ b
- 3. ✗ c
- 4. ✓ d

Question Number : 88 Question Id : 7288 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Global warming does not lead to

- a. Melting of ice caps
- b. Ozone hole
- c. Climate change
- d. Rising of levels of the sea

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 89 Question Id : 7289 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

What is not true about the diaphragm?

- a. It is a muscular partition between the thorax and abdomen
- b. Diaphragm contracts and relaxes to make breathing possible
- c. It is dome shaped when relaxed
- d. It is heavily supplied with nerves and blood vessels

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 90 Question Id : 7290 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

AIDS is caused by

- a. Bacteria
- b. HIV virus
- c. Zoster virus
- d. Eating junk food

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 91 Question Id : 7291 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Let  $x$  be the least number which upon being divided by 2, 3, 4, 5, 6 leaves in each case a remainder 1, but leaves no remainder when divided by 7. The sum of digits of  $x$  is

- a. 3
- b. 4
- c. 5
- d. 7

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 92 Question Id : 7292 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Let  $a = 2^5 \times 3^6 \times 7^7$ ,  $b = 2^5 \times 3^6 \times 7^8$ ,  
 $c = 2^5 \times 3^7 \times 7^9$  and  $d = 2^4 \times 3^7 \times 7^{10}$

HCF of  $a$ ,  $b$ ,  $c$  and  $d$  is

- a.  $96 \times (21)^6$
- b.  $96 \times (21)^7$
- c.  $112 \times (21)^6$
- d.  $112 \times (21)^7$

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 93 Question Id : 7293 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If the price of an article is increased by 12% and the sale is decrease by 10%, then what will be the effect on the revenue ?

- a. 0.8 % increase
- b. 0.8 % decrease
- c. 8 % increase
- d. 8 % decrease

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 94 Question Id : 7294 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If  $3a = 4b$ ,  $5b = 6c$ ,  $7c = 8d$ , then a: d is

- a. 35:32
- b. 32:35
- c. 35:64
- d. 64:35

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 95 Question Id : 7295 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A company reduces the number of its employees in the ratio 9:8 and increase their wages in the ratio 14:15 . The bill of total wages of the employees

- a. Increases by 5 %
- b. Increase by  $4\frac{16}{21}$  %
- c. Decrease by  $4\frac{16}{21}$  %
- d. Decrease by 5 %

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 96 Question Id : 7296 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A vessel X contains a solution of two liquids A and B in the ratio 5:2 and another vessel Y contains the solution of the liquids A and B in the ratio 8:5 . In what ratio should quantities be taken from X and Y so as to form a solution of A and B in the ratio 9:4 ?

- a. 2:7
- b. 7:2
- c. 3:7
- d. 7:3

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 97 Question Id : 7297 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

1.5 kg of sugar solution has 40 % sugar in it . How much sugar (in kg) should be added to make it 50 % in the solution ?

- a. 0.5
- b. 0.45
- c. 0.3
- d. 0.25

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 98 Question Id : 7298 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A man buys a car at a cash down payment of Rs.1 lakh and another three equal annual installments of Rs. 109760 each .If the rate of interest is 12% per annum compounded annually, then the present value (in Rs. of the car is

- a. 363625
- b. 340183
- c. 333625
- d. 320183

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 99 Question Id : 7299 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A person borrowed a certain sum of money at 4 % simple interest and in 8 years if the interest amounted to Rs.23120 less than the sum borrowed , than the sum(in Rs.) was

- a. 36000
- b. 35500
- c. 34000
- d. 34500

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 100 Question Id : 7300 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A dealer bought an article at 40% discount on its original price. If he sold it at a 20% gain on the original price, then his percentage profit is

- a. 60
- b. 80
- c. 100
- d. 120

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 101 Question Id : 7301 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A person buys a table listed at certain price and gets successive discounts of 10% and 20%. He spends 10% of the cost price on its transportation. If he finally sells it at Rs.9108 and gets a profit of 15% then the listed price of the article ( in Rs.) is

- a. 11800
- b. 11500
- c. 11000
- d. 10000

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 102 Question Id : 7302 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A motor boat goes 10 km upstream and back again to the starting point in 55 minutes. If the stream is running at the speed of 2 km/hour, the speed in km/hour of the motor boat in still water is

- a. 18
- b. 20
- c. 22
- d. 24

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 103 Question Id : 7303 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A person travels for 3 hours at the speed of 42 km/hour and for  $4\frac{1}{2}$  hours at the speed of 60 km/hour. Now he finds that she has covered  $\frac{11}{20}$  of the total distance. At what average speed (km/hour) should she travel to cover the remaining distance in  $4\frac{1}{2}$  hours ?

