# PHYSICS

**1. Which instrument aids in the detection of the heartbeat?**

**(a) Stethoscope**

**(b) Thermometer**

**(c) Spirometer**

**(d) Sphygmomanometer**

**Answer - (a)**

**RRB Group-D– 09/09/2022 (Shift-III)**

**Stethoscope is used to detect heartbeat**

**2. Name the instrument used by the physicians to measure blood pressure.**

**(a) Echocardiogram**

**(b) Sphygmomanometer**

**(c) Stethoscope**

**(d) Spirometer**

**Answer - (b)**

**RRB Group-D– 09/09/2022 (Shift-III)**

**Sphygmomanometer is used to measure blood pressure**

**3. Which of the following does NOT match?**

**(a) Compass – used for navigation and indicates north-south directions**

**(b) Cyclotron – measures small magnitude Cyclones**

**(c) Actinometer – measures the intensity of radiation**

**(d) Electroscope – detects the presence of electric charge**

**Answer - (b)**

**RRB NTPC 23.02.2021 (Shift-I) Stage Ist**

**Cyclotron is used to produce isotopes not measure cyclones**

**4. Which instrument is used to detect the presence of electric charge on an object?**

**(a) Multimeter**

**(b) Electroscope**

**(c) Amperemeter**

**(d) Ohmmeter**

**Answer - (b)**

**RRB NTPC 19.03.2021 (Shift-I) Stage Ist**

**Electroscope detects electric charge**

**5. What does a hygrometer measure?**

**(a) Heat**

**(b) Humidity**

**(c) Force**

**(d) Radiation**

**Answer - (b)**

**RRB NTPC 27.01.2021 (Shift-II) Stage Ist**

**Hygrometer measures humidity**

**6. A lie detector apparatus is also known as a :**

**(a) Seismograph**

**(b) Barograph**

**(c) Polarimeter**

**(d) Polygraph**

**Answer - (d)**

**RRB NTPC 01.02.2021 (Shift-II) Stage Ist**

**Lie detector is also known as Polygraph**

**7. Which device is used to see the Sun?**

**(a) Stroboscope**

**(b) Telescope**

**(c) Helioscope**

**(d) Sun meter**

**Answer - (c)**

**RRB NTPC 10.04.2016 (SHIFT-I) Stage-I**

**Helioscope is used to see the Sun**

**8. Potentiometer basically –**

**(a) Is a measuring instrument**

**(b) Is a connective device**

**(c) Is a calibration equipment**

**(d) Is a notation tool**

**Answer - (a)**

**RRB J.E. (14.12.2014), Green paper**

**Potentiometer is a measuring instrument**

**9. From which device is the electric current measured?**

**(a) Voltmeter**

**(b) Ammeter**

**(c) Ohmmeter**

**(d) Wavemeter**

**Answer - (b)**

**(d) Barometer**

**Answer - (d)**

**RRB NTPC 10.01.2021 (Shift-I) Stage Ist**

**Barometer measures atmospheric pressure**

**97. Which device is used to see the Sun?**

**(a) Stroboscope**

**(b) Telescope**

**(c) Helioscope**

**(d) Sun meter**

**Answer - (c)**

**RRB NTPC 10.04.2016 (SHIFT-I) Stage-I**

**Helioscope is used to see the Sun**

**98. Potentiometer basically –**

**(a) Is a measuring instrument**

**(b) Is a connective device**

**(c) Is a calibration equipment**

**(d) Is a notation tool**

**Answer - (a)**

**RRB J.E. (14.12.2014), Green paper**

**Potentiometer is a measuring instrument**

**99. From which device is the electric current measured?**

**(a) Voltmeter**

**(b) Ammeter**

**(c) Ohmmeter**

**(d) Wavemeter**

**Answer - (b)**

**RRB J.E. (14.12.2014), Red paper**

**Current is measured using Ammeter**

**100. Ammeter is –**

**(a) Is connected in a series to the circuit**

**(b) Must have the following legitimate resistance**

**(c) Draws less power**

**(d) All of the above**

**Answer - (d)**

**RRB J.E. (14.12.2014, Set-2), Red paper**

**Ammeter is connected in series, has resistance and draws less power**

**101. What does stalagmometer used to measure?**

**(a) Dynamic viscosity**

**(b) Surface tension**

**(c) Refractive index**

**(d) Lighted activity**

**Answer - (b)**

**RRB SSE 21.12.2014**

**Stalagmometer measures surface tension**

**102. Which among the following devices is used to measure atmospheric pressure?**

**(a) Tetrameter**

**(b) Odometer**

**(c) Thermometer**

**(d) Barometer**

**Answer - (d)**

**RRB NTPC 10.01.2021 (Shift-I) Stage Ist**

**Barometer measures atmospheric pressure**

**103. Which device is used to see the Sun?**

**(a) Stroboscope**

**(b) Telescope**

**(c) Helioscope**

**(d) Sun meter**

**Answer - (c)**

**RRB NTPC 10.04.2016 (SHIFT-I) Stage-I**

**Helioscope is used to see the Sun**

**104. Potentiometer basically –**

**(a) Is a measuring instrument**

**(b) Is a connective device**

**(c) Is a calibration equipment**

**(d) Is a notation tool**

**Answer - (a)**

**RRB J.E. (14.12.2014), Green paper**

**Potentiometer is a measuring instrument**

**RRB ALP & Tec.(09-08-2018)Shift-I**

**Displacement is 8m.**

**185. **10 N force is working on an object. Object displaced 5m in the direction of applied force, then work done is -****

**(a) 50N**

**(b) -50N**

**(c) 50J**

**(d) -50J**

**Answer - (c)**

**RRB Group –D, 04-10-2018 (Shift-I)**

**Work done is 50J.**

**186. **If force F=0, then work done W = ?****

**(a) 20**

**(b) 0**

**(c) 1**

**(d) 100**

**Answer - (b)**

**RRB Group –D, 31-10-2018 (Shift-III)**

**If force is zero, work done is also zero.**

**187. **A porter picks up 12 kg of goods from the ground and places it on his head 1.5 meters above the ground then work on the goods to be done by him is:****

**(a) 140J**

**(b) 150J**

**(c) 180J**

**(d) 155J**

**Answer - (c)**

**RRB Group –D, 04-10-2018 (Shift-II)**

**Work done is 180J.**

**188. **The force of 25 N is working on an object, that object is moved in the direction of force by 5 m, the work done by the force is:****

