

# Railway Recruitment Board

## Notations :

- 1.Options shown in green color and with ✓ icon are correct.
- 2.Options shown in red color and with ✗ icon are incorrect.

**Question Paper Name:** Junior Engineer 27th Aug Shift 3 Actual  
**Subject Name:** Junior Engineer  
**Creation Date:** 2015-08-18 12:45:52.0  
**Cut Off:** 0  
**Duration:** 120  
**Number of Questions:** 150  
**Total Marks:** 150.0

## Junior Engineer

**Group Number :** 1  
**Group Id :** 6  
**Group Maximum Duration :** 0  
**Group Minimum Duration :** 120  
**Revisit allowed for view? :** No  
**Revisit allowed for edit? :** No  
**Break time:** 0  
**Group Marks:** 150.0

## Junior Engineer

**Section Id :** 6  
**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:** 6  
**Question Shuffling Allowed :** Yes

**Question Number : 1 Question Id : 1051 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33**

**Work done in a free expansion process is**

## Options :

1. ✓ Zero
2. ✗ Positive

3. ✘ Negative

4. ✘ Maximum

Question Number : 2 Question Id : 1052 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The internal energy of an ideal gas is

Options :

1. ✔ A function of temperature only

2. ✘ A function of pressure

3. ✘ A function of volume

4. ✘ Both pressure and volume

Question Number : 3 Question Id : 1053 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The process in which no heat enters or leaves the system is called

Options :

1. ✘ Isobaric

2. ✘ Isothermal

3. ✔ Isentropic

4. ✘ Isochoric

Question Number : 4 Question Id : 1054 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Ignition quality of diesel fuel is indicated by

Options :

1. ✘ Octane number

2. ✔ Cetane number

3. ✘ Raynolds number

4. ✘ Mach number

Question Number : 5 Question Id : 1055 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

In Spark ignition engine, fuel used is

Options :

1. ✘ Diesel

2. ✔ Petrol

3. ✘ Kerosene

4. ✘ Both Diesel and kerosene

Question Number : 6 Question Id : 1056 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The heat flow through solids only by

Options :

1. ✔ Conduction

2. ✘ Convection

3. ✘ Radiation

4. ✘ Does not flow

Question Number : 7 Question Id : 1057 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A perfect black body is

Options :

1. ✘ One which absorbs total radiant energy

2. ✘ Black in colour

3. ✘ One which does not reflect the radiant energy

4. ✔ One which absorbs all radiant energy at all wavelengths

Question Number : 8 Question Id : 1058 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Weld spatter is a welding defect due to

Options :

1. ✘ Lack of flux

2. ✔ High welding current

3. ✘ High welding speed

4. ✘ Dirty metal surface

Question Number : 9 Question Id : 1059 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

During arc welding, eyes need to be protected against

Options :

1. ✘ Intense glare

2. ✘ Microwave
3. ✘ High frequency waves
4. ✔ Ultraviolet and infrared radiation

Question Number : 10 Question Id : 1060 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Lathe bed is usually made of

Options :

1. ✘ Mild steel
2. ✔ Cast iron
3. ✘ High speed steel
4. ✘ Alloy steel

Question Number : 11 Question Id : 1061 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Extrusion is the process of

Options :

1. ✘ Producing holes by arc
2. ✘ Metal shaping on presses
3. ✔ Pushing the heated billet of metal through the orifice
4. ✘ Welding two dissimilar metals

Question Number : 12 Question Id : 1062 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A third flask sometimes used between cope and drag is called

Options :

1. ✘ Middle
2. ✘ Core
3. ✘ Fillet
4. ✔ Cheek

Question Number : 13 Question Id : 1063 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Gears in mass production is produced by

Options :

1. ✘ Milling

2. ✘ Shaping
3. ✔ Hobbing
4. ✘ Forming

Question Number : 14 Question Id : 1064 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

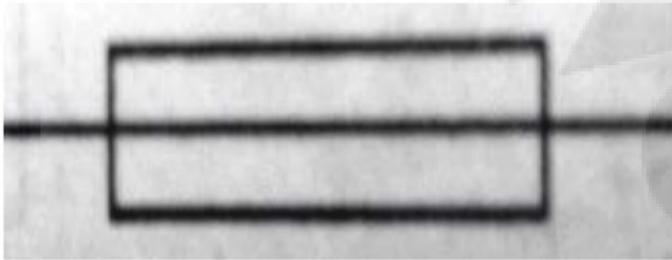
Scab is a

Options :

1. ✔ Sand casting defect
2. ✘ Machining defect
3. ✘ Welding defect
4. ✘ Forging defect

Question Number : 15 Question Id : 1065 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The following symbol depicts



Options :

1. ✘ Relay
2. ✘ Lightning arrester
3. ✔ Fuse
4. ✘ Circuit Breaker

Question Number : 16 Question Id : 1066 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Thermal relay works on the principle of

Options :

1. ✔ Heating effect of current
2. ✘ Flow of current in the circuit
3. ✘ Ohm's Law
4. ✘ Electromagnetic Induction

Question Number : 17 Question Id : 1067 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which of the following is not a part of a DC machine?

