# Railway Recruitment Board



#### **Notations:**

1. Options shown in green color and with  $\checkmark$  icon are correct.

2.Options shown in red color and with \* icon are incorrect.

Question Paper Name: Junior Engineer 26th Aug Shift 3 Actual

Subject Name: Junior Engineer

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

# Junior Engineer

Group Number:	1
Group Id:	3
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: 3
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: 3
Question Shuffling Allowed: Yes

Question Number: 1 Question Id: 301 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

Zeroth law of thermodynamics forms the basis of measurement of

#### **Options:**

1. Pressure

2. V Temperature

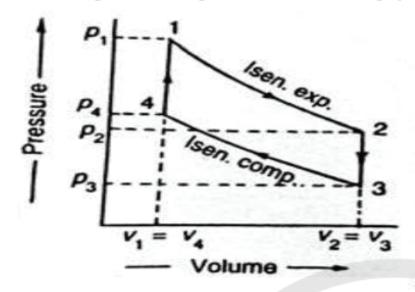
3. ¥ Heat exchange 4. Work Question Number: 2 Question Id: 302 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 Internal energy is defined by **Options:** Zeroth law of thermodynamics 2. First law of thermodynamics Second law of thermodynamics Law of entropy Question Number: 3 Question Id: 303 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** The concept of overall heat transfer is used in the heat transfer in the case of **Options:** 1 Conduction 2 × Convection 3. 🗶 Radiation Combined mode of heat transfer of conduction and convection Question Number: 4 Question Id: 304 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** The unit of thermal conductivity in S.I. unit is **Options:** > ₩ W²/mK 3 **₩** W/m²K 4. \* W/m Question Number: 5 Question Id: 305 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** All radiations in a black body are **Options:** 1. \* Reflected 2 \* Refracted 3 \* Transmitted

4. Absorbed

Question Number: 6 Question Id: 306 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

The given P-V diagram indicates following cycle



#### **Options:**

Carnot cycle

2. 🗸 Otto cycle

3 🗶 Diesel cycle

Dual cycle

Question Number: 7 Question Id: 307 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

If the cut-off ratio is decreased, the efficiency of diesel cycle

# **Options:**

1 Increases

Decreases

3. Remains constant

4. \* May increase or decrease

Question Number: 8 Question Id: 308 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Size of shaper is specified by

#### **Options:**

Size of table

2. 

Length of stroke

Power of motor

Ratio of forward to return stroke

Question Number: 9 Question Id: 309 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33 Which of the following is an example of orthogonal cutting? **Options:** 1 × Shaping Turning 3. \* Drilling 4. Milling Question Number: 10 Question Id: 310 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Grey cast iron is usually welded by **Options:** Gas welding Resistance welding Arc welding Thermit welding Question Number: 11 Question Id: 311 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** A grinding wheel of 150 mm diameter is rotating at 3000 rpm. The grinding speed is **Options:** 1 **v** 7.5 π m/sec 2 × 15 π m/sec 💥 45 π m/sec 4 × 450 π m/sec Question Number: 12 Question Id: 312 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 In Die casting, machining allowance is **Options:** Small 2. \* Large 3. ¥ Very large

Question Number: 13 Question Id: 313 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

4. ✔ Not provided

The grinding operation is a **Options:** Shaping operation Forming operation Surface finishing operation Dressing operation Question Number: 14 Question Id: 314 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 The process in which leaving a tab without removing any material is **Options:** Notching Lancing Parting 4 × Sliting Question Number: 15 Question Id: 315 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 Steel rails are welded by **Options:** Gas welding Thermit welding Resistance welding Argon are welding Question Number: 16 Question Id: 316 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** D.C. generator works on the principle of **Options:** Electromagnetic Induction Ohm's Law Lenz's Law Kirchoff's Law

Question Number: 17 Question Id: 317 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33

Thermal relays are used in **Options:** 1. motor starters switchgear protection transformer protection generators Question Number: 18 Question Id: 318 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 The most commonly used moderator in a Nuclear reactor is **Options:** graphite oil oxygen heavy water Question Number: 19 Question Id: 319 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Over speed protection of a generator is done by **Options:** 1. 