- a. 62
- b. 72
- c. 78
- d. 82

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 104 Question Id : 7304 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Two pipes P and Q can fill up a tank with water in 24 hours and 40 hours respectively . Both the pipes are open simultaneously. If the tank is filled up in 16 hours, then the pipe Q must be turned off after

- a. 13 hours 20 minutes
- b. 12 hours 10 minutes
- c. 13 hours 30 minutes
- d. 12 hours 20 minutes

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 105 Question Id : 7305 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Four women and five men can finish a piece of work in 5 days whereas 12 men and 11 women can finish the same work in 2 days. The time ( in days) taken by 2 men and one women to finish the same work is

- a. 10
- b. 12
- c. 14
- d. 15

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c

4. ✘ d

Question Number : 106 Question Id : 7306 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The average of 100 numbers is 100. If the first number is increase by 1, second by 2, third by 3 and so on , then the average of the numbers so obtained exceeds the original average by

- a. 25.5
- b. 50
- c. 50.5
- d. 60

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 107 Question Id : 7307 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A class has 75 students and their average marks in an examination is 40. If the average marks of passed students is 60 and that of failed students is 35 , then the percentage of students who passed the examination is

- a. 15
- b. 20
- c. 25
- d. 30

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 108 Question Id : 7308 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The roots of the equation  $px^2 - 2(p+2)x + 3p = 0, p \neq 0$ , differ by 2. then the values of p are

- a.  $2, \frac{-2}{3}$
- b.  $-2, \frac{2}{3}$
- c. -3, -1
- d. 1,3

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c



4. ✘ d

Question Number : 109 Question Id : 7309 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If  $x^2 - 11x + k = 0$  and  $x^2 - 14x + 2k = 0$ , where  $k \neq 0$ , have a common root, then the value of  $k$  is

- a. 10
- b. 12
- c. 20
- d. 24

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 110 Question Id : 7311 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

One of the factors of  $(p+q)(q+r)(r+p)+pqr$  is

- a.  $P+q-r$
- b.  $q+r-p$
- c.  $p-q+r$
- d.  $pq+qr+rp$

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 111 Question Id : 7313 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Factorization of  $(x+1)(x+2)(x+3)(x+4)-120$  is

- a.  $(x-1)(x+6)(x^2+5x+16)$
- b.  $(x+1)(x^2+5x+16)$
- c.  $(x-1)(x-6)(x^2+5x+16)$
- d.  $(x-1)(x+6)(x^2-5x+16)$

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 112 Question Id : 7315 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If the sum of first  $n$  terms of an arithmetic progression is  $3n^2+2n$ , then its  $100^{\text{th}}$  term is

- a. 499
- b. 599
- c. 600
- d. 601

Options :

- 1. ✘ a
- 2. ✔ b
- 3. ✘ c
- 4. ✘ d

Question Number : 113 Question Id : 7317 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The sum of an infinite geometric series with first term 28 and the fourth term  $\frac{4}{49}$  is

- a.  $49\frac{1}{3}$
- b.  $35\frac{2}{3}$
- c.  $30\frac{1}{3}$
- d.  $32\frac{2}{3}$

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 114 Question Id : 7319 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

If  $\cos\theta - \sin\theta = l$  and  $\tan\theta = m \sec^2\theta$ , then the value of  $\frac{l^2+2m}{2}$  is

- a.  $\frac{1}{2}$
- b.  $\frac{1}{4}$
- c.  $\frac{2}{4}$
- d. 1

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 115 Question Id : 7321 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A person is standing on the ground and flying a kite with a string of length 140 m at an angle of  $30^\circ$ . Another person is standing on the roof of a building 20 m high and is flying a kite at an angle of  $45^\circ$ . If both persons are on opposite sides of both the kites, the length (in m) of the string that the second person must have so that the two kites meet, is

- a. 70
- b.  $60\sqrt{2}$
- c.  $50\sqrt{2}$
- d. 50

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

Question Number : 116 Question Id : 7323 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

To which period would rock engravings with geometrical designs like triangle, circle, square sun and flower belong?