Options :

1. ✓ Stabilizer
2. ✗ Stator
3. ✗ Commutator
4. ✗ Armature

Question Number : 18 Question Id : 1068 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The type of transformer used in a Stabilizer is

Options :

1. ✗ Power Transformer
2. ✓ Auto Transformer
3. ✗ Current Transformer
4. ✗ Distribution Transformer

Question Number : 19 Question Id : 1069 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

.Safety relay used in a transformer acts as

Options :

1. ✗ Temperature Gauge
2. ✗ Explosion Vent
3. ✓ Buchholz Relay
4. ✗ Earthing Point

Question Number : 20 Question Id : 1070 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

.The value of slip of an induction motor at synchronous speed is

Options :

1. ✓ zero
2. ✗ infinite
3. ✗ unity
4. ✗ cannot be determined

Question Number : 21 Question Id : 1071 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The motor used in electrical shaving machines is

Options :

1.  Universal motor
2.  Shaded pole motor
3.  Capacitor motor
4.  Reluctance motor

Question Number : 22 Question Id : 1072 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Economiser used in power plants is used to heat

Options :

1.  flue gases
2.  intake air
3.  steam
4.  feed water

Question Number : 23 Question Id : 1073 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which of the following is a high head turbine

Options :

1.  Propeller turbine
2.  Francis turbine
3.  Kaplan turbine
4.  Pelton wheel turbine

Question Number : 24 Question Id : 1074 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A 4 ohm resistor is connected in a circuit containing 4 V supply. The current drawn is

Options :

1.  8 A
2.  4 A
3.  1 A
4.  16 A

Question Number : 25 Question Id : 1075 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which of the following rectifiers can withstand maximum voltage on DC side

Options :

1. ✘ Mercury bulb rectifier
2. ✘ Glass bulb rectifier
3. ✔ Steel tank rectifier
4. ✘ Varactor diode

Question Number : 26 Question Id : 1076 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

In an arc rectifier, the drop in voltage at the cathode is approximately

Options :

1. ✘ 1 volt
2. ✔ 6 to 7 volts
3. ✘ 60 to 70 volts
4. ✘ 1.2 to 7 volts

Question Number : 27 Question Id : 1077 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which one of the following converts sound waves into AF signals

Options :

1. ✘ loudspeaker
2. ✘ antenna
3. ✘ rectifier
4. ✔ microphone

Question Number : 28 Question Id : 1078 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which one of the following gives noiseless reception

Options :

1. ✘ amplitude modulation
2. ✘ phase modulation
3. ✔ frequency modulation
4. ✘ amplitude or phase modulation

Question Number : 29 Question Id : 1079 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The basic logic gate whose output is the complement of the input is

Options :

1. ✘ OR gate
2. ✘ AND gate
3. ✔ INVERTER gate
4. ✘ XOR gate

Question Number : 30 Question Id : 1080 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The most commonly used semiconductor material is

Options :

1. ✔ silicon
2. ✘ carbon
3. ✘ germanium
4. ✘ phosphorus

Question Number : 31 Question Id : 1081 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

For a P-N junction diode, the current in reverse bias may be

Options :

1. ✘ few amperes
2. ✘ few milliamperes
3. ✘ between 0.5 A to 1 A
4. ✔ few microamperes to nanoamperes

Question Number : 32 Question Id : 1082 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

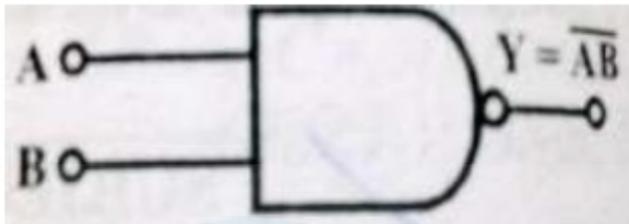
A full wave bridge rectifier is supplied voltage at 50 Hz. The lowest ripple frequency will be

Options :

1. ✘ 400 Hz
2. ✘ 200 Hz
3. ✔ 100 Hz
4. ✘ 50 Hz

Question Number : 33 Question Id : 1083 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Identify the following logic gate



Options :

1. ✘ AND gate
2. ✘ OR gate
3. ✔ NAND gate
4. ✘ NOT gate

Question Number : 34 Question Id : 1084 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The forbidden energy gap for germanium is

Options :

1. ✘ 0.12 eV
2. ✔ 0.72 eV
3. ✘ 1.11 eV
4. ✘ 1.52 eV

Question Number : 35 Question Id : 1085 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The term nominal stress in stress-strain curve for mild steel implies

Options :

1. ✔ Average stress
2. ✘ Actual stress
3. ✘ Yield stress
4. ✘ Stress at necking

Question Number : 36 Question Id : 1086 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Inorganic soil with low compressibility is represented by

Options :

1. ✘ MH

2. ✘ SL

3. ✔ ML

4. ✘ CH

Question Number : 37 Question Id : 1087 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Minimum grade of concrete to be used in reinforced concrete is

Options :

1. ✘ M 10

2. ✘ M 15

3. ✔ M 20

4. ✘ M 25

Question Number : 38 Question Id : 1088 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which one of following is a compression member?