✓ Governor Differential protection Over current relay Alarm Question Number: 20 Question Id: 320 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** The motor which does not have winding on it, is **Options:** 1. \* Repulsion 2. \* Reluctance 3. ✔ Hysterisis 4. W Universal

Question Number: 21 Question Id: 321 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33

# Which of the following is not fitted on transformer?

#### **Options:**

- 1. Commutator
- 2. \* Breather

Conservator

3 💥

🔒 🙀 Buchholz Relay

Question Number: 22 Question Id: 322 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Open circuit test in transformers is conducted to determine

**Options:** 

hysteresis losses

opper losses

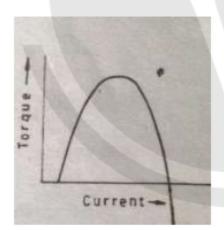
3. ✓ core losses

4. \* eddy current losses

Question Number: 23 Question Id: 323 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

The given figure is the Torque-Current characteristics of



#### **Options:**

- Cumulative Compound motor
- Shunt motor
- Series motor
- 4. Differential Compound motor

Question Number: 24 Question Id: 324 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Which of the following is not a non-linear element?

1. \* Gas diode 2. W Heater coil 3. ¥ Tunnel diode 4 \* Electric arc Question Number: 25 Question Id: 325 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Which of the following is known as metal rectifier? **Options:** Selenium disc rectifier Copper oxide rectifier Gas tube diode Varactor diode Question Number: 26 Question Id: 326 Question Type: MCQ Option Shuffling: No **Correct: 1.0 Wrong: 0.33** For full-wave rectified sine wave, form factor is **Options:** 1.41 2. 1.11 3 ₩ 1.5 4. \* 1.28 Question Number: 27 Question Id: 327 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 Electron pair bonding occurs when atoms **Options:** lack electrons lack holes 3. 

✓ share electrons 4. \* share holes Question Number: 28 Question Id: 328 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** 

**Options:** 

In a p type semiconductor, minority carriers are

1. \* holes 🧹 electrons dopants atoms Question Number: 29 Question Id: 329 Question Type: MCQ Option Shuffling: No **Correct: 1.0 Wrong: 0.33** Which of the following is a pentavalent material? **Options:** 1. \* carbon boron 3. **✓** phosphorus 4 × silicon Question Number: 30 Question Id: 330 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Another name for a unity gain amplifier is **Options:** adifference amplifier comparator 🗝 single ended 4. 🗸 voltage follower Question Number: 31 Question Id: 331 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** At room temperature, the current in intrinsic semiconductor is due to **Options:** holes electrons 3. × ions holes and electrons both Question Number: 32 Question Id: 332 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 AB + AB' =**Options:** 

```
1. × B
4. * 0
Question Number: 33 Question Id: 333 Question Type: MCQ Option Shuffling: No
Correct: 1.0 Wrong: 0.33
Which of the following devices has one input and many outputs?
Options:
1 * Multiplexer
2. 🗸 Demultiplexer
     flip-flop
4. * Counter
Question Number: 34 Question Id: 334 Question Type: MCQ Option Shuffling: No
Correct: 1.0 Wrong: 0.33
 The number of bits in ASCII is
Options:
4. * 10
Question Number: 35 Question Id: 335 Question Type: MCQ Option Shuffling: No
Correct : 1.0 Wrong : 0.33
Poise can also be expressed as
Options:
     Dyne-cm/s2
  Dyne-cm/s
3. Dyne-s/cm
     Dyne-s/cm<sup>2</sup>
Question Number: 36 Question Id: 336 Question Type: MCQ Option Shuffling: No
Correct : 1.0 Wrong : 0.33
 Number of phases in soil mass is
Options:
```

```
3 * 1
Question Number: 37 Question Id: 337 Question Type: MCQ Option Shuffling: No
Correct: 1.0 Wrong: 0.33
 Bolts are most suitable to carry
      Shear
     Bending
3. 🕢 Axial tension
     Shear and bending
Question Number: 38 Question Id: 338 Question Type: MCQ Option Shuffling: No
Correct : 1.0 Wrong : 0.33
 Spherical shape of droplets of mercury is due to
Options:
1 * High density
2. High surface tension
3. # High adhesion
4. Water
Question Number: 39 Question Id: 339 Question Type: MCQ Option Shuffling: No
Correct: 1.0 Wrong: 0.33
The method of orienting a plane table with two inaccessible points is known as
Options:
     Intersection
  * Resection
     Back sighting
4. 	✓ Two-point problem
Question Number: 40 Question Id: 340 Question Type: MCQ Option Shuffling: No
Correct : 1.0 Wrong : 0.33
The most likely time (m) is 'mode' of the
Options:
1. * Normal distribution
```

2 🥓 Beta distribution 3. \* Binomial distribution 4. \* Poisson distribution Question Number: 41 Question Id: 341 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 Which of the following timbers is suitable for making sports goods? **Options:** 1. Mulberry Mahogany 3. ¥ Sal 4. \* Deodar Question Number: 42 Question Id: 342 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 Cement concrete is a **Options:** Elastic material 2. Visco-elastic material 3 \* Non elastic material Rlastic material Question Number: 43 Question Id: 343 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Which of the following is used to measure the discharge? **Options:** 1. Current meter 2. Venturimeter 3. \* Pitot tube Hotwire anemometer Question Number: 44 Question Id: 344 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33 Direct method of contouring is **Options:** 1 \* A quick method Adopted for large surveys only

- 3. ✔ Most accurate method 4 × Suitable for hilly terrains **Correct : 1.0 Wrong : 0.33 Options:** 1. Sand 2 🗱 Silt
- Question Number: 45 Question Id: 345 Question Type: MCQ Option Shuffling: No

Which of the following soils has more plasticity index?