- a. Megalithic at the end of Neolithic
- b. Paleolithic period to Chalcolithic.
- c. End of Iron Age and beginning of Bronze age
- d. End of Neolithic beginning of Iron Age

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 117 Question Id : 7325 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which Gupta ruler does the historian Vincent Smith call 'The Napoleon of India'?

- a. Samudragupta
- b. Chandrgupta 1
- c. Chandragupta II
- d. Skanda Gupta

Options :

- 1. ✔ a
- 2. ✘ b

3. ✘ c

4. ✘ d

Question Number : 118 Question Id : 7327 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In which Movement was the slogan 'Do or Die' given and there were mass arrests

- a. Home rule
- b. Non Cooperation
- c. Quit India Movement
- d. Khilafat

Options :

1. ✘ a

2. ✘ b

3. ✔ c

4. ✘ d

Question Number : 119 Question Id : 7329 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which one of the given process increases the length of the river?

- a. Deepening of the gorge and excess water flows in .
- b. Headward erosion in a waterfall when the cap rock falls off.
- c. Hard rocks fall into the channel and the river course changes
- d. River water gets diverted by another river near the source

Options :

1. ✘ a

2. ✔ b

3. ✘ c

4. ✘ d

Question Number : 120 Question Id : 7331 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

When the cyclones develop into storms they take away the energy of the monsoon depression. What is the effect of this on the India?

- a. Weak monsoon over West Coast
- b. Sea Surges in the Narmada
- c. Stormy weather in the Arabian Sea
- d. Upwelling of sea water and high tide.

Options :

1. ✓ a
2. ✗ b
3. ✗ c
4. ✗ d

Question Number : 121 Question Id : 7333 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which of the following is not a positive effect of Foreign Direct Investment on the Indian Market?

- a. Stimulates economic activity
- b. Increase in prices
- c. Cheaper goods for consumers
- d. Increased employment

Options :

1. ✗ a
2. ✓ b
3. ✗ c
4. ✗ d

Question Number : 122 Question Id : 7335 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Why has the government excluded some wealthy groups from availing benefits related their status as backward classes?

- a. Increase opportunity to be employed
- b. Bring more backward groups for benefits
- c. To ensure that there is equality
- d. Increase the right of the poorest .

Options :

1. ✗ a
2. ✗ b
3. ✓ c
4. ✗ d

Question Number : 123 Question Id : 7337 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Where in the constitution has it been stated that the Judiciary must be separated from the Executive ?

- a. Directive principles of State Policy
- b. Fundamental Rights
- c. Preamble of the Constitution
- d. Schedules

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 124 Question Id : 7339 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

What will be the special e- commerce facility offered by the Indian Postal Services ?

- a. Rural artisans can sell goods online.
- b. Farmers can buy seeds and fertilisers easily.
- c. Health services in rural areas can be provided promptly
- d. Same day delivery of letters to villages.

Options :

- 1. ✓ a
- 2. ✗ b
- 3. ✗ c
- 4. ✗ d

Question Number : 125 Question Id : 7341 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Why have the Solar Panels been located over water canals in Gujarat ?

- a. Increase the temperature of the canal water
- b. To reduce evaporation and generate electricity
- c. Reduce the heating of the panels by cool water
- d. Keeping the panels clean and dry.

Options :

- 1. ✗ a
- 2. ✓ b
- 3. ✗ c
- 4. ✗ d

Question Number : 126 Question Id : 7343 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

What are the components of the natural components of development ?

- a. Institutions, political structure, rights
- b. Roads, electricity, banks,
- c. Savings, Insurance, Salaries.
- d. Resources, environment, Food, health

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 127 Question Id : 7345 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

What is special about the way the Commonwealth Games are inaugurated?

- a. The Queen of England sends a baton which travels.
- b. A fire is lit in London and then in the city of the Games.
- c. All athletes carry the flags of their country and the British flag.
- d. The mascot for each game is decided by the Queen of England.