Options :

1. ✘ Purlin

2. ✔ Boom

3. ✘ Girt

4. ✘ Tie

Question Number : 39 Question Id : 1089 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Absolute pressure in flow system

Options :

1. ✘ is always above local atmospheric pressure

2. ✘ is equal to a vacuum pressure

3. ✔ May be above, below or equal to the local atmospheric pressure

4. ✘ is also called negative pressure

Question Number : 40 Question Id : 1090 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Gantt charts indicate

Options :

1. ✓ Comparison of actual progress with the scheduled progress
2. ✗ Balance of work to be done
3. ✗ Progressive cost of project
4. ✗ Inventory costs

Question Number : 41 Question Id : 1091 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

As per Indian Standard specifications, concrete is designated into

Options :

1. ✗ 3 grades
2. ✗ 5 grades
3. ✓ 7 grades
4. ✗ 10 grades

Question Number : 42 Question Id : 1092 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

First class timber has an average life of

Options :

1. ✗ Less than one year
2. ✗ 1 to 5 years
3. ✓ 5 to 10 years
4. ✗ More than 10 years

Question Number : 43 Question Id : 1093 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Equation of continuity is based on the principle of conservation of

Options :

1. ✓ Mass
2. ✗ Energy
3. ✗ Momentum
4. ✗ Time

Question Number : 44 Question Id : 1094 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The instrument used for accurate centering in plane table survey is

Options :

1. ✗ Spirit level

2. ✘ Alidade
3. ✔ Plumbing fork
4. ✘ Through compass

Question Number : 45 Question Id : 1095 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A series of closely spaced contour lines represents a

Options :

1. ✔ Steep slope
2. ✘ Gentle slope
3.  Uniform slope
4.  Plane surface

Question Number : 46 Question Id : 1096 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

After storage, the strength of cement

Options :

1.  Decreases
2.  Increases
3.  Remains same
4.  May increase or decrease

Question Number : 47 Question Id : 1097 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The pointer of an indicating instrument should be

Options :

1.  very light
2.  very heavy
3.  either light or heavy
4.  neither light nor heavy

Question Number : 48 Question Id : 1098 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

In majority of instruments, damping is provided by

Options :

- fluid friction
- spring
- eddy currents
- both spring and fluid friction

Question Number : 49 Question Id : 1099 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

An ammeter is a

Options :

- secondary instrument
- absolute instrument
- recording instrument
- integrating instrument

Question Number : 50 Question Id : 1100 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The function of shunt in an ammeter is to

Options :

- by pass the current
- increase the sensitivity of the ammeter
- increase the resistance of ammeter
- either increasing sensitivity of ammeter or by passing current

Question Number : 51 Question Id : 1101 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The multiplier and the meter coil in a voltmeter are in

Options :

- series
- parallel
- series-parallel

4.  bi- junction mode

Question Number : 52 Question Id : 1102 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The value of peak factor considered in the estimation of water demand for the population of 1,00,000 is

Options :

1.  2.25

2.  2.50

3.  2.75

4.  3.00

Question Number : 53 Question Id : 1103 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A water borne disease may be controlled by

Options :

1.  disinfection of water

2.  sterilization of water

3.  demineralization of water

4.  desalination of water

Question Number : 54 Question Id : 1104 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The colour in water is determined using instrument called

Options :

1.  spectrophotometer

2.  photometer

3.  tintometer

4.  atomic adsorption spectrophotometer

Question Number : 55 Question Id : 1105 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The high concentration level of ozone affects the vegetation and the colour of the affected part of leaf becomes

Options :

- silver
- black
- colourless
- brown

Question Number : 56 Question Id : 1106 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The unit of sound pressure level, dBA is defined as

Options :

- summation of measured and reference sound pressure level
- ratio of measured to reference sound pressure levels
- ratio of measured to reference sound pressure levels in logarithmic scale
- product of measured to reference sound pressure levels

Question Number : 57 Question Id : 1107 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The presence of ozone is considered to be boon for humanity in

Options :

- troposphere
- stratosphere
- mesosphere
- ionosphere

Question Number : 58 Question Id : 1108 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Joystick is a(an) \_\_\_\_\_

Options :

- Input device

2.  Output device
3.  Storage device
4.  Both input and output device

Question Number : 59 Question Id : 1109 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which of the following is not true about Cache memory?