**(a) 125W**

**(b) 125N**

**(c) 125J**

**(d) 125Pa**

**Answer - (c)**

**RRB Group –D, 26-10-2018 (Shift-II)**

**Work done is 125J.**

**189. **When a man pushes a wall but fails to displace it, it does ?****

**(a) Positive work**

**(b) Negative work**

**(c) Most positive work**

**(d) No any work**

**Answer - (d)**

**RRB Group –D, 12-12-2018 (Shift-II)**

**No work is done if displacement is zero.**

**190. **When a person walks 4 meters with a constant force of 12N, the work done by him is –****

**(a) 6J**

**(b) 2J**

**(c) 8J**

**(d) 48J**

**Answer - (c)**

**RRB Group –D, 12-12-2018 (Shift-I)**

**Work done is 48J.**

**191. **To say that the work has been done, two conditions must be completed, one of them is-****

**(a) Force is not required**

**(b) Object must be displaced**

**(c) There should be no absorption and emission of energy**

**(d) There should be no change in the condition of the object**

**Answer - (b)**

**RRB Group –D, 24-10-2018 (Shift-III)**

**Displacement of object is necessary for work.**

**192. **The product of force and displacement is called-****

**(a) Momentum**

**(b) Acceleration**

**(c) Work**

**(d) Burden**

**Answer - (c)**

**RRB Group –D, 19-09-2018 (Shift-I)**

**Product of force and displacement is called work.**

**193. **The work is product of –****

**(a) Energy and volume**

**(b) Power and displacement**

**(c) Force and Displacement of object towards the direction of force**

**(d) Displacement of the object in the direction of the force**

**RRB Group D 26-10-2018(Shift-III)**

**Force and distance**

**238. **Which physical quantity has the same dimension as that of work?****

**(a) Energy**

**(b) Power**

**(c) Force**

**(d) Torque**

**Answer - (a)**

**RRB Group D 01-10-2018(Shift-I)**

**Energy**

**239. **Work is a_____quantity.****

**(a) Scalar**

**(b) Vector**

**(c) Either scalar or vector**

**(d) Dimensionless**

**Answer - (a)**

**RRB Group D 12-11-2018(Shift-II)**

**Scalar**

**240. **The work done by a force is always equal to the change in-****

**(a) Kinetic energy**

**(b) Potential energy**

**(c) Momentum**

**(d) None of the above**

**Answer - (a)**

**RRB Group D 27-09-2018(Shift-III)**

**Kinetic energy**

**241. **Work is said to be done when-****

**(a) Force causes any change**

**(b) Force causes change in velocity only**

**(c) Force causes change in momentum**

**(d) Force causes change in displacement**

**Answer - (d)**

**RRB Group D 04-10-2018(Shift-I)**

**Force causes change in displacement**

**242. **One newton is the S.I. unit of-****

**(a) Force**

**(b) Pressure**

**(c) Energy**

**(d) Power**

**Answer - (a)**

**RRB Group D 22-09-2018(Shift-I)**

**Force**

**243. **Which physical quantity has the same dimensions as work?****

**(a) Energy**

**(b) Power**

**(c) Force**

**(d) Torque**

**Answer - (a)**

**RRB Group D 01-10-2018(Shift-I)**

**RRB Group-D 20-09-2018(Shift-I)**

**Potential energy is equal to mgh**

**357. **If an object of 10kg mass is moving at a speed of 2m/s, then kinetic energy of the object is-****

**(a) 5J**
**(b) 40J**
**(c) 10J**
**(d) 20J**

**RRB Group-D 27-09-2018(Shift-I)**

**Kinetic energy is 20J**

**358. **What is the formula for finding the kinetic energy of an object ?