Options :

- 1. ✔ a
- 2. ✘ b
- 3. ✘ c
- 4. ✘ d

Question Number : 128 Question Id : 7347 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Who is the captain of the women's hockey team of India?

- a. Mamta Kharab
- b. Suraj Lata Devi
- c. Ritu Rani
- d. Chanchana Devi

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c

4. ✘ d

Question Number : 129 Question Id : 7349 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which type of collaboration is India getting from Singapore in building smart cities?

- a. Expansion of tourism, building fast metros and railways and water purification
- b. Information Technology management of cities, and efficient sewerage treatment.
- c. Cleaning the rivers, converting sea water to potable water and expanding facilities of ports.
- d. Building the broad roads, and increasing the living areas for the urban poor.

Options :

1. ✘ a

2. ✔ b

3. ✘ c

4. ✘ d

Question Number : 130 Question Id : 7351 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which award was given to ISRO for the Lunar Probe Mission in 2009?

- a. Sir Arthur Clarke Award
- b. NASA award
- c. Space Pioneer Award
- d. IAF World Space Award

Options :

1. ✘ a

2. ✘ b

3. ✔ c

4. ✘ d

Question Number : 131 Question Id : 7353 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which island will now on be the centre for immigration check of luxury cruises to India?

- a. Kerala
- b. Andaman Islands
- c. Minicoy
- d. Lakshwadweep Islands

Options :

1. ✘ a

2. ✘ b



3. ✘ c

4. ✔ d

Question Number : 132 Question Id : 7354 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In which one of the following scales of temperature are both freezing and boiling points of water higher than the others?

- a. Reaumur scale
- b. Kelvin scale
- c. Fahrenheit scale
- d. Centigrade scale

Options :

1. ✘ a

2. ✔ b

3. ✘ c

4. ✘ d

Question Number : 133 Question Id : 7356 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The unit of heat is calorie. 1 calorie yields the amount of heat required for raising the temperature of 1 gram of water by 1 degree centigrade from

- a. 14.5 degree centigrade to 15.5. degree centigrade
- b. 15.5 degree centigrade to 16.5 degree centigrade
- c. 16.5 degree centigrade to 17.5 degree centigrade
- d. 17.5 degree centigrade to 18.5 degree centigrade

Options :

1. ✔ a

2. ✘ b

3. ✘ c

4. ✘ d

Question Number : 134 Question Id : 7359 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which one of the following types of lenses is used for correcting the defect of focus in the eye called astigmatism?

- a. Prismatic Lens
- b. Concave Lens
- c. Convex Lens
- d. Cylindrical lens

Options :

1. ✘ a

- ✘ b
- ✘ c
- ✔ d

Question Number : 135 Question Id : 7361 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Presence of which salts cause the Temporary hardness of water?

- Hydrogen Chloride and Sulphides
- Carbonates Calcium and Magnesium
- Sulphur and Silicates of Iron
- Silicates Calcium and Magnesium

Options :

- ✘ a
- ✔ b
- ✘ c
- ✘ d

Question Number : 136 Question Id : 7363 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Salts of which of the following elements are used for providing colour to fireworks?

- Strontium and Barium
- Chromium and Nickel
- Potassium and Mercury
- Zinc and Sulphur

Options :

- ✔ a
- ✘ b
- ✘ c
- ✘ d

Question Number : 137 Question Id : 7365 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

On the basis of which of the following compounds in the sweat from Human feet do the trained dogs track people?

- Sulphuric Acid
- Nitric Acid
- Carboxylic Acid
- Uric Acid

Options :

- ✘ a
- ✘ b
- ✔ c

4. ✘ d

Question Number : 138 Question Id : 7367 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

What is the result of having more vitamins and minerals than the body needs?

- a. Increased weight gain
- b. Memory loss
- c. Excessive sweating and lack of appetite.
- d. Liver and Kidney failure

Options :

1. ✘ a

2. ✘ b

3. ✘ c

4. ✔ d

Question Number : 139 Question Id : 7369 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

What are genes?

- a. Blood groups
- b. D.N.A code
- c. Cells in bone marrow
- d. Type of human characteristic.

