Railway Recruitment Board

Notations:

- Options shown in green color and with vicon are correct.
- 2. Options shown in red color and with * icon are incorrect.

Question Paper Name: Junior Engineer 26th Aug Shift 2 Actual

Subject Name: Junior Engineer

Creation Date: 2015 08 18 12:40:17

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Cut Off:0Duration:120Number of Questions:150Total Marks:150.0

Junior Engineer

Group Number:

Group Id:

Group Maximum Duration:

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Revisit allowed for view?:

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No

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Break time:

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Junior Engineer

Section Id: 2
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: 2
Question Shuffling Allowed: Yes

Question Number: 1 Question Id: 151 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

A system and its environment put together constitute

Options:

An adiabatic system

2. An isolated system

```
3. A segregated system
     A homogeneous system
Question Number: 2 Question Id: 152 Question Type: MCQ Option Shuffling: No
Correct : 1.0 Wrong : 0.33
Slope of constant volume line on temperature entropy diagram is given by
Options:
Cp/T
4 JT/Cv
Question Number: 3 Question Id: 153 Question Type: MCQ Option Shuffling: No
Correct: 1.0 Wrong: 0.33
Stefen Boltzman law is applicable to
Options:
    Gray body
    White body
з. 🖋 Black body
🗸 😹 Blue body
Question Number: 4 Question Id: 154 Question Type: MCQ Option Shuffling: No
Correct: 1.0 Wrong: 0.33
Heat is transferred by conduction, convection and radiation in
Options:
    Insulated pipes carrying hot water
    Refrigerator freezer coils
  Melting of ice
    Boiler furnaces
Question Number: 5 Question Id: 155 Question Type: MCQ Option Shuffling: No
Correct: 1.0 Wrong: 0.33
A four stroke diesel engine has
Options:
1 * One valve
```

Two valves Three valves Four valves Correct: 1.0 Wrong: 0.33

Question Number: 6 Question Id: 156 Question Type: MCQ Option Shuffling: No

A certain engine produces 10 kw indicated power. Its mechanical efficiency is 70%. Then the frictional power is

Options:

2 kw

2.5 kw

3 kw

4 🙀 3.5 kw

Question Number: 7 Question Id: 157 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

Morse test is applicable only to

Options:

Single cylinder SI engines

Single cylinder Clengines

Multi-cylinder Clengines

Multi-cylinder Sland Cl engines

Question Number: 8 Question Id: 158 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

The consumable electrode is used in

Options:

Carbon arc welding

Submerged arc welding

TIG welding

MIG Welding

Question Number: 9 Question Id: 159 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

The phenomenon of weld decay occurs in

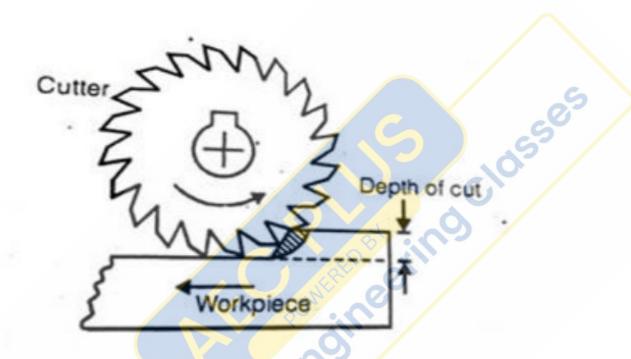
Options:

- 🔭 😦 Cast iron
- Brass
- 💂 💂 Bronze
- 4 🗸 Stainless steel

Question Number: 10 Question Id: 160 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

The given figure represents



Options:

- Up milling
- Down milling
- 🔒 🙀 Climb milling
- Angular milling

Question Number: 11 Question Id: 161 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

In sand moulding the bottom flask is called

- Cope
- Drag
- 3. 🗱 Fillet
- Riddle

Question Number: 12 Question Id: 162 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Cast iron pipes are cast by **Options:** Die casting process Centrifugal casting process Investment casting process Vaccum Moulding process Question Number: 13 Question Id: 163 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Swagging is an operation of **Options:** Hot rolling Forging Extrusion Piercing Question Number: 14 Question Id: 164 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** In Die cutting operation, punching a number of holes in a sheet is called **Options:** Perforating Parting Notching Lancing Question Number: 15 Question Id: 165 Question Type: MCQ Option Shuffling: No **Correct: 1.0 Wrong: 0.33** The flow of current in solids is due to **Options:** 1 / electrons electrons and ions

atoms atoms and nucleus Question Number: 16 Question Id: 166 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Ohm's law is applicable for **Options:** conductors only superconductors only conductors and semiconductors semiconductors only Question Number: 17 Question Id: 167 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** "The algebraic sum of all the currents meeting at a point in a circuit is equal to zero." This statement is **Options:** Kirchoff's Junction Rule Ampere Circuital Law Kirchoff's loop Rule Lenz Rule Question Number: 18 Question Id: 168 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 In a DC generator, the critical resistance refers to the resistance of **Options:** 1 * brushes 2 🗸 field armature 4 * load Question Number: 19 Question Id: 169 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33**