Options :

1.  Faster memory than RAM
2.  Volatile memory
3.  Smaller in size than RAM
4.  Sequential access memory

Question Number : 60 Question Id : 1110 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which of the following statement is not true?

Options :

1.  Data bus is bidirectional
2.  Address bus is bidirectional
3.  Address bus is unidirectional
4.  Same data bus is used for both read and write operations

For the above question, User had specified 'ignore' during keys upload.

Question Number : 61 Question Id : 1111 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

EBCDIC coding scheme uses \_\_\_\_\_ bits to code different characters.

Options :

1.  4
2.  8
3.  16
4.  32

Question Number : 62 Question Id : 1112 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The hexadecimal representation of 125.25 is \_\_\_\_\_

Options :

- (7D.40)<sub>16</sub>
- (7D.04)<sub>16</sub>
- (D7.40)<sub>16</sub>
- (D7.04)<sub>16</sub>

Question Number : 63 Question Id : 1113 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Considering X as a binary variable, the Boolean expression  $X.X'$  is equivalent to

Options :

- X
- 1
- 0
- X'

Question Number : 64 Question Id : 1114 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The 2's compliment of the binary number  $(10101010)_2$  is

Options :

- $(10000000)_2$
- $(00000000)_2$
- $(01010110)_2$
- $(10101010)_2$

Question Number : 65 Question Id : 1115 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A programming language which enables a programmer to write programs that are more or less independent of a particular type of computer is called \_\_\_\_\_

Options :

- Assembly language

2.  Machine language

3.  Low-level language

4.  High-level language

Question Number : 66 Question Id : 1116 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Class 'C' IP addresses use \_\_\_\_\_ bits for Network ID.

Options :

1.  8

2.  16

3.  24

4.  32

Question Number : 67 Question Id : 1117 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

W3C stands for \_\_\_\_\_

Options :

1.  World Wide Web Consortium

2.  World Wide Web Community

3.  World Wide Websites Consortium

4.  World Wide Websites Community

Question Number : 68 Question Id : 1118 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Angle is measured by

Options :

1.  plain scale

2.  comparative scale

3.  scale of chords

4.  diagonal scale

Question Number : 69 Question Id : 1119 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If a line is parallel to V.P. and inclined to H.P., its true length will be seen in

Options :

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

Question Number : 70 Question Id : 1120 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If a circular plane is inclined at  $60^{\circ}$  with the H.P. and  $30^{\circ}$  with the V.P., its side view will be

Options :

1.  a circle
2.  a straight line
3.  an ellipse
4.  true shape

Question Number : 71 Question Id : 1121 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The exact value of R.F. on an isometric scale is

Options :

1.  0.815
2.  0.8165
3.   $(2/3)^{1/2}$
4.  9/11

Question Number : 72 Question Id : 1122 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The eccentricity of an ellipse is

Options :

1.  =1

2.   $<1$

3.   $>1$

4.   $=0$

Question Number : 73 Question Id : 1123 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A force acting on a body of mass 1.5 kg, accelerates it from rest to a velocity of 4 m/s.  
The change in the momentum of the body is

Options :

1.  1.5 kg m/s

2.  3.0 kg m/s

3.  4.5 kg m/s

4.  6.0 kg m/s

For the above question, User had specified 'ignore' during keys upload.

Question Number : 74 Question Id : 1124 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Let  $g$  be the acceleration due to gravity on the surface of Earth. The acceleration due to gravity on the surface of Moon is

Options :

1.   $6g$

2.   $g/6$

3.   $g$

4.   $g/3$

Question Number : 75 Question Id : 1125 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The quantity of work equal to one joule is also equivalent to one

Options :

1.  watt x second

2.  watt/second

3.  watt/ second<sup>2</sup>

4.  watt

Question Number : 76 Question Id : 1126 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A source A of frequency  $f$  and another source of frequency  $2f$  are used to produce sound waves in a science laboratory. Let  $v_A$  and  $v_B$  represent the velocity of waves produced by the sources A and B, respectively. Then  $v_B/v_A$  is

Options :

1.  1

2.  2

3.  0.5

4.  4

Question Number : 77 Question Id : 1127 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The size of image formed by a convex lens ( focal length  $f$  ) is equal to the size of the object. The object is placed at a distance

Options :

1.  between  $f$  and  $2f$

2.  greater than  $2f$

3.   $2f$

4.  less than  $f$

Question Number : 78 Question Id : 1128 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A 1m long metal wire of radius 1 cm has a resistance of  $1.6 \times 10^{-4} \Omega$ . The resistivity of the metal is

Options :

1.   $5.0 \times 10^{-8} \Omega \text{ m}$

2.   $1.0 \times 10^{-8} \Omega \text{ m}$

3.   $1.6 \times 10^{-8} \Omega \text{ m}$

4.   $3.2 \times 10^{-8} \Omega \text{ m}$

Question Number : 79 Question Id : 1129 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The decreasing order of reactivity of four metals is in the order:  $Zn > Fe > Cu > Ag$ . In view of the order of reactivity, which of the following reaction is feasible?