Options :

1. ✘ a

2. ✔ b

3. ✘ c

4. ✘ d

Question Number : 140 Question Id : 7371 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which part of the cell is called the 'power house' of the Cell?

- a. Mitochondria
- b. Plasma membrane"
- c. Ribosome
- d. Cytoplasm

Options :

1. ✔ a

2. ✘ b
3. ✘ c
4. ✘ d

Question Number : 141 Question Id : 7373 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Pointing to a photograph, a boy said, 'The man in the blue shirt is my father's brother's wife's father's son's sister's husband.' said a girl. He is her .....

- a. Father
- b. Grandfather
- c. Uncle
- d. Cousin

Options :

1. ✘ a
2. ✘ b
3. ✔ c
4. ✘ d

Question Number : 142 Question Id : 7375 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

ROMAN : MANORRAMON :: CIDER : ?

The letters of the word ROMAN: MANORRAMON are related 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. RIDESSIRED
- b. DERCICEDIR
- c. DERICECDIR
- d. DERICCEDIR

Options :

1. ✘ a
2. ✘ b
3. ✘ c
4. ✔ d

Question Number : 143 Question Id : 7377 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

What should be the missing term in the following number series?

61, 67, 71, 73, 79, 83, ..., 97,

- a. 89
- b. 87
- c. 85
- d. 91

Options :

- ✓ a
- ✗ b
- ✗ c
- ✗ d

Question Number : 144 Question Id : 7379 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which is the next term in the following sequence of letter clusters?  
PLaN, OJbP, NHcR, MFdT, LDeV,

- KBgX
- KBfX
- JCfX
- JBfX

Options :

- ✗ a
- ✓ b
- ✗ c
- ✗ d

Question Number : 145 Question Id : 7381 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which is the odd number-pair?

- 14 – 392
- 13 – 338
- 15 – 480
- 16 – 512

Options :

- ✗ a
- ✗ b
- ✓ c
- ✗ d

Question Number : 146 Question Id : 7383 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

In a code, LIBRARIANS is coded as ILRBRAAISN. In that code, what will be the code for PHOSPHATIC?

- BMBKXSObBK
- EMEKXSObEK
- HPSOHPTACI
- BMBKXSObEK

Options :

- ✘ a
- ✘ b
- ✔ c
- ✘ d

Question Number : 147 Question Id : 7385 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

If, in a certain code language, FIN is written as 138, SAG as 246, ERR as 077 and RIG as 147, in that code language, GINGER will be written as:

- 314704
- 413407
- 314307
- 013447

Options :

- ✘ a
- ✘ b
- ✘ c
- ✔ d

Question Number : 148 Question Id : 7387 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

I asked my aunt how old she was. Instead of giving a direct reply, she said 'When I am  $n$  years old, the year will be the square of  $n \times n$ .' What was her age in 2010?

- 30
- 31
- 29
- 28

Options :

- ✔ a
- ✘ b
- ✘ c
- ✘ d

Question Number : 149 Question Id : 7389 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A shepherd taking rest in the shade of a tree woke up to find that one of his sheep was missing. He set out west looking for the sheep. After walking a short distance, he turned to the left and reached the bank of a river. Turning right there, he walked along the river bank and he noticed that he was walking against the flow of the river. In which direction does the river flow?

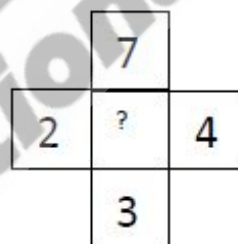
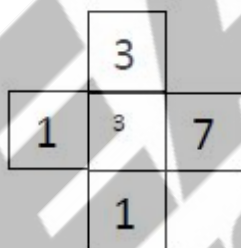
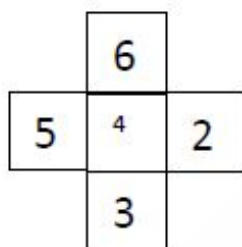
- a. North to South
- b. South to North
- c. East to West
- d. West to East

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✘ c
- 4. ✔ d

Question Number : 150 Question Id : 7391 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. 4
- d. 3

Options :

- 1. ✘ a
- 2. ✘ b
- 3. ✔ c
- 4. ✘ d