- 3. 🗸 Clay
- Gravel

Question Number: 46 Question Id: 346 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Seasoning of timber is required to

#### **Options:**

- Soften the timber
- Harden the timber
- Straighten the timber
- 4. Remove sap from the timber

Question Number: 47 Question Id: 347 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

An instrument transformer is used to extend the range of

#### **Options:**

- 1 / induction instrument
- electrostatic instrument
- 3. \* moving coil instrument
- 4 × PMMC instrument

Question Number: 48 Question Id: 348 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

Wattmeter cannot be designed on the principle of

- 1 \* electrostatic instrument
- 2 \* thermocouple instrument
- 3. w moving iron instrument
- 4 \* electrodynamic instrument

Question Number: 49 Question Id: 349 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

In an energy meter, braking torque is produced to

#### **Options:**

1 × safe guard it against creep

😞 👱 brake the instrument

3 \* bring energy meter to stand still

 $Question\ Number: 50\ Question\ Id: 350\ Question\ Type: MCQ\ Option\ Shuffling: No$ 

**Correct : 1.0 Wrong : 0.33** 

Resistances can be measured with the help of

#### **Options:**

wattmeters

o voltmeters

3 \* ammeters

4 ohmmeters and resistance bridges

Question Number: 51 Question Id: 351 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Which of the following essential features is possessed by an indicating instrument?

#### **Options:**

1 \* Deflecting device

Controlling device

3 🗶 Damping device

Deflecting, controlling and damping device

Question Number: 52 Question Id: 352 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Per capita water demand is

#### **Options:**

average amount of daily water required by one person

monthly average amount of daily water required by one person

annual average amount of daily water required by one person

weekly average amount of daily water required by one person

Question Number: 53 Question Id: 353 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

The permissible/desirable drinking water standard for total hardness is 200 mg/l 2. 🖋 300 mg/l 3. **×** 250 mg/l 500 mg/lQuestion Number: 54 Question Id: 354 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** In BOD<sub>5</sub> determination of sewage, the initial dissolved oxygen is measured to be 8.3 mg/l. However, after 5 day incubation at 20 °C temperature, the dissolved oxygen is found to be 2.3 mg/l. If the dilution factor is 1:60, the BOD5 of the sewage would be **Options:** 1. × 360 mg/l 260 mg/l 3. v cannot be determined 4. **8** 6.0 mg/l Question Number: 55 Question Id: 355 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** The continuous exposure of high concentration of carbon monoxide may cause **Options:** damage of alveoli 2. 💥 kidney damage failure of respiratory system 4. v coma followed by death Question Number: 56 Question Id: 356 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** The frequency range of audibility of a healthy person with perfect hearing is **Options:** 1. \* 200 to 10000 Hz 2. **2** 2000 to 5000 Hz <sub>3.</sub> ✓ 20 to 20,000 Hz