Options :

- $CuSO_4 + 2Ag \rightarrow Ag_2SO_4 + 2Ag$
- $ZnCl_2 + Cu \rightarrow CuCl_2 + Zn$
- $2AgNO_3 + Cu \rightarrow Cu(NO_3)_2 + 2Ag$
- $FeSO_4 + Cu \rightarrow CuSO_4 + Fe$

Question Number : 80 Question Id : 1130 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Sodium sulphate dissociates in water as follows:



What is the total number of ions present in the solution containing one mole of dissolved sodium sulphate in water?

Options :

- $6.023 \times 10^{23}$
- $12.046 \times 10^{46}$
- $18.069 \times 10^{69}$
- $18.069 \times 10^{23}$

Question Number : 81 Question Id : 1131 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which of the following is an endothermic process?

Dissolution of

Options :

- $NH_4Cl$  in water
- $NaOH$  in water
- Quick lime in water
- Sulphuric acid in water

Question Number : 82 Question Id : 1132 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

An organic compound X, molecular mass= 46, undergoes dehydration reaction to yield the compound Y, the first member of olefin homologous series. What is the compound X ?

Options :

- Aldehyde
- Alcohol
- Ester
- Carboxylic acid

Question Number : 83 Question Id : 1133 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The values of pH of four different solutions of salts W, X, Y, & Z respectively in water are 6.2, 6.5, 6.8 and 7.5 respectively. Which of them is a basic salt?

Options :

- W
- X
- Y
- Z

Question Number : 84 Question Id : 1134 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which one of the following set of elements has the same number of valence electrons?

Options :

- Li Be Mg
- B Al Si
- Li Na K
- Li Na Mg

Question Number : 85 Question Id : 1135 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which part of the leaf makes carbon-dioxide available for Photosynthesis?

Options :

- Veins

2.  Stomata

3.  Leaf margin

4.  Lower surface of leaf

Question Number : 86 Question Id : 1136 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Which one of the following cannot be called an ecosystem?

Options :

1.  Pond

2.  Aquarium

3.  Swimming Pool

4.  Agricultural Field

Question Number : 87 Question Id : 1137 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

In a food chain who gets the maximum amount of energy?

Options :

1.  Tertiary consumers

2.  Secondary consumers

3.  Primary consumers

4.  Producers

Question Number : 88 Question Id : 1138 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The gland which secretes enzymes as well as hormones is

Options :

1.  Pituitary

2.  Thyroid

3.  Pancreas

4.  Liver

Question Number : 89 Question Id : 1139 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A brown eyed man (BB) married a blue eyed woman (bb).What will be the color of the eyes of their children ? (B gene is dominant, b gene is recessive)

Options :

1.  All their children will be brown eyed
2.  All will be blue eyed
3.  Eye color of all will be a mixture of brown and blue
4.  50 % children will have brown eyes and the other 50% will have blue eyes

Question Number : 90 Question Id : 1140 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The Indian thali has (A) chapati or rice (B) dal and (C) green vegetables cooked with very little oil. Which nutrients do A,B, and C have?

Options :

1.  A=Protein, B=Carbohydrates, C=Fat
2.  A=Carbohydrates, B=Protein, C=Fat and Vitamins
3.  A=Fat, B=Protein ,C=Vitamins
4.  A=Vitamins, B=Carbohydrates=Fat

Question Number : 91 Question Id : 1141 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The HCF and LCM of 16 and 25 are respectively

Options :

1.  0,400
2.  1,400
3.  1,25
4.  16,25

Question Number : 92 Question Id : 1142 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The least number which when divided by 8 and 12 leaving remainder 5 in each case is

Options :

1.  19

2.  29

3.  91

4.  101

Question Number : 93 Question Id : 1143 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If  $a:b=2:3$  and  $a+b = 45$ , then  $a$  is equal to

Options :

1.  27

2.  25

3.  18

4.  9

Question Number : 94 Question Id : 1144 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If  $2, x, x^2, 4$  are in proportion, then  $x$  is equal to

Options :

1.  2

2.  4

3.  8

4.  16

Question Number : 95 Question Id : 1145 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

If 20% of a number is 250, then number is

Options :

1.  25

2.  1250

3.  2500

4.  5000

Question Number : 96 Question Id : 1146 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In how many years ₹ 500 will amount to ₹ 700 at simple interest of 5% per annum?