A transformer core is laminated in order to prevent

Options:

current leakage

eddy currents loss

oil leakage

hysterisis loss

Question Number: 20 Question Id: 17

Correct: 1.0 Wrong: 0.33

Question Number: 20 Question Id: 170 Question Type: MCQ Option Shuffling: No

HRC fuses on a transformer provide protection against

Options:

- . 💂 insulation failure
- 🌲 internal faults
- a external faults
- low oil level

Question Number: 21 Question Id: 171 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Buchholz's relay is used in

Options:

- motor protection
- 💂 line protection
- generator protection
- transformer protection

Question Number: 22 Question Id: 172 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

The stator frame in an induction motor is used

Options:

- 🙀 to protect the whole machine
- to ventilate the armature
- as a return path for flux
- to hold the armature stampings

 $Question\ Number: 23\ \ Question\ Id: 173\ \ Question\ Type: MCQ\ \ Option\ Shuffling: No$

Correct: 1.0 Wrong: 0.33

The starting winding of a single phase winding resides in

Options: armature 2 🛊 field 3 x rotor 4 🛷 stator Question Number: 24 Question Id: 174 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Galvanising is a process of applying a layer of zinc on metal surface. It is also known as **Options:** electrorefining 2 anoding electroplating cathoding Question Number: 25 Question Id: 175 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 A single transistor can be used to build which of the following logic gates **Options:** 1 OR 2 * AND 3 NOR 4. NOT Question Number: 26 Question Id: 176 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Which of the following expressions represents logical AND gate? **Options:** 1 × A+B 2 * A/B з **ж** А>В

Question Number: 27 Question Id: 177 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

4. 🗸 A.B

Substances which generate potential difference when exposed to light are known as

Options: photo voltaic material light generators thermoelectricgenerators volt generators Question Number: 28 Question Id: 178 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Most commonly used control element in voltage regulators is **Options:** 1 J BJT UJT 3 🚜 FET 4. SBS Question Number: 29 Question Id: 179 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 In a differential amplifier, an ideal CMRR is **Options:** infinity zero ***** +1 Question Number: 30 Question Id: 180 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** What is the equivalent of decimal 14 in binary? **Options:** 1110 **1011** 3 * 1101

Question Number: 31 Question Id: 181 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

1111

How many electrons are there in the valence shell of a pure semiconductor?

Options: Question Number: 32 Question Id: 182 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 Exclusive-OR (XOR) logic gates can be constructed from what other logic gates? **Options:** OR gates only AND gates and NOT gates AND gates, OR gates, and NOT gates OR gates and NOT gates Question Number: 33 Question Id: 183 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 The process of mixing AF signal and RF waves is known as **Options:** 1 modulation demodulation oscillation amplification Question Number: 34 Question Id: 184 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** The main advantage of frequency modulation over amplitude modulation is **Options:** that there will be no distortion that the complete information is contained in the side bands that it uses a wider band of frequencies the elimination of noises

Question Number: 35 Question Id: 185 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

If the modulus of elasticity is zero, the material is said to be **Options:** Rigid Elastic Flexible 4 / Plastic Question Number: 36 Question Id: 186 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Water content of soil can be **Options:** Greater than 100 % Less than 0% Only from 0% to 100% Never be greater than 100% Question Number: 37 Question Id: 187 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** The maximum percentage of moment redistribution allowed in RCC beams is **Options:** 1 * 10% 20% 30% 40% Question Number: 38 Question Id: 188 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 Bending compressive and tensile stresses respectively are calculated based on **Options:** Net area and gross area Gross area and net area Net area in both cases Gross area in both cases

Question Number: 39 Question Id: 189 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** The liquid used in manometers should have **Options:** Low density High density Low surface tension High surface tension Question Number: 40 Question Id: 190 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Which of the following instruments is generally used for base line measurements? **Options:** Chain Metallictape Steel tape 4. Invar tape Question Number: 41 Question Id: 191 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 In a bar chart the vertical axis represents **Options:** Time Types of activities Number of labours Various activities of the project Question Number: 42 Question Id: 192 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 Initial setting time is maximum for **Options:** Portland-Pozzolana cement Portland-Slag cement 3 Low heat portland-pozzolana cement

