# **Railway Recruitment Board**

#### **Notations:**

- 1. Options shown in green color and with  $\checkmark$  icon are correct.
- 2.Options shown in red color and with  $\,^{\mbox{\tiny $\Omega$}}\,$  icon are incorrect.

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

Subject Name:Junior EngineerCreation Date:2015-08-18 12:48:18.0

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

# Junior Engineer

Group Number:

Group Id:

Group Maximum Duration:

Group Minimum Duration:

Revisit allowed for view?:

No
Revisit allowed for edit?:

No
Break time:

Group Marks:

Junior Engineer

Section Id:
Section Number:
1
Section type:
Online
Mandatory or Optional:
Number of Questions:
150
Number of Questions to be attempted:
150
Section Marks:
150.0

Sub-Section Number:1Sub-Section Id:3Question 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

🛴 🥒 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 V First law of thermodynamics
- 💂 🧝 Second law of thermodynamics
- 4. \* 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:**

- 1 ✓ W/mK
- > ₩ W²/mK
- → w W/m²K
- √ × W/m

Question Number: 5 Question Id: 305 Question Type: MCQ Option Shuffling: No

**Correct : 1.0 Wrong : 0.33** 

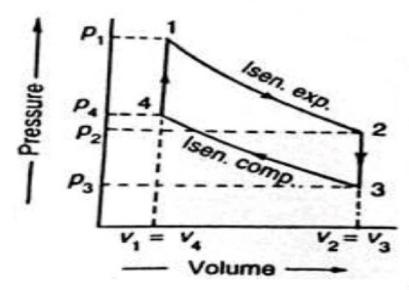
All radiations in a black body are

- 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
- o JOtto 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
- Remains constant
- 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

- 1. Size of table
- 2. 🗸 Length of stroke
- Power of motor
- Ratio of forward to return stroke

Correct: 1.0 Wrong: 0.33

Which of the following is an example of orthogonal cutting?

#### **Options:**

- 1. Shaping
- Turning
- 💂 🧝 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:**

- 1. ✓ Gas welding
- 2. \* 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. **√** 7.5 π m/sec
- 2 × 15 π m/sec
- 5 🙀 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

- 1. Small
- 2. 💥 Large
- 3. 💥 Very large
- 4. ✔ Not provided

The grinding operation is a **Options:** Shaping operation Forming operation Surface finishing operation 4. \* 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 2. Lancing 3. \* 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 4. \* 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

Question Number: 17 Question 11, 217 Question Torse MCQ Ording Shaffling No.

Ohm's Law

Lenz's Law

Kirchoff's Law

# 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:** 1. 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

B. ✓ Hysterisis

4. Wuiversal

Which of the following is not fitted on transformer?

#### **Options:**

- 1. Commutator
- 2. 🗱 Breather

Conservator

3 %

4 🚜 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

2. \* copper losses

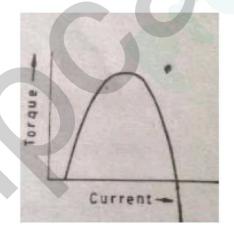
3. ✓ core losses

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:** 1. 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

 $\label{eq:Question Number: 28 Question Id: 328 Question Type: MCQ Option Shuffling: No Correct: 1.0 Wrong: 0.33$ 

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. acarbon
- boron 2.
- B → 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:**

- difference 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' =

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 2. W Dyne-cm/s yne-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

Question Number: 37 Question Id: 337 Question Type: MCQ Option Shuffling: No **Correct : 1.0 Wrong : 0.33** Bolts are most suitable to carry **Options:** 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. W High density 2. High surface tension High adhesion 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 2. Resection Back sighting 4 V 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:**

Normal distribution

- 2. W Beta distribution Binomial distribution 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:**

- 1 \* Elastic material
- 2. Visco-elastic material
- 3. \* Non elastic material
- 4. Plastic 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:**

- 👱 Current meter
- Venturimeter
- 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

- 1. \* A quick method
- Adopted for large surveys only

- 3. Most accurate method
- 4 × Suitable for hilly terrains

 $Question\ Number: 45\ \ Question\ Id: 345\ \ Question\ Type: MCQ\ \ Option\ Shuffling: No$ 

Correct: 1.0 Wrong: 0.33

Which of the following soils has more plasticity index?