4 × 20 to 2000 Hz Question Number: 57 Question Id: 357 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** The green house gases as per their increasing order of effectiveness are **Options:** 1 ✓ CO2, CH4, N2O and CFC CH4, CO2, N2O and CFC N<sub>2</sub>O, CH<sub>4</sub>, CO<sub>2</sub> and CFC CFC, CH<sub>4</sub>, CO<sub>2</sub> and N<sub>2</sub>O Question Number: 58 Question Id: 358 Question Type: MCQ Option Shuffling: No **Correct: 1.0 Wrong: 0.33** Printer is a(an) **Options:** 1 × Input device 2 V Output device 3. ¥ Storage device Both input and output device Question Number: 59 Question Id: 359 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Which of the following is not true about EPROM? **Options:** Random access memory Erasable programmable read only memory Non-volatile memory Sequential access memory Question Number: 60 Question Id: 360 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Which of the following components of CPU temporarily stores data for ALU operations? **Options:** 1. \* Arithmetic and Logic Unit (ALU) 2. Control Unit (CU) 3. Registers

```
Random Access Memory (RAM)
Question Number: 61 Question Id: 361 Question Type: MCQ Option Shuffling: No
Correct : 1.0 Wrong : 0.33
BCD coding scheme uses bits to code decimal digits.
Options:
1 🗸 4
3 * 16
4. * 32
Question Number: 62 Question Id: 362 Question Type: MCQ Option Shuffling: No
Correct: 1.0 Wrong: 0.33
The binary representation of 195.5 is
Options:
1. * (11000001.01)2
  × (11000001.11)<sub>2</sub>
3. × (11000011.01)<sub>2</sub>
4 V (11000011.10)2
Question Number: 63 Question Id: 363 Question Type: MCQ Option Shuffling: No
Correct : 1.0 Wrong : 0.33
Considering X as a binary variable, the Boolean expression X.1 is equivalent to
Options:
1. 🗸 X
2. * 1
3. * 0
4. * X'
Question Number: 64 Question Id: 364 Question Type: MCQ Option Shuffling: No
Correct : 1.0 Wrong : 0.33
 The 2's compliment of the binary number (00000000)<sub>2</sub> is
Options:
1. * (11111111)2
2. 🗸 (00000000)2
3. × (10101010)<sub>2</sub>
4 × (01010101)<sub>2</sub>
```

Question Number: 65 Question Id: 365 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33
A proprietary technology developed by Microsoft that allows embedding and linking to
documents and other objects is
Options:
1. * DOM
2. * MODEM
3. ✔ OLE
4. * OpenDoc
Question Number: 66 Question Id: 366 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33
Class 'B' IP addresses use bits for Network ID.
Options:
1. * 8
2. <b>✓</b> 16
3. <b>×</b> 24
4. * 32
Question Number: 67 Question Id: 367 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33
Which of the following is not a Web browser?
Options:
1. * Netscape Navigator
2. * NetSurf
3. ✓ XML
4. * Opera
Question Number: 68 Question Id: 368 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33
The diagonal scale is used to represent
Options:
1.   three consecutive units
2. * two consecutive units
3. * diagonal of square
4. * diagonal of rectangle

Question Number: 69 Question Id: 369 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

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

### **Options:**

Front view

Top view

3. Side view

Both front and top views

Question Number: 70 Question Id: 370 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

If both the front and top views of a plane are straight lines, it may be

### Options:

perpendicular to both horizontal and vertical planes

parallel to horizontal plane and perpendicular to vertical plane

Berpendicular to horizontal plane and parallel to vertical plane

parallel to both horizontal and vertical planes

 $Question\ Number: 71\ \ Question\ Id: 371\ \ Question\ Type: MCQ\ \ Option\ Shuffling: No$ 

Correct: 1.0 Wrong: 0.33

For orthographic projections, BIS recommends the following projections.

#### **Options:**

1 \* Fourth-angle projection

🤈 🗶 Third-angle projection

3 V First- angle projection

Second-angle projection

 $Question\ Number: 72\ \ Question\ Id: 372\ \ Question\ Type: MCQ\ \ Option\ Shuffling: No$ 

Correct: 1.0 Wrong: 0.33

A square lamina is perpendicular to the H.P. and inclined to V.P. Its

#### **Options:**

V.T. will be perpendicular to the reference line

H.T. will be parallel to the reference line

V.T. will be parallel to the reference line

4. \* V.T. will be inclined to the reference line

Question Number: 73 Question Id: 373 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

A truck of mass 1000 kg moving at a speed of 20 m/s is braked suddenly with a braking force of 5000 N. The distance travelled by the truck before stopping is

# **Options:**

```
1 × 20 m
```

2. × 30 m

3. 🗸 40 m

4. **×** 80 m

Question Number: 74 Question Id: 374 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

A cubical box (each side 10 cm) of weight 19.6 N is placed on a table. The pressure exerted by the box on the table is

#### **Options:**

1 × 19.6 N/m<sup>2</sup>

2 1.96 x 10<sup>3</sup> N/m<sup>2</sup>

3. \* 1.96 N/m<sup>2</sup>

4 **≈** 0.98 x 10<sup>3</sup> N/m<sup>2</sup>

Question Number: 75 Question Id: 375 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Rohan does 150 J of work in 5 s. The power delivered by him is

# **Options:**

1. **4** 30 W

2 × 15 W

3 × 150 W

4 × 750 W

Question Number: 76 Question Id: 376 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

For a sound wave, the amplitude is

#### **Options:**

the distance between two consecutive crests

the distance between two consecutive troughs

the height difference between a crest and a trough

one-half the height difference between a crest and a trough.