Options :

1.  4

2.  5

3.  6

4.  8

Question Number : 97 Question Id : 1147 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In how many years ₹ 2000 will amount to ₹ 2100 at 10% per annum compounded half yearly?

Options :

1.  2

2.  1.5

3.  1

4.  0.5

Question Number : 98 Question Id : 1148 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The cost price of an article is ₹ 220. If profit is 10%, then selling price of article is

Options :

1.  ₹ 242

2.  ₹ 252

3.  ₹ 200

4.  ₹ 363

Question Number : 99 Question Id : 1149 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

. If selling price of an article is ₹ 330 and profit is 10% , then cost price of article is

Options :

- ₹ 290
- ₹ 297
- ₹ 300
- ₹ 363

Question Number : 100 Question Id : 1150 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A shopkeeper mixes 10 kg of wheat which cost him ₹ 20/kg with 5 kg of wheat which cost him ₹15/kg. He sells the mixture at ₹21/kg. His profit is

Options :

- ₹ 40
- ₹ 45
- ₹ 50
- ₹ 55

Question Number : 101 Question Id : 1151 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

In two vessels A and B, spirit and water are in the ratio 2:1 and 2:3 respectively. The ratio in which these are mixed which contains half water is

Options :

- 5:3
- 3:5
- 2:3
- 3:2

Question Number : 102 Question Id : 1152 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The speed of a car is 72km/h. The time taken by it to cover a distance of 500 m in seconds is

Options :

- 20

2.  25

3.  30

4.  40

Question Number : 103 Question Id : 1153 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A train 80m long is moving with the speed of 45km/h. The time taken by it in seconds to pass a bridge 120m long is

Options :

1.  8

2.  10

3.  16

4.  20

Question Number : 104 Question Id : 1154 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

A and B can do a piece of work in 6 days. A alone can do the same work in 10 days. In how many days B alone, can do the same work?

Options :

1.  15

2.  8

3.  7

4.  8.5

Question Number : 105 Question Id : 1155 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

P and Q can do a piece of work in 15 days, Q and R in 12 days, and R and P in 20 days. The number of days required for Q to do the same work alone is

Options :

1.  60

2.  40

3.  30

4.  20

Question Number : 106 Question Id : 1156 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The average of 4,6,0,3,6, is

Options :

1.  4.75
2.  4.5
3.  3.8
4.  3.5

Question Number : 107 Question Id : 1157 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The average of 20 observations is 18 and average of 30 observations is 25.  
The average of all 50 observations is

Options :

1.  21.5
2.  21.8
3.  22.2
4.  22.5

Question Number : 108 Question Id : 1158 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Sum of first 20 terms of the AP

-4, -2,0,2,..... is

Options :

1.  600
2.  340
3.  300
4.  460

Question Number : 109 Question Id : 1159 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The sum of infinite GP  $1, \frac{1}{3}, \frac{1}{9}, \frac{1}{27}, \dots$  is

Options :

1.   $\frac{5}{3}$
2.   $\frac{3}{2}$
3.   $\frac{4}{3}$
4.   $\frac{3}{5}$

Question Number : 110 Question Id : 1160 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The angle of elevation of top of a tower from a point on the ground 20 m away from the foot of the tower is  $60^\circ$ . The height of tower is

Options :

1.   $\frac{20\sqrt{3}}{3}$  m
2.   $\frac{40\sqrt{3}}{3}$  m
3.  20m
4.   $20\sqrt{3}$  m

Question Number : 111 Question Id : 1161 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The angles of elevation of top of a tower, 30m high, from two points on opposite side of the tower are  $30^\circ$  and  $60^\circ$  respectively. If the points and tower are in same line, the distance between two points is

Options :

1.   $20\sqrt{3}$  m
2.   $40\sqrt{3}$  m
3.   $20(\sqrt{3} + 1)$  m
4.   $20(\sqrt{3} - 1)$  m

Question Number : 112 Question Id : 1162 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

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

Options :

1.  8

2.  -8

3.  -10

4.  10

Question Number : 113 Question Id : 1163 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

One of the factor of  $(2x+3y)^3 - (5x-2y)^3$  is

Options :

1.   $(7x+y)$

2.   $(7x-y)$

3.   $(3x+5y)$

4.   $(5y-3x)$

Question Number : 114 Question Id : 1164 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The value of k for which  $x^2+5x-2k=0$  has equal roots is

Options :

1.   $\frac{25}{8}$

2.   $-\frac{25}{8}$

3.   $\frac{5}{2}$

4.   $-\frac{5}{2}$

Question Number : 115 Question Id : 1165 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The sum of squares of the roots of the equation  $x^2+x-2=0$  is

Options :

1.  1

2.  2

3.  5

4.  3

Question Number : 116 Question Id : 1166 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

In a game of cricket, when the ball bounces more than once before reaching batsman's side, it is called

Options :

1.  Bouncer

2.  Yorker

3.  Short ball

4.  Dead ball

Question Number : 117 Question Id : 1167 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

How many points are awarded for one normal basket in a game of basketball?