****

**(a) ma**
**(b) 1/2mv2**
**(c) mgh**
**(d) 1/2mv2**

**RRB Group-D 10-10-2018(Shift-II)**

**Formula is 1/2mv2**

**359. **What does the kinetic energy equal ?****

**(a) 1/2mv2**
**(b) mgh**
**(c) mv**
**(d) Ma**

**RRB ALP. & Tec. 17-08-2018(Shift-II)**

**Kinetic energy equals 1/2mv2**

**360. **An object of mass 11kg is moving at a velocity of 5m/s. How much the energy is contained in that object ?****

**(a) 137.5 ms**
**(b) 137.5J**
**(c) 180.5J**
**(d) 17.5J**

**RRB Group-D 10-10-2018(Shift-II)**

**Energy contained is 137.5J**

**361. **An object of mass 15kg is moving at the uniform velocity as 5m/s. Find the kinetic energy contained in an object ?****

**(a) 187.5J**
**(b) 17.5J**
**(c) 180.5J**
**(d) 187.5ms**

**RRB Group-D 08-10-2018(Shift-II)**

**Kinetic energy contained is 187.5J**

**362. **An object of mass 12kg is placed at a certain height from the ground. If the potential energy of the object is 480J, find the height from the ground of an object ?****

**(a) 6m**
**(b) 5m**
**(c) 4m**
**(d) 8m**

**RRB Group-D 03-10-2018(Shift-II)**

**Height of the object is 4m**

**363. **Which of the following is an example of potential energy?****

**(a) Bricks placed on the roof of the house**
**(b) Spring of a clock when it rotates**
**(c) Compressed spring**
**(d) Stored water in an elevated reservoir under the water supply system**

**(a) A, D**
**(b) C, D**
**(c) A, B and C**
**(d) A, B, C, D**

**RRB Group-D 05-11-2018(Shift-I)**

**Examples are A, B, C, D**

**364. **An object capable of performing a work has.....****

**(a) Force**
**(b) Energy**
**(c) Momentum**
**(d) Power**

**RRB Group-D 15-11-2018(Shift-III)**

**An object capable of performing work has energy**

**365. **The water flowing in a hydroelectric power station can run the turbine because it containes.****

**(a) Electric energy**
**(b) Chemical energy**
**(c) Kinetic energy**
**(d) Potential energy**

**RRB Group-D 02-11-2018(Shift-II)**

**Water contains kinetic energy**

**366. **Which of the following statements is false?****

**(a) Compressed spring has potential energy**
**(b) The raising hammer has potential energy**
**(c) Dam water has kinetic energy**
**(d) A moving car has kinetic energy**

**RRB Group-D 01-12-2018(Shift-II)**

**Dam water has potential energy**

**367. **An object of mass 20kg is moving at a velocity of 6m/s. What is the kinetic energy of the object?****

**(a) 3600J**
**(b) 360J**
**(c) 36J**
**(d) 3.6J**

**RRB Group-D 05-12-2018(Shift-III)**

**Kinetic energy is 360J**

**368. **What can be predicted with respect to the energy in the given figure?****

**A B**

**(a) Both vehicles have gravitational potential energy**
**(b) Both vehicles are moving in forward direction using maximum energy.**
**(c) Both vehicles are converting mechanical energy into musculer energy**
**(d) Both vehicles have kinetic energy**