Question Number: 77 Question Id: 377 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

An object and a screen are separated by 25 cm. When a convex lens is placed between them at a distance of 5 cm from the object, a sharp image is formed on the screen. The focal length of the lens is

### **Options:**

```
20 cm
```

<sub>2.</sub> **\*** 6.67 cm

<sub>3. ✓</sub> 4.0 cm

2.0 cm.

Question Number: 78 Question Id: 378 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Two conducting wires A (resistance  $R_A$ ) and B (resistance  $R_B$ ) are made of same material and have the same length. If the diameter of wire B is twice that of wire A, the ratio  $R_A/R_B$  is

# **Options:**

1. 🗸 4

2 × 1/4

₃ № 1/2

<sub>4</sub> **\*** 1.

Question Number: 79 Question Id: 379 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

For its complete combustion, one mole of an alkane required 3.5 mole of oxygen gas at the same temperature and pressure. What is the name of alkane?

#### **Options:**

, Methane

\_ \_ Ethane

💂 🔭 Propane

Butane

 $Question\ Number: 80\ Question\ Id: 380\ Question\ Type: MCQ\ Option\ Shuffling: No$ 

Correct: 1.0 Wrong: 0.33

Which one of the following is a molecule of an element?



 $_{2}$  H<sub>2</sub>S

3. NaCl

CO<sub>2</sub>

Question Number: 81 Question Id: 381 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

Rancidity of oils and fats can be controlled by controlling the process of Options:

Decomposition

Neutralization

Reduction

₄ 

✓ Oxidation

Question Number: 82 Question Id: 382 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

An element  $\underline{\mathbf{X}}$  contains only one electron in its outermost shell. Which of the following statements are correct about  $\underline{\mathbf{X}}$ ?

i) It forms an acidic oxide.

- ii) It forms a basic oxide.
- iii) It is a good conductor of electricity.
- iv) It has a dull and non lustrous surface

**Options:** 

Question Number: 83 Question Id: 383 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Which one of the following can act as an olfactory indicator?

**Options:** 

Phenolphthalein

1 %

```
Methyl orange
  Vanilla essence
    Litmus solution
Question Number: 84 Question Id: 384 Question Type: MCQ Option Shuffling: No
Correct: 1.0 Wrong: 0.33
Which one of the following elements is the most metallic in nature?
Options:
 ... Na
     Al
     Li
     В
Question Number: 85 Question Id: 385 Question Type: MCQ Option Shuffling: No
Correct : 1.0 Wrong : 0.33
Scientific names of living beings consist of
Options:
    one word
 🌙 two words
    four words
    more than four words
Question Number: 86 Question Id: 386 Question Type: MCQ Option Shuffling: No
Correct: 1.0 Wrong: 0.33
Human heart is made of cardiac muscle fibres because these are
Options:
     striated and involuntary
    involuntary and without fatigue
    voluntary and do not stop contracting
```

# voluntary and fibres are connected

Question Number: 87 Question Id: 387 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

Leaves of cacti are modified into spines to reduce transpiration. This is an adaptation to which feature of their habitat?

### **Options:**

- Scarcity of water
- Lack of rainfall
- Hot daytime
- Cool nights

Question Number: 88 Question Id: 388 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

Which organ of the digestive system gets affected by the disease Jaundice/Hepatitis?

# **Options:**

- Liver
- Pancreas
- stomach
- Kidney

Question Number: 89 Question Id: 389 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Which out of the following is **not** a Green House Gas?

#### **Options:**

- Carbon Dioxide
- 🍃 🥒 Nitrogen
- Sulphur Dioxide
- Nitrous Oxide

Question Number: 90 Question Id: 390 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

In which one of the following is DNA present? **Options:** 1. Genes Ribosomes ₃ • Vacuoles Golgi Question Number: 91 Question Id: 391 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** The HCF of two numbers is 15 and their LCM is 270. If one number is 45, the other number is **Options:** 18 <sub>3</sub> **×** 81 <sub>4</sub> **\*** 675 Question Number: 92 Question Id: 392 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** The largest number which divides 247 and 319, leaving remainders 7 and 4 respectively is **Options:** <sub>1.</sub> ✓ 15 30 <sub>3. \*</sub> 45

Question Number: 93 Question Id: 393 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33

If a : b = 5 : 6 and b : c = 3 : 4, then c : a is

**Options:** 

<sub>4.</sub> **\*** 56

```
1. * 4:5
2. * 5:4
8:5
```

Question Number: 94 Question Id: 394 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

# If 8, 12, 14, x are in proportion, then x is equal to

# **Options:**

Question Number: 95 Question Id: 395 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Successive discounts of 40% and 20% are equivalent to a single discount of Options:

Question Number: 96 Question Id: 396 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