High strength portland cement Question Number: 43 Question Id: 193 Question Type: MCQ Option Shuffling: No **Correct: 1.0 Wrong: 0.33** The viscosity of a gas **Options:** Decreases with increase in temperature

- Increases with increase in temperature
- is independent of temperature
- is independent of pressure for very high pressure intensities

Question Number: 44 Question Id: 194 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

In an internal focussing type of telescope, the lens provided is **Options:**

- Concave
- Convex
- Plano-convex
- Plano-concave

Question Number: 45 Question Id: 195 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Voids ratio of a soil mass can

Options:

- Never be greater than unity
- Be zero
- Take any value greater than zero
- Take values between 0 and 1 only

Question Number: 46 Question Id: 196 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

The main ingredients of portland cement are

- Lime and silica
- Lime and alumina

- 💂 🙀 Silica and alumina
- Lime and iron

Question Number: 47 Question Id: 197 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Which of the following devices should be used for accurate measurement of low D.C. voltage?

Options:

- Small range moving coil voltmeter
- D.C. potentiometer
- Small range thermocouple voltmeter
- 4 * Hot wire voltmeter

Question Number: 48 Question Id: 198 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

A direct current can be measured by

Options:

a D.C. potentiometer directly

a D.C. potentiometer in conjunction with a standard resistance

a D.C. potentiometer in conjunction with a volt ratio box

4. *

a D.C. potentiometer in conjunction with volt ratio box and standard resistance

Question Number: 49 Question Id: 199 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Basically a potentiometer is a device for

Options:

- comparing two voltages
- measuring a current
- 💂 🧝 comparing two currents
- 🗸 🧝 measuring a voltage

Question Number: 50 Question Id: 200 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

In order to achieve high accuracy, the slide wire of a potentiometer should be

Options:

as long as possible

- as short as possible
- neither too small nor too large
- very thick

Question Number: 51 Question Id: 201 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

Standard resistor is made from

Options:

- platinum 🙀
- 2 manganese
- 💂 🙀 silver
- 🗸 🙀 nichrome

Question Number: 52 Question Id: 202 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

In surface water, the colour produced by colloidal suspension is termed as

Options:

- apparent colour
- true colour
- 💂 light colour
- adark colour

Question Number: 53 Question Id: 203 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

The stokes equation used for determination of settling velocity of discrete particle is

Options:

$$Vs = g(\rho_s - 1) d^2 / 18 \mu$$

$$_{2}$$
 * Vs = g (ρ_{s} - 1) $d^{2}/18 v$

$$_{3}$$
 * Vs = g (ρ_{s} – 1) d /18 v

Vs = g d
$$(\rho_s - 1)^2 / 18 \mu$$

Question Number: 54 Question Id: 204 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

The amount of oxygen required by microorganisms to decompose the biodegradable organics is called

- oxygen demand
- oxygen deficiency
- 🖫 🥒 biochemical oxygen demand
- 4 * chemical oxygen demand

 $Question\ Number: 55\ \ Question\ Id: 205\ \ Question\ Type: MCQ\ \ Option\ Shuffling: No$

Correct : 1.0 Wrong : 0.33

The formation of photochemical smog is caused by

Options:

- NOx, CO, HC, O₃
- NOx, CO₂, HC, O₃
- NOx, Pb, HC, O₃
- NOx, SOx, HC, O₃

Question Number: 56 Question Id: 206 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

The threshold of sound pressure that a normal healthy person can respond to is

Options:

- 0.0002 Pa
- 0.00002 Pa
- _ 0.002 Pa
- 0.02 Pa

Question Number: 57 Question Id: 207 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

In pre-industrial era the concentration of carbon dioxide, CO₂ was

Options:

- 200 ppm
- 💂 360 ppm
- 265 290 ppm
- 300 ppm 🙀

Question Number: 58 Question Id: 208 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Which of the following is not a valid category of impact printers?
Options: Daisy-wheel printers
2. * Line printers
3. * Drum printers
4. Laser printers
Question Number: 59 Question Id: 209 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33
Which of the following is not true about ROM?
Options:
Random access memory
2. * Read only memory
3. Non-volatile memory
Sequential access memory
Question Number: 60 Question Id: 210 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33
Which of the following is a component of Central Processing Unit (CPU)?
Options:
1. * Hard Disk
2. * Keyboard
3. ✓ Registers
Random Access Memory (RAM)
Question Number: 61 Question Id: 211 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 Original ASCII coding scheme uses bits for coding 128 different characters.
Options:
_{1.} × 6
2. 🗸 7
3. * 8
4. * 16
Question Number: 62 Question Id: 212 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33 The binary representation of 129.25 is
Options:
1. (10000001.01) ₂
2. * (11000001.01) ₂
3. (10000011.10) ₂
4 * (10000001.11) ₂
Question Number: 63 Question Id: 213 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33
Considering X as a binary variable, the Boolean expression X + 0 is equivalent to
Options:
1. * X
2. * 1
3. * 0
4. * X'
Question Number: 64 Question Id: 214 Question Type: MCQ Option Shuffling: No
Correct: 1.0 Wrong: 0.33
Correct: 1.0 Wrong: 0.33 The 2's compliment of the binary number (10001100) ₂ is
The 2's compliment of the binary number (10001100) ₂ is
The 2's compliment of the binary number (10001100) ₂ is
The 2's compliment of the binary number (10001100) ₂ is
The 2's compliment of the binary number (10001100) ₂ is
The 2's compliment of the binary number (10001100) ₂ is Options: (01001000) ₂ (01110100) ₂
The 2's compliment of the binary number (10001100) ₂ is Options: (01001000) ₂ (01110100) ₂ (00100111) ₂
The 2's compliment of the binary number (10001100) ₂ is Options: (01001000) ₂ (01110100) ₂ (00100111) ₂ (11110111) ₂ Question Number: 65 Question Id: 215 Question Type: MCQ Option Shuffling: No
The 2's compliment of the binary number (10001100) ₂ is Options: (01001000) ₂ (01110100) ₂ (00100111) ₂ (11110111) ₂ Question Number: 65 Question Id: 215 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33
The 2's compliment of the binary number (10001100) ₂ is Options: (01001000) ₂ (01110100) ₂ (00100111) ₂ (11110111) ₂ Question Number: 65 Question Id: 215 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 Windows 7 is a
The 2's compliment of the binary number (10001100) ₂ is Options: (01001000) ₂ (01110100) ₂ (00100111) ₂ (11110111) ₂ Question Number: 65 Question Id: 215 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 Windows 7 is a Options: Real-time operating system

Distributed operating system Question Number: 66 Question Id: 216 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Class 'A' IP addresses use _____ bits for Host ID. **Options:** 1 * 8 2 * 16 3 **24** 4. * 32 Question Number: 67 Question Id: 217 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Which of the following is not a Web browser? **Options:** Opera NetSurf Chrome Question Number: 68 Question Id: 218 Question Type: MCQ Option Shuffling: No **Correct: 1.0 Wrong: 0.33** The R.F. of a scale is **Options:** 1 * < 1 any of these Question Number: 69 Question Id: 219 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 Which of the following methods is not used for drawing elliptical curves? **Options:** oblong method 2. v tangent method

- concentric circles method
- intersecting arc method

Question Number: 70 Question Id: 220 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 top view will be

Options:

- 🔒 a point
- a line of larger dimension
- a line of smaller dimension
- a line of same dimension

Question Number: 71 Question Id: 221 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

In first - angle projection method, the relative positions of the observer, object and plane are

Options:

- Plane is placed between observer and object
- Observer is placed between object and plane
- Object is placed between observer and plane
- May be placed in any order

Question Number: 72 Question Id: 222 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

A square lamina is perpendicular to both the reference planes. Its top and front views will be

Options:

- the straight lines
- 🍃 😦 the squares
- a square and a straight line respectively
- a straight line and a square respectively

Question Number: 73 Question Id: 223 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

A 5 kg mass at rest on a frictionless table is acted upon by a constant force of 12 N. The distance travelled by it in 2s is

```
__ 1.2 m
```

2.4 m

3 y 4.8 m

4 * 9.6 m

Question Number: 74 Question Id: 224 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

The gravitational force between two bodies kept at a distance d is proportional to

Options:

Question Number: 75 Question Id: 225 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

An object of 10 kg is raised through a height of 2 m. The work done is ($g = 9.8 \text{ m/s}^2$)

Options:

Question Number: 76 Question Id: 226 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

Which of the following statements about sound and light waves is correct?

Options:

Both sound and light waves are transverse

Both sound and light waves are longitudinal

💂 😦 Sound wave is transverse but light wave is longitudinal

Sound wave is longitudinal but light wave is transverse

Question Number: 77 Question Id: 227 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

A beam of light is incident on a surface of a rectangular glass slab (μ =1.52). If the velocity of the beam before it enters the slab is 3 x 10° m/s, its velocity after emerging from the slab is

Options:

- 1.97 x 108 m/s
- 2 3 x 108 m/s
- 4.56 x 108 m/s
- 4 * 1.5 x 108 m/s

Question Number: 78 Question Id: 228 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Three resistors, each with resistance *r*, are in series in a circuit. They are replaced by one equivalent resistor of resistance *R*. Which of the following statements is correct?