**RRB Group-D 31-10-2018(Shift-II)**

(a) centrifugal force

(b) inertia

(c) centripetal force

(d) gravitational force

Answer - (b)

RRB Group-D 16-11-2018 (Shift-I)

Inertia

465. **In the force equation F is equal to-**

(a) ma

(b) mgh

(c) mv

(d) u + at

Answer - (a)

RRB Group-D 15-10-2018 (Shift-III)

ma

466. **Which of the following is the effect of balanced force applied on an object?**

(a) Change in shape of an object

(b) Change in steady state of an object

(c) Change in the direction of speed of an object

(d) Change in the speed of an object

Answer - (a)

RRB Group-D 04-12-2018 (Shift-III)

Change in shape of an object

467. **Calculate the acceleration produced when a force of 100 N is applied to an object of mass 50 kg.**

**Answer - (d)**

**551. Rate of change of displacement is?**

**(a) speed**

**(b) momentum**

**(c) displacement**

**(d) velocity**

**Answer - (d)**

**552. Uneven distance in same time interval?**

**(a) uneven speed**

**(b) transformed speed**

**(c) equal speed**

**(d) rotational speed**

**Answer - (a)**

**553. Motion in specified direction is?**

**(a) velocity**

**(b) speed**

**(c) acceleration**

**(d) force**

**Answer - (a)**

**554. Specifies motion with direction?**

**(a) momentum**

**(b) displacement**

**(c) velocity**

**(d) force**

**Answer - (c)**

**555. Scientific term for speed moving in direction?**

**(a) velocity**

**(b) speed**

**(c) acceleration**

**(d) time**

**Answer - (a)**

**556. Rate of change of displacement over time?**

**(a) acceleration**

**(b) force**

**(c) velocity**

**(d) speed**

**Answer - (c)**

**557. Maximum range angle of projection?**

**(a) 60°**

**(b) 75°**

**(c) 30°**

**(d) 45°**

**Answer - (d)**

**558. Projectile path?**

**(a) straight line**

**(b) parabola**

**(c) circle**

**(d) hyperbola**

**Answer - (b)**

**638. **The speed of the boy sitting on the swing is...****

**(a) uniform**
**(b) circular**
**(c) uneven**
**(d) periodic**

**Answer - (d)**

**RRB Group-D 31-10-2018 (Shift-II)**

**Speed of boy on swing is periodic.**

**639. **The Law of Gravitation was given by_____ .****

**(a) Galileo Galilei**
**(b) Isaac Newton**
**(c) Albert Einstein**
**(d) Charles Darwin**

**Answer - (b)**

**RRB NTPC 27.02.2021 (Shift-I) Stage Ist**

**Law of gravitation was given by Isaac Newton.**

**640. **Gravitational force is defined by the force of attraction between -****

**(a) two charges**
**(b) two masses**
**(c) two magnets**
**(d) multiple masses**

**Answer - (b)**

**RRB Group-D 08-10-2018 (Shift-I)**

**Gravitational force is attraction between two masses.**

**641. **Which of the two statements given by A and B is / are true? What is the force of gravitational:****

**A. Is directly proportional to the multiplication of the mass of two objects.**
**B. Is directly proportional to the square of the distance between to objects.**

**(a) Only B is true while A is false.**
**(b) Both A and B are untrue**
**(c) Only A is true while B is false.**

(d) Both A and B are true.

Answer - (c)

RRB Group-D 05-11-2018 (Shift-I)

Statement A regarding gravitational force is true.

642. **F = GMm/d what is G called in the formula?**

(a) Universal gravitational constant
(b) Acceleration due to gravity
(c) Gravitational force
(d) High altitude

Answer - (a)

RRB Group-D 05-11-2018 (Shift-III)

In gravitational force formula, G is universal gravitational constant.

643. **Each object of the universe attracts another object by a force is proportional to.** . . . . . .

(a) product of their heights
(b) product of their volumes
(c) product of their masses
(d) product of their energies

Answer - (c)

RRB Group-D 15-11-2018 (Shift-I)

Gravitational force is proportional to product of masses.

644. **The force of gravity between any two bodies in the universe does not depend on. . . . . .**

(a) Distance between them
(b) Product of their masses
(c) Gravitational constant
(d) Sum of their masses

Answer - (d)

RRB Group-D 11-10-2018 (Shift-I)

Gravitational force does not depend on sum of masses.