The simple interest on rupees 800 for  $\frac{5}{2}$  years at 5% per annum is Options:

 $Question\ Number: 97\ \ Question\ Id: 397\ \ Question\ Type: MCQ\ \ Option\ Shuffling: No$ 

Correct: 1.0 Wrong: 0.33

The compound interest on rupees 12000 for 1 year at 10% per annum compounded half yearly is

# **Options:**

2. 🗸

3. 🎇

Question Number: 98 Question Id: 398 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

If CP of 25 articles is equal to SP of 20 articles, then in the whole transaction there is a profit of

# **Options:**

 $Question\ Number: 99\ \ Question\ Id: 399\ \ Question\ Type: MCQ\ \ Option\ Shuffling: No$ 

Correct: 1.0 Wrong: 0.33

To gain 25% after allowing a discount of 10%, the shopkeeper should mark the price of the article which cost him ₹ 720 as

4. ❤

Question Number: 100 Question Id: 400 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

A shopkeeper mixes 26 kg of rice which costs him ₹ 100 per kg with 30 kg of rice which costs him ₹ 180 per kg. He sells the mixed rice at ₹ 150 per kg.. The percentage gain is

# **Options:**

2 %

3 %

Question Number: 101 Question Id: 401 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

In two vessels A and B, the spirit and water are in the ratio of 5:2 and 7:6 respectively. The ratio in which these are mixed to obtain new mixture which contains spirit and water in the ratio 3:2 is

#### **Options:**

35:12

Question Number: 102 Question Id: 402 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

The speed of a boat in still water is 15 km/hr. The speed of the stream is 3 km/hr. The time taken to go 12 km downstream in minutes is

45 2. **\*** 50 3. **\*** 

Question Number: 103 Question Id: 403 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

A train 200 m long is moving at 40 km/hr. The time in seconds, it will take to pass another train 150 long which is moving at 50 km/h in the opposite direction from the moment they meet is

**Options:** 

**Question Number: 104 Question Id: 404 Question Type: MCQ Option Shuffling: No** 

Correct: 1.0 Wrong: 0.33

A can do a piece of work in 15 days and B can do the same work in 10 days. If they work together, number of days required to complete the same work is

**Options:** 

 $Question\ Number: 105\ \ Question\ Id: 405\ \ Question\ Type: MCQ\ \ Option\ Shuffling: No$ 

Correct: 1.0 Wrong: 0.33

P and Q can do a piece of work in 10 days, Q and R in 12 days and R and P in 15 days. In how many days P alone can do the same work?

**Options:** 

1. ✓ 24

 $Question\ Number: 106\ \ Question\ Id: 406\ \ Question\ Type: MCQ\ \ Option\ Shuffling: No$ 

Correct: 1.0 Wrong: 0.33

# The average of first six even whole numbers is

# **Options**:

Question Number: 107 Question Id: 407 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

The average marks of students of section A and B are respectively 60 and 70. The number of students in section A is 47 and in section B is 53. The average marks of both sections taken together are

# **Options:**

Question Number: 108 Question Id: 408 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

The first term of an AP is -5 and third term is 17. Its seventh term is Options:

o 24

Question Number: 109 Question Id: 409 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

# The $12^{th}$ term of the G.P 1, -3, 9, -27, ..., is

**Options:** 

Question Number: 110 Question Id: 410 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

A ladder just reaches the top of a wall. The foot of the ladder is 8m away from the foot of the wall. The ladder makes an angle of 60° with the ground. The length of the ladder is

Options :

1. \*

16 m

$$\frac{16\sqrt{3}}{3}$$
 m

4. 🗱

Question Number: 111 Question Id: 411 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

From a point on the bridge across a river the angle of depressions of the bank on the opposite side of the river are 60° and 45° respectively. If the bridge is at a height of 3m from the bank, the width of the river is

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

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

$$3 - \sqrt{3} \text{ m}$$

$$_{4} \checkmark 3 + \sqrt{3} \text{ m}$$

Question Number: 112 Question Id: 412 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

If (x-1) is a factor of  $3x^3 - 2ax^2 - 3x + 6$ , then a is equal to

**Options:** 

Question Number: 113 Question Id: 413 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

One of the factors of  $(81x^2 - 1) + (1 + 9x)^2$  is

**Options:** 

$$9+x$$

$$_{3}$$
 ×  $9-x$ 

$$9x - 1$$

 $Question\ Number: 114\ \ Question\ Id: 414\ \ Question\ Type: MCQ\ \ Option\ Shuffling: No$ 