Options:

- R is smaller than r
- The voltage across R equals the voltage across r
- The current through R equals the current through r
- The power dissipated in R equals the power dissipated in r

Question Number: 79 Question Id: 229 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

According to the law of constant proportions, what mass of oxygen would be present in a sample of carbon dioxide gas containing 3 grams of carbon?

Options:

- , 🙀 3 g
- , * 6g
- 3 / 8 g
- 12 g

Question Number: 80 Question Id: 230 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Which of the following is a process of galvanization?

- Mixing of a metal with another metal by melting
- Coating the surface of a metal with Zinc
- Coating the surface of a metal with its oxide
- Painting a metal

Question Number: 81 Question Id: 231 Question Type: MCQ Option Shuffling Correct: 1.0 Wrong: 0.33	: No	
Which element has the least number of valence	e ele	ctrons?
Options:		
1 * Chlorine		
2. Sodium		
3. * Fluorine		
4. S Oxygen		
Question Number: 82 Question Id: 232 Question Type: MCQ Option Shuffling Correct: 1.0 Wrong: 0.33 For the reaction, 2 Na + H ₂ > 2NaH, which of the follow i) Na is oxidized	ing sta	itements are correct? i) H _{2 is} oxidized
(iii) H ₂ acts as an oxidizing agent	(iv)	Na acts as an oxidizing agent
Options:		SS
1. ✔ (i & iii)		-10-5
2. * (i & ii)		G */
3. * (ii & iii)	40	
4. * (ii & iv)		
Question Number: 83 Question Id: 233 Question Type: MCQ Option Shuffling Correct: 1.0 Wrong: 0.33 Which of the following compounds would react with sodium hycarbon dioxide gas?		carbonate to produce
Options:		
1. CH ₃ CH ₂ OH		
carbon dioxide gas? Options: CH ₃ CH ₂ OH CH ₃ CH ₃		
3. * CH ₂ = CH ₂		
4. ✓ CH₃COOH		
Question Number: 84 Question Id: 234 Question Type: MCQ Option Shuffling Correct: 1.0 Wrong: 0.33 In which of the following reactions does NH ₃ act		n as an acid and a base?
Options:		
$_{1}$ NH ₃ + H ₂ O> NH ₄ ⁺ + OH ⁻		

2NH₃ ----> NH₂⁻ + NH₄⁺

 NH_3 +HCl ----> NH_4 + Cl NH₃ + NaOH ----> NaNH₂ + H₂O

Question Number: 85 Question Id: 235 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

The plant organelles which can trap sunlight are

Options:

- Chlorophyllonly
- Chloroplasts only
- Mitochondria only
- Mitochondria and Chloroplasts

Question Number: 86 Question Id: 236 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

Which of the following diseases is not spread by mosquitoes?

Options:

- Malaria
- Dengue
- Filaria
- Tuberculosis

Question Number: 87 Question Id: 237 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

The flowering plants belong to the group

Options:

Angiosperms

Gymnosperms

Bryophytes

Pteridophytes

Question Number: 88 Question Id: 238 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

Fish has a streamlined body to

- balance the body while swimming
- counter the resistance of water
- gain speed as they move forward
- avoid collision with other fish

Question Number: 89 Question Id: 239 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

Landslides and soil erosion are occurring more frequently than before because

Options:

- Climate has changed
- Forests have been cut
- Rainfall has become scarce

Drought has dried the soil

4 3

Question Number: 90 Question Id: 240 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Air enters the lungs due to movement of

Options:

- Rib muscles only
- Diaphragm only
- Trachea and bronchi
- Rib muscles and diaphragm

Question Number: 91 Question Id: 241 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

The HCF of two numbers is 12 and their LCM is 72. If one number is 36, the other number is Options:

1 * 12

2. 24

3 * 36

4 * 48

Question Number: 92 Question Id: 242 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

The largest number which divides 81 and 108, leaving remainders 6 and 3 respectively is
Options:
1. * 9
2. 🗸 15
_{3.} * 18
4. * 515
Question Number: 93 Question Id: 243 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33
If a: b = 4: 5 and b: c = 2: 3, then c: a is
Options:
1. 15:8
2 * 3:4
3 x 8:15
4 * 3:5
Question Number: 94 Question Id: 244 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33
If 3, 5, x, 25 are in proportion, then x is equal to
Options:
1. * 5
2. * 10
2. * 10 3. * 15
4. * 75
Question Number: 95 Question Id: 245 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33
Successive discounts of 30% and 10% are equivalent to a single discount of
Options:
1. * 20%
2. * 35%
36%
_{4.} ✓ 37 %
Question Number: 96 Question Id: 246 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33