Options :

1.  1

2.  2

3.  3

4.  2 or 3

Question Number : 118 Question Id : 1168 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Wires in our homes are made of metal because metals are

Options :

1.  good conductors of electricity

2.  cheap and wires are long

3.  easily available

4.  conveniently covered by insulators

Question Number : 119 Question Id : 1169 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Who wrote our national song, 'Vande Mataram'?

Options :

1.  Bankim Chandra Chatterjee

2.  Rabindra Nath Tagore

3.  Sumitra Nandan Paut

4.  Mohan Das Karam Chand Gandhi

Question Number : 120 Question Id : 1170 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

What is not true about, "what forces can do"?

Options :

1.  Speed up and slow down

2.  Turn and change shape

3.  Push and pull

4.  Turn but not change direction

Question Number : 121 Question Id : 1171 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

How can you know that vinegar is an acid?

Options :

1.  It will turn blue litmus red

2.  It will turn red litmus blue

3.  Phenolphthalein turns pink when added to vinegar

4.  Its pH will be more than 7

Question Number : 122 Question Id : 1172 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The majority of Members of Parliament of the present Lok Sabha are from

Options :

1.  Bharatiya Janta party

2.  Aam Aadmi party

3.  Congress

4.  Bahujan Samaj party

Question Number : 123 Question Id : 1173 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Alcohols are studied in Organic Chemistry because there are

Options :

1.  Hydrocarbons
2.  Silicon compounds
3.  Ring compounds
4.  Made C, O, N

Question Number : 124 Question Id : 1174 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

When new plants are grown from plant parts other than the flower, it is termed

Options :

1.  Multiple Fission
2.  Sexual reproduction
3.  Vegetative propagation
4.  Binary fission

For the above question, User had specified 'ignore' during keys upload.

Question Number : 125 Question Id : 1175 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

When cell division in the body is out of control, it causes

Options :

1.  Fever
2.  Cancer
3.  Inflammation
4.  a and c

Question Number : 126 Question Id : 1176 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Mules which humans use to carry load are unable to breed because

Options :

- their parents belong to the same species
- their parents belong to different species
- reproductive organs are absent in mules
- mules are neither female nor male

Question Number : 127 Question Id : 1177 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

What is **not** true regarding your image, when you see yourself in the plane mirror?

Options :

- Image is of the same size as you
- It is at the same distance behind the mirror as you are in front of it
- The face, hands and legs are in the same direction in the mirror as yours
- Your image is laterally inverted in the mirror

Question Number : 128 Question Id : 1178 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

One of the India's past presidents was active as a scientist of repute till his death recently. Select his name.

Options :

- Rajendra Prasad
- Sarvapalli Radhakrishnan
- A P J Abdul Kalam
- Pranab Mukherji

For the above question, User had specified 'ignore' during keys upload.

Question Number : 129 Question Id : 1179 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The state capital of Haryana and Punjab is

Options :

- Ambala
- Chandigarh

3.  Chandigarh and Ludhiana respectively

4.  Rohtak and Amritsar respectively

Question Number : 130 Question Id : 1180 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

How does deforestation cause an increase in greenhouse gases in the atmosphere?

Options :

1.  Trees form a Carbon Sink in the forest when they are cut down

2.  All trees cut from forest are burnt down which releases lots of Carbon dioxide

3.  Canopy layer of forest prevents leaching and that causes air to have lot of greenhouse gases

4.  Deforestation reduces cloud formation and rain which increases collection of greenhouse gases

Question Number : 131 Question Id : 1181 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Summer solstice falls on 20<sup>th</sup> or 21<sup>st</sup> on this day

Options :

1.  Day and night are equal

2.  Day is the longest of all days in the year

3.  Night is longest of all nights in the year

4.  The temperature is usually the highest in the year

Question Number : 132 Question Id : 1182 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which out of the following is not correct?

Options :

1.  The Dutch invaded Indonesia

2.  The Japanese occupied Singapore during World War II

3.  India was colonized by the British for almost two centuries

4.  Palestinian territory was never part of Israel

Question Number : 133 Question Id : 1183 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

What was the name of the founder of Buddhism, before he renounced the world?

Options :

1.  Gautama
2.  Siddhartha
3.  Partha
4.  Mahaveera

Question Number : 134 Question Id : 1184 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which of the following became the greatest landmark in history of mankind as it ushered in an era of liberty, equality and fraternity?

Options :

1.  Spanish Revolution in 1936
2.  Russian Revolution in 1971
3.  Serbian Revolution in 1804
4.  French Revolution in 1789

Question Number : 135 Question Id : 1185 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Which salt of Calcium is Plaster of Paris?