#### **Options:**

- 1. Sand
- 2. 💥 Silt
- 3. 🗸 Clay
- 4. Sravel

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
- 🛊 😹 moving coil instrument
- 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
- 💍 🧝 thermocouple instrument
- 3. moving iron instrument
- a electrodynamic ins

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

2 \* brake the instrument

3 \* bring energy meter to stand still

4 w maintain steady speed and equal to driving torque

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:**

1. \* wattmeters

😞 🙀 voltmeters

3. ammeters

🎍 🥒 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

3. 🖋 annual average amount of daily water required by one person

weekly average amount of daily water required by one person

Question Number: 53 Question Live 252 Question Type MCQ Ontion Shuffling

The permissible/desirable drinking water standard for total hardness is

#### **Options:**

- 200 mg/l
- 2. 🖋 300 mg/l
- 3. × 250 mg/l
- 4. × 500 mg/l

 $Question\ Number: 54\ \ Question\ Id: 354\ \ Question\ Type: MCQ\ \ Option\ Shuffling: No$ 

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 BOD<sub>5</sub> of the sewage would be

#### **Options:**

- 1. × 360 mg/l
- 2. × 260 mg/l
- 3. 🗸 cannot be determined
- 4. × 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
- 🍃 🙀 kidney damage
- a 🙀 failure of respiratory system
- 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

- 200 to 10000 Hz
- 2 × 2000 to 5000 Hz
- 3. **✓** 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 ✓ CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O and CFC CH4, CO2, N2O and CFC N2O, CH4, CO2 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? 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:** Arithmetic and Logic Unit (ALU) 2 Control Unit (CU) 3. V Registers

4. \* 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)<sub>2</sub>  $(11000001.11)_2$ 3 × (11000011.01)<sub>2</sub> 4. (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 Χ, 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  |  |  |
| 16<br>2. <b>*</b>   |  |  |
| 3. * 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:  Netscape Navigator  |  |  |
| 2. * NetSurf  |  |  |
| 3. × XML  |  |  |
| 4. S 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   |  |  |
| diagonal of rectangle   |  |  |

#### **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
- 2. ✔ 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:**

- Fourth-angle projection
- Third-angle projection
- 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

- 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

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
- 🤈 💥 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. 🗸 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

- 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.

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>o 🙀</sub> 6.67 cm

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:**

, 🎤 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?

**Options:** 

 $C1_2$ 

H<sub>2</sub>S

🙎 🙀 NaCl

 $CO_2$ 

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

🗸 🥒 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:** 

1. 3

2.

2 3

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

```
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:
<sub>1.</sub> ✓ Na
     Αl
     L_1
     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
- 3. ☀ 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
- ₃ ≰ 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?

- Carbon Dioxide
- 2. Nitrogen
- Sulphur Dioxide
- Nitrous Oxide

# In which one of the following is DNA present?

# **Options**:

```
₁ 

✓ Genes
```

Ribosomes

🚬 Vacuoles

Golgi

4. 💸

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:**

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:**

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

```
1. ₩ 4:5
```

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

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:

# 60%

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:

```
4 * ₹ 200
```

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 %

ર ‰

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. 38

50

З. 🌂

55

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:**

, 🙀 8

12

14

<sub>\*</sub> 117

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:**

1 \* 5

6

- × /

, 🚆 8

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

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?

```
40
```

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

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:

2 %

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:** 

2. 💙

$$\frac{16\sqrt{3}}{2}$$
 m

 $16\sqrt{3}n$ 

16√3m

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

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

2. 🤐

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

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

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:** 

$$9+x$$

$$=$$
 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

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

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

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:** 

$$-8, 4$$

$$-8, -4$$

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
- <sub>2.</sub> 🚜 Milkha Singh
- 💂 🙀 PT Usha
- 🔒 🗶 Vijender Kumar

**Ouestion Number: 118 Ouestio** 

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

л **Ж** 

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

Correct: 1.0 Wrong: 0.33

Which of the following is not an insect?

#### **Options:**

Spider

Butterfly

Beetle

Т-----:4

Termite

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

**Correct : 1.0 Wrong : 0.33** 

# You can make soap at home from vegetable oil and

**Options:** 

Caustic Potash

- Ammonium Hydroxide
- 2 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:**

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

$$_{\bullet}$$
 6CO<sub>2</sub> + 6H<sub>2</sub>O  $\rightarrow$  C<sub>6</sub>H<sub>12</sub>O<sub>6</sub> + 6O<sub>2</sub>

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

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

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

F and Ca

💂 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?

- **2** 20 2 \* 15 в \star 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

- Frictional electricity
- Current electricity

# 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

4. •

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

Ganges Brahmaputra 🔒 🙀 Narmada 4. ¥ 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 \_, 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:**

- 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

2. 💥

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 Nobel Prize for Economics

Amartya Sen is also credited with developing the input output method with C.V.

2 / Raman

Amartya Sen received the Nobel Prize in 1998 for his contribution to welfare economics

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: 140** <sub>2.</sub> 🗸 125 з \* 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

2 🗸 C

з **ж** Е

4. \* F

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.

1. Medicine 2. Injury

3. Doctor

4. Accident

5. Cure

Hospital

**Options:** 

4, 2, 3, 6, 1, 5

5, 6, 3, 1, 2, 4

4, 2, 6, 1, 3, 5

4, 2, 6, 3, 1, 5

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.

(3[34]5)

(4[65]7) (6[?]9)

**Options:** 

<sub>1</sub> **\*** 85

107

117

128

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?

**Options:** 

<sub>2 \* 6</sub>

<sub>> ×</sub> 8

<sub>4</sub> 💥 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

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:**

<sub>1.</sub> **\*** 43

2 \* 53

- ... 56