The simple interest on rupees 200 for 3 years at 6% per annum in rupees is **Options:** 36 3 * 24 4. * 48 Question Number: 97 Question Id: 247 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** A sum of money doubles itself in 4 years when the interest is compounded annually. The number of years when it will become eight times is **Options:** 1 * 32 2 * 16 3. 🕢 12 _{4.} * 8 Question Number: 98 Question Id: 248 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** If C.P. of 12 articles is equal to S.P. of 10 articles, then in the whole transaction there is a profit of **Options:** 25% 4 20%

Question Number: 99 Question Id: 249 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33

To gain 25% after allowing a discount of 20%, the shopkeeper should mark the price of the article which cost him ₹ 400 as

- 1. **≈** ₹525
- , 🧝 ₹ 580

Question Number: 100 Question Id: 250 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

A shopkeeper mixes 40 kg of sugar which costs him ₹ 36 per kg with 27 kg of sugar which costs him ₹ 30 per kg. He sells the mixture at ₹ 35 per kg. His gain percent is Options:

Question Number: 101 Question Id: 251 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

In two vessels A and B, the milk and water are in the ratio of 5:2 and 4:5 respectively.

The ratio in which these are mixed to obtain new mixture which contains milk

and water in the ratio 3:2 is

Options:

Question Number: 102 Question Id: 252 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

Speed of a boat in still water is 3 km/hr. the speed of the stream is 1 km/hr. The time taken to go 4 km upstream in minutes is

Question Number: 103 Question Id: 253 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

A train 100 m long is moving at 40 km/h. The time in seconds, it will take to pass another train 150 m long which is moving at 50 km/h in the opposite direction from the moment they meet is

Options:

- 1 * 6
- ₂ * 8
- 3 🧳 10
- 4 * 15

Question Number: 104 Question Id: 254 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

A and B can do a piece of work in 24 days. If efficiency of A is double than B, then in how many days, A alone can do the same work?

Options:

- 1 * 30
- 2 / 36
- ₃ 60
- ₄ ***** 72

Question Number: 105 Question Id: 255 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

P and Q can do a piece of work in 12 days, Q and R in 15 days and R and P in 20 days.

In how many days Q alone can do the same work?

Options:

- 1 20
- 2 30
- ₃ **× 47**
- __ 60

Question Number: 106 Question Id: 256 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

The average of first five prime numbers is

		-	-
4	40	- ≺	h
1	-		

₂ **×** 4.5

3 🐹 5.5

Question Number: 107 Question Id: 257 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

The average weight of 100 students is 46 kg. The average weight of boys is 50 kg. If the number of boys is 60, the average weight of girls in kilograms is

Options:

- 1. * 35
- 2. 40
- 3 * 45
- 4 * 50

Question Number: 108 Question Id: 258 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

Which term of AP; 7, 14, 21, 28,... is 77?

Options:

Question Number: 109 Question Id: 259 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

The third term of a G.P. is - 3. The product of its first five terms is

Options:

Question Number: 110 Question Id: 260 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

A ladder 15 m long just reaches the top of a vertical wall. If the ladder makes an angle of 60° with the wall, the height of the wall is

Options:

$$\frac{15\sqrt{3}}{2}$$
 m

 $Question\ Number: 111\ \ Question\ Id: 261\ \ Question\ Type: \ MCQ\ \ Option\ Shuffling: No$

Correct: 1.0 Wrong: 0.33

From a point on the bridge across a river the angles of depression of the banks on the opposite side of the river are 30° and 45° respectively. If the bridge is at a height of 3m from the bank, the width of the river is

Options:

$$2(\sqrt{3}+1) m$$

$$(\sqrt{3} + 1)$$
 m

$$_{3} * 4(\sqrt{3} + 1) \text{ m}$$

$$_{4} \approx 2(2\sqrt{3}+1)$$
 m

Question Number: 112 Question Id: 262 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

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

Options:

Question Number: 113 Question Id: 263 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

One of the factors of $(36x^2 - 1) + (1 + 6x)^2$ is

$$_{1} * 6 + x$$

$$_{2} = 6 - x$$

Question Number: 114 Question Id: 264 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

All values of k for which $x^2 + kx + 16 = 0$ has real roots is

Options:

Question Number: 115 Question Id: 265 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

The sum and product of the roots of the equation $x^2 - 4x + 5 = 0$ are respectively

Options:

Question Number: 116 Question Id: 266 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

Who discovered the sea route to India?