Options :

1.  Calcium Sulphate
2.  Calcium Oxide
3.  Calcium Carbonate
4.  Calcium Hydroxide

Question Number : 136 Question Id : 1186 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

Dr. Baba Saheb Bhimrao Ambedkar, is regarded as the architect of Indian constitution because, he

Options :

1. Designed the cover page of the document
2. Was elected the president of Constituent Assembly
3. Was the chairman of the Drafting committee
4. a and b

Question Number : 137 Question Id : 1187 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The economic group called “group of seven” (G7) does not include

Options :

1. Canada
2. Germany
3. Japan
4. Netherlands

Question Number : 138 Question Id : 1188 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Comparative advantage and absolute advantage are terms related to

Options :

1. International trade
2. E-commerce
3. Commercial vehicular exchange
4. Movement of commodities within a country

Question Number : 139 Question Id : 1189 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The terms of trade measures

Options :

1. the ratio of export prices to import prices
2. extent of international competitiveness
3. effective exchange rates

4.  Nominal exchange rates

Question Number : 140 Question Id : 1190 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

The President of India can declare Emergency under Article 352 on the advice of :

Options :

1.  Prime Minister
2.  Council of Ministers
3.  Governor
4.  Cabinet

Question Number : 141 Question Id : 1191 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

A boy pointing to a photograph said, "His father is my father's brother." How is the person in the photograph related to the boy?

Options :

1.  Cousin
2.  Brother
3.  Nephew
4.  Sister

Question Number : 142 Question Id : 1192 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

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

$$35 : 16 :: 53 : ?$$

Options :

1.  61
2.  29
3.  27

Question Number : 143 Question Id : 1193 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

'Botany' is related to 'Plants' in the same way as 'Anthropology' is related to:

Options :

1.  Archives
2.  Culture
3.  Rural
4.  Events

Question Number : 144 Question Id : 1194 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

C is taller than B, who is shorter than D. D is taller than C, who is shorter than E.  
D is shorter than E, who is taller than A.  
Who is the tallest of all?

Options :

1.  A
2.  C
3.  D
4.  E

Question Number : 145 Question Id : 1195 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

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

1. Locality    2. State    3. Member    4. Village    5. Nation    6 Family

Options :

1.  3, 6, 1, 4, 2, 5
2.  5, 2, 4, 1, 6, 3
3.  3, 6, 4, 1, 2, 5
4.  3, 6, 4, 2, 1, 5

Question Number : 146 Question Id : 1196 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

One term in the following number series is wrong. Find out the wrong term.

1097, 368, 125, 44, 16, 8, 5

Options :

1.  8
2.  16
3.  44
4.  125

Question Number : 147 Question Id : 1197 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

If SIT = 66 and ROW = 50, then HOPE will be equal to:

Options :

1.  128
2.  88
3.  64
4.  28

Question Number : 148 Question Id : 1198 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

If 'HOSTILE' is coded as 'JMURKJG', then 'REQUEST' would be coded as:

Options :

1.  TCSSGSV
2.  PGPWCUR
3.  TCSSGQV
4.  TCSWCSV

Question Number : 149 Question Id : 1199 Question Type : MCQ Option Shuffling : No  
Correct : 1.0 Wrong : 0.33

Shovan walked 5 km towards South-West, took a right turn and walked 3 km. Then he turned right again and walked 9 km. How far and in which direction is Shovan now with respect to his starting point?

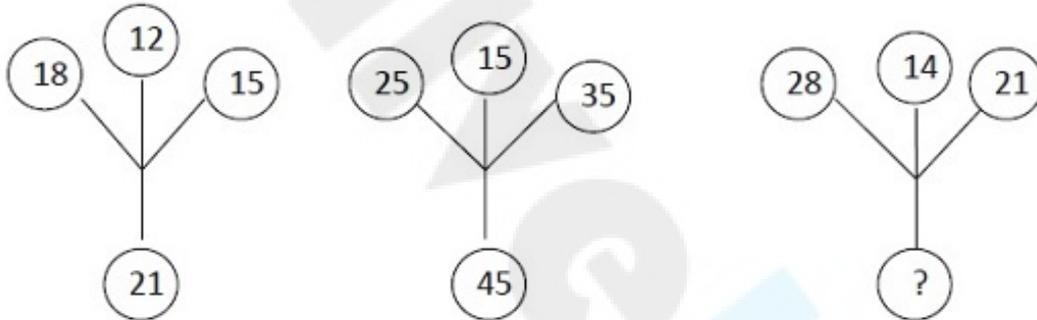
Options :

- 4 km North
- 5 km North
- 4 km North-East
- 5 km North-East

Question Number : 150 Question Id : 1200 Question Type : MCQ Option Shuffling : No

Correct : 1.0 Wrong : 0.33

The numbers in the following figures follow a pattern. Which number would replace the question mark?



Options :

- 25
- 42
- 35
- 49