**Correct : 1.0 Wrong : 0.33** 

All values of k for which  $x^2 - kx + 9 = 0$  has real roots is

$$-6 \le k \le 6$$

$$_{2.}$$
  $6 \le k \le -6$ 

$$k \ge 6$$

$$k \ge 6$$
 $k \ge 6$ 
 $k \le -6$ 

Question Number: 115 Question Id: 415 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

The sum and product of the roots of the equation  $x^2 - 8x + 4 = 0$  are respectively

# **Options:**

$$-8, 4$$

Question Number: 116 Question Id: 416 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

The football player has to leave the field if the referee shows him **Options:** 

- Green card once
- Yellow card once
- Green card twice
- Yellow card twice or Red card once

Question Number: 117 Question Id: 417 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

The first Indian to win an Olympic gold medal in an individual capacity was **Options:** 

- 1 / Abhinav Bindra
- 2. 🗶 Milkha Singh
- 3. 🗱 PT Usha
- 4 × Vijender Kumar

Question Number: 118 Question Id: 418 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

When you touch a hot plate and immediately withdraw your hand, the action in triggered by your

**Options:** 

, 💂 Brain

Spinal Cord

Upper arm muscles

bones of the hand

Question Number: 119 Question Id: 419 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

In a green house, paraffin is ignited to enhance photosynthesis in the plants as it provides

**Options:** 

Water

Carbon-di-oxide

Oxygen

More light

O / N 1 100 O

Question Number: 120 Question Id: 420 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

Which of the following is not an insect?

**Options:** 

<sub>1.</sub>

✓ Spider

Butterfly

Beetle

**Termite** 

л **Ж** 

 $Question\ Number: 121\ \ Question\ Id: 421\ \ Question\ Type: MCQ\ \ Option\ Shuffling: No$ 

**Correct : 1.0 Wrong : 0.33** 

# You can make soap at home from vegetable oil and

**Options**:

Caustic Potash

Ammonium Hydroxide

🖫 🥒 Caustic Soda

Sodium Chloride

Question Number: 122 Question Id: 422 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Students were asked to present a "balanced equation" regarding Photosynthesis. Which is the correct equation?

**Options**:

$$_{1} * 6CO_{2} + H_{2}O \rightarrow C_{6}H_{12}O_{6} + O_{2}$$

$$6CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + 6O_2$$

$$CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + O_2$$

$$CO_2 + H_2O \rightarrow C_6H_{12}O_6 + O_2$$

Question Number: 123 Question Id: 423 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Which out of the F, Br, Ca and Mg which are important elements because their salts are useful to humans may be grouped as halogens?

**Options:** 

F and Br

1. 🗸

F and Ca

2 %

💂 Br and Mg

... Ca and Br

Question Number: 124 Question Id: 424 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

A maximum of how many partners can a trading business firm have according to Indian Partnership Act?

```
<sub>1</sub> 🗸 20
<sub>2</sub> × 15
₃ 🛚 10
Question Number: 125 Question Id: 425 Question Type: MCQ Option Shuffling: No
Correct : 1.0 Wrong : 0.33
 We are able to walk on the ground because of
Options:
Friction
     Gravitation
    Rotation
     Combination of gravity and Rotation
Question Number: 126 Question Id: 426 Question Type: MCQ Option Shuffling: No
Correct : 1.0 Wrong : 0.33
 Scissors belong to the category of simple machines called levers. It is a first
 class lever because
Options:
     Fulcrum (fixed point) is between load and effort
     Load is between Fulcrum and effort
     Effort is between fulcrum and load
     It does not have a fulcrum
Question Number: 127 Question Id: 427 Question Type: MCQ Option Shuffling: No
Correct: 1.0 Wrong: 0.33
As I was folding my blanket of synthetic fibers, there were sparks due to
generation of
Options:
     Frictional electricity
     Current electricity
```

Flow of electric field

# Flow of potential

Question Number: 128 Question Id: 428 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

The latest country to give up its national currency and adopt "euro" as its currency is

### **Options:**

- 1. Latvia
- Lebanon
- 3 🗶 Brazil
- Italy

Question Number: 129 Question Id: 429 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Who presides over the present Lok Sabha when parliament session is on?