Options:

Vasco da Gama

🙎 🙀 Magellan

3 🙀 Diaz

Christopher Columbus

Question Number: 117 Question Id: 267 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

In the medieval times, Bedouins were

- Early Romans
- , 😦 Greek Emperors
- Wandering Arab camel herdsmen
- Tribal horse riders

Question Number: 118 Question Id: 268 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

The major cause of top soil being lost due to soil erosion is

Options:

- Westerly winds
- 🚬 Thermal inversion
- 3 Deforestation
- Cattle grazing

Question Number: 119 Question Id: 269 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

The term used for armed rebellion against a constituted authority is

Options:

- Insurgency
- Terrorism
- Naxalism 💂
- 4 Coup

Question Number: 120 Question Id: 270 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

The treaty of Versailles was signed in the summer of 1919 with

Options:

- Germany
- 👡 🧝 Austria
- _ _ Turkey
- Hungary

Question Number: 121 Question Id: 271 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

About 30% of the 'Great wall of China' has recently been found to have disappeared due to Just Natural causes Global Warming Natural disasters Natural causes and theft of bricks for building houses Question Number: 122 Question Id: 272 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Is Virus a living being? **Options:** Yes, because it has DNA No, because it does not possess the machinery to duplicate itself Yes, because it can divide to reproduce when inside a living being No, because its coat is made of Protein Question Number: 123 Question Id: 273 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** What does a plant do with the sugar it makes? **Options:** Uses it up completely to get energy for its survival Stores it in its roots Converts it into starch Stores it for herbivores to feed upon Question Number: 124 Question Id: 274 Question Type: MCQ Option Shuffling: No **Correct: 1.0 Wrong: 0.33** Which out of the following is in all cases a hereditary disorder **Options:** Thallasemia Diabetes mellitus **Tuberculosis** Anaemia

Question Number: 125 Question Id: 275 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

The latest Nobel Peace Prize was awarded to two people, a man and a woman. To which countries do they belong?

Options:

1 China

India and Pakistan

🦼 US and Greece

🗼 😦 India and Indonesia

Question Number: 126 Question Id: 276 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

Who is Dalai Lama and where does he live?

Options:

Tibetan Spiritual leader living in Dharamshala, Himachal Pradesh

Buddhist monk living in Tibet

Tibetan rebel fighting the Chinese

Religious leader from Tibet living in Kushalnagar, Coorg

Question Number: 127 Question Id: 277 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

In the geography class students were confused regarding the difference between climate and weather. Four of the students gave four answers. Which one is the correct difference?

Options:

Climate is the sum total of variation in weather in an area whereas weather is the state of atmosphere over an area.

Climate and weather are synonymous

Climate is the sum total of weather conditions over a large area for a long period of time and weather is the state of atmosphere over an area at any point of time.

4. *

Climate is the duration of seasons in a large area and weather refers to seasonal changes in a small area.

Question Number: 128 Question Id: 278 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

The tournament that takes place in Roland Garros in Paris is associated with Options: Lawn tennis
Table tennis
Basket ball
Bowling
4. **
Question Number: 129 Question Id: 279 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33
Which is the national sport of India?
Options: Cricket
Football
3. Hockey
4. * Kabaddi
Question Number: 130 Question Id: 280 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 Where would you place vinegar if you were to show its pH on a scale showing pH from 1 to 8 to?
Options:
Left of 7
Right of 7
3. * On 7
4. * On 8
Question Number: 131 Question Id: 281 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33
A gel is a
Options:
Suspension of a solid in a liquid
2. Suspension of tiny liquid droplets in another liquid
3. Cas trapped in a viscous liquid
4. * Gas trapped in a semi-solid
Question Number: 132 Question Id: 282 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

Which out of the following is incorrect regarding Lok Sabha?

Options:

- 530 members are elected from states
- 20 members are elected from Union Territories

3. 🗸

2 members from Anglo Indian community are elected by the community

4. 3

2 members of Anglo Indian community are nominated by the President if there is no member from the Anglo Indian community

Question Number: 133 Question Id: 283 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Some salts we use in the kitchen for cooking are given below but one is erroneously mentioned. Identify it

Options:

- 🙀 Sodium chloride
- Sodium bi carbonate
- Calcium Phosphate
- Monosodium glutamate

Question Number: 134 Question Id: 284 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

When mother was heating the oven to a certain temperature for baking a cake, the daughter wanted to know the difference between heat and temperature. In mother's response which one statement was incorrect?

Options:

1 *

Heat is a form of energy and temperature measures how hot something is

- Heat is measured in Joules and temperature in degree Celsius (°C)
- Reat and temperature both flow between temperatures
- When heat energy flows, temperature increases or decreases

Question Number: 135 Question Id: 285 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Read the poem written by a child.

Plants will always grow
Wind will always blow
Solar cells will give electrical energy
Waves forever will make energy

About what did a child write in the above poem?

Options:

- Renewable energy resources
- Non renewable energy resources
- Energy resources of all kinds
- Principle of conservation of energy

Question Number: 136 Question Id: 286 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

The colour of an object is the colour it reflects. So a red boot______Identify the wrong statement among the ones written below.

Options:

- looks red in white light as it reflects red and absorbs all other colours
- red in red light as it reflects red light falling on it
- looks black in green light which it absorbs
- red in green light when there is no red light

Question Number: 137 Question Id: 287 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

Which of the following statements regarding international trade is true?

- Higher exchange rate makes country's exports cheaper
- , 🙀 Higher exchange rate makes country's imports cheaper
- Lower exchange rate makes country's imports cheaper in domestic markets
- Lower exchange rate makes country's exports cheaper

Question Number: 138 Question Id: 288 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

The main cause of balance of payments (BoP) deficit in developed free market economies is

Options:

- Less demand for country's exports
- Less demand for country's imports
- Rising demand for country's exports
- Recurring Political instability in the country

Question Number: 139 Question Id: 289 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Which democratic country has an unwritten constitution?

Options:

- United States
- 2 🗸 England
- 🚬 ڀ India
- Canada and America

Question Number: 140 Question Id: 290 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

If the Gross Domestic Product (GDP) of a country is higher than Gross National Product (GNP), then

Options:

The total production by national and foreign individuals within the geographical boundaries of a country is lower than produced by its citizens on its land or foreign soil

Net payment outflow to foreign assets is greater than net income inflow from assets abroad

The strength of the country's basal economy is less than economic strength of the nationals of the country

Net payments outflow is lower than incoming inflow

Question Number: 141 Question Id: 291 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

Sabnam introduced Vipul as the son of the only daughter of the father of her uncle. Vipul is Sabnam's

Options:

, son

2 uncle

nephew

Question Number: 142 Question Id: 292 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.

6:42::9:?

Options:

1. 90

, 🙀 87

_ 👱 73

65

Question Number: 143 Question Id: 293 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

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

Water: Filter:: Movie: ?

Options:

Actor

🚬 Theater

_ _ Director

4 🗸 Censor

Question Number: 144 Question Id: 294 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

Seven cars P, Q, R, S, T, U and V are kept in an exhibition. Q is to the immediate right of U. U is fourth to the right of V. P is between R and S. V which is third to the left of S is at one of the ends.

Which is correct position of the car T?

Options:

- it is in the middle
- 🚬 it is fourth to the left of S
- ₃ it is at one of the ends
- it is next to V

Question Number: 145 Question Id: 295 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. District 2. Nation 3. Married couple 4. State 5. Village 6. Family
- **Options:**
- 6, 3, 5, 1, 4, 2
- ₂ **3**, 6, 5, 1, 4, 2
- 3, 6, 5, 1, 2, 4
- 4 * 6, 3, 5, 4, 1, 2

Question Number: 146 Question Id: 296 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

The numbers in each group are related in a certain way. Choose the correct number from among the alternatives that will replace the question mark.

(13 [22] 31) (15 [33] 51) (17 [?] 69)

Options:

- 1 * 55
- 2 38
- _ 44
- 43

Question Number: 147 Question Id: 297 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

In a certain language, '273' means 'leaves are green'; '5426' means 'green is a color'; and '9524' means 'color is bright green'. Which digit means 'bright' in that language?

Options:

1. * 4

o **x** 2

₂ 9

, 💂 5

Question Number: 148 Question Id: 298 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

If 'BACKWARD' is coded as 'DBARACKW', then 'HANDLING' would be coded as:

Options:

👡 🙀 GHANNILD

💂 💂 GHANINLD

▲ ■ GHNANILD

Question Number: 149 Question Id: 299 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Starting from his house, Mohan walks 10 km to the South; turns left and walks 12 km. He turns right and walks 5 km. Finally he turns right and walks 20 km. How far is he from the starting point?

Options:

15 km

_{2.} 17 km

💂 👱 23 km

4 × 27 km

Question Number: 150 Question Id: 300 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

The numbers in the matrix given below follow a certain trend row-wise and and/or column wise. Study the trend and choose the number which will replace the question mark?

5	4	7
14	25	9
12	?	5

Options:

1. 49

2. 🗱 35

3. * 22

_{4.} ***** 16