# **Options:**

- 🙀 President, Pranab Mukherji
- Vice President, Hamid Ansari
- 💂 🙀 Prime Minister, Narendra Modi
- Speaker, Sumitra Mahajan

Question Number: 130 Question Id: 430 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

BCMI project connects Bangladesh, China and India with

#### **Options:**

- . . Manila
- Myanmar 🔪
- 🔒 🙀 Malaysia
- Morocco

Question Number: 131 Question Id: 431 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

One long river of our country which flows through the North-East is Options:

Ganges Brahmaputra 🙎 🙀 Narmada Kaveri Question Number: 132 Question Id: 432 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** The making of 'maps' is called **Options:** Calligraphy Numismatics ₃ ✓ Cartography Philately Question Number: 133 Question Id: 433 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** What is global warming and climate change due to? **Options:** Accumulation of Carbon dioxide in the atmosphere Ozone hole Photo chemical smog UV rays of sunlight falling on earth Question Number: 134 Question Id: 434 Question Type: MCQ Option Shuffling: No **Correct: 1.0 Wrong: 0.33** The Indian constitution was written on 26/11/1949 and came into force on **Options:** Same day 26.01.1950 15.08.1950 26.01.1952

Question Number: 135 Question Id: 435 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

A few children between ages 8 and 14 were rescued from a factory where they worked under inhuman conditions. Which fundamental right of the constitution made this possible?

# **Options:**

- Right to Education
- Right to Freedom of Speech
- Right against exploitation
- Right to Freedom of Religion

Question Number: 136 Question Id: 436 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

The relationship between quantity, revenue and price is

### **Options:**

- Quantity times Price = Revenue
- Revenue times Price = Quantity
- Quantity times Revenue = Price
- Price times Quantity = Current price

Question Number: 137 Question Id: 437 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

Pablo Picasso's creation 'Guernica' was based on consequences of

# **Options:**

Spanish civil war

- Sudanese civil war
- 🚬 Second world war
- American war of independence

Question Number: 138 Question Id: 438 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

Three national leaders were together called Lal Bal Pal. Which name in the options is wrong?

**Options:** Bal Gangadhar Tilak Bipin Chandra Pal Lala Lajpat Rai Lal Bahadur Shastri Question Number: 139 Question Id: 439 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Who was the last Governor General in the two century rule of the British in India? **Options:** Lord Clive Sir Warren Hastings Lord Mountbatten Lord Cornwallis Question Number: 140 Question Id: 440 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Which of the following statements is not true? **Options:** Amartya Sen is the only economist from India/of Indian origin to have won the 1 \* Nobel Prize for Economics Amartya Sen is also credited with developing the input output method with C.V. 🤈 🥒 Raman Amartya Sen received the Nobel Prize in 1998 for his contribution to welfare 3 cconomics Amartya Sen is also known as a champion of nationalism, secularism Question Number: 141 Question Id: 441 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Pointing to a photograph Rohit said, "His father's brother is my brother's father." How is Rohit related to the man in the photograph?

**Options:** 

cousin

```
uncle
      brother-in-law
      brother
Question Number: 142 Question Id: 442 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.
 16:27::36:?
Options:
<sub>1</sub> × 140
2. 125
₃ * 112
<sub>4</sub> * 84
Question Number: 143 Question Id: 443 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.
 Microphone : Loud :: Microscope : ?
Options:
      Bacteria
     Reflect
     Examine
     Magnify
Question Number: 144 Question Id: 444 Question Type: MCQ Option Shuffling: No
Correct : 1.0 Wrong : 0.33
 Six friends A, B, C, D, E and F are sitting in a row. A is not sitting next to C or D.
There are two persons between D and F. D is next to B, who is in one of the extremes.
Who is sitting in the other extreme?
Options:
```

1. \* A

		_
_		
ο.	-	•

Question Number: 145 Question Id: 445 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.

Medicine

2. Injury

3. Doctor

4. Accident

5. Cure

6. Hospital

**Options**:

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

Question Number: 146 Question Id: 446 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.

**Options:** 

Question Number: 147 Question Id: 447 Question Type: MCQ Option Shuffling: No

Correct : 1.0 Wrong : 0.33

In a certain language, '296' means 'adults are educated'; '7825' means 'rich persons are nice'; and '9257' means 'educated persons are rich'. Which digit means 'educated' in that language?

4. \* 7

Question Number: 148 Question Id: 448 Question Type: MCQ Option Shuffling: No

Correct: 1.0 Wrong: 0.33

If 'METHOD' is coded as 'LFRJLG', then 'GROUND' will be coded as:

# **Options:**

FSMWLG

FSMWKG

ESMWKG

FSNWKG

Question Number: 149 Question Id: 449 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

Harsh's school bus picks him up from his home. Then it takes one left turn and two right turns to reach his school. If the bus is facing North-West when it reaches the school, which direction was the bus facing at Harsh's home?

# **Options:**

South-West

2. South-East

North-East

South

 $Question\ Number: 150\ Question\ Id: 450\ Question\ Type: MCQ\ Option\ Shuffling: No$ 

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?

9	11	21
24	29	?
6	7	14

#### **Options:**

1. \* 43

2. \* 53

₃ 🗸 56