645. **S.I. unit of universal gravitational constant G is -**

(a) N kg/m^2
(b) N m/kg^2
(c) N/m
(d) N kg/m

Answer - (b)

RRB JE 24.05.2019 (Shift-III)

S.I. unit of G is newton meter square per kilogram square (N m^2/kg^2).

646. **Which one of the following is not true about Kepler's rules for planetary bodies?**

(a) The orbit of a planet is an elliptical with the Sun at one of the two foci.
(b) A line segment connecting a planet and the sun makes an equal area outside during equal intervals of time.
(c) The square of its orbital period is proportional to the cube of the semi-principal axis of its orbit.
(d) The orbital period depends on the mass of the planet.

Answer - (d)

RRB NTPC 07.04.2016 (Shift-III) Stage Ist

Orbital period in Kepler's law doesn't depend on mass of planet.

647. **Which of the following among is a weak force?**

(a) momentum force
(b) gravitational force
(c) mass
(d) short range force

Answer - (b)

RRB Group-D 26-10-2018 (Shift-II)

Among given options, gravitational force is weak force.

648. **What is the value of gravitational constant (G)?**

(a) 6.6734×10^-11 m^3/Kg/s^2
(b) 6.67408×10^-11 m^3/kg/s
(c) 6.6734×10^-11 Nm^2/kg^2
(d) 6.6734×10^-11 N-m^2/kg^2

Answer - (d)

**(c) capillarity**

**(d) surface tension**

**Answer - (a)**

**Force between similar molecules is called cohesive force.**

**762. The friction in liquids is called :**

**(a) Rigidity**

**(b) Viscosity**

**(c) Morbidity**

**(d) Rancidity**

**Answer - (b)**

**Friction in liquid is called viscosity.**

**763. A drop of a fluid is combined because the attraction of its particles minimizes its possible area. This phenomenon is called-**

**(a) Surface tension**

**(b) Excess**

**(c) Capillary action**

**(d) Viscosity**

**Answer - (a)**

**Surface tension causes liquid drop to acquire spherical shape.**

**764. Due to which property the falling drop of water is spherical-**

**(a) Surface tension**

**(b) Water solubility**

**(c) Water capillary**

**(d) Viscosity of water**

**Answer - (a)**

**Spherical shape is due to minimizing surface area tendency via surface tension.**

**765. How does a blotting paper absorbing ink?**

**(a) Viscosity of ink**

**(b) Capillarity**

**(c) Solidification action**

**(d) Evaporation**

**Answer - (b)**

**Blotting paper absorbs ink via capillary action phenomenon.**

**766. Kerosene oil rises up in wick of a lantern because of**

**(a) Gravitation**

**(b) Capillarity**

**(c) Diffusion**

**(d) Osmosis**

**Answer - (b)**

**Oil rises in wick due to capillary action phenomenon.**

**767. A tank, filled partially with a liquid, is subjected to a uniform horizontal acceleration. Which of the following is true for the surface of liquid in the tank?**

**(a) The surface of the fluid falls in the direction of motion and rises towards the back of the tank**

**(b) The surface of the fluid falls only at the center of the tank**

**(c) The surface of the fluid is fixed horizontally**

**(d) The surface of the fluid rises in the direction of motion and falls towards the back of the tank**

**Answer - (a)**

**Surface lags in direction of motion and leads at back due pseudo force.**

**(a) On the ground**

**(b) Just below the point of hanging**

**(c) At the center of the object**

**(d) Just below the center of the object**

**Answer - (b)**

**Centre of gravity is at point below source of hanging.**

**745. If a person stands on the weight scale inside the lift and the lift starts moving upwards then -**

**(a) The scale will show more weight**

**(b) The scale will show weight loss**

**(c) The scale will show zero weight**

**(d) The scale will not show any deflection but it will show the actual weight.**

**Answer - (a)**

**Weight appears more in upward moving lift due to pseudo force.**

**746. What is the force of gravitational exerted on an object?**

**(a) stress**

**(b) inertia**

**(c) weight**

**(d) work**

**Answer - (c)**

**Force of gravity is called weight.**

**747. Why does a stone thrown towards the sky return to the earth?**

**(a) The downward pressure pulls it towards the earth.**

**(b) The centripetal force, which pulls it towards the earth.**

**(c) The work done by the object pulls it towards the earth.**

**(d) There is a gravitational force which pulls it towards the ground.**

**Answer - (d)**

**Gravitational force pulls object towards earth.**

**748. How is gravitational acceleration represented?**

**(a) From the Greek letter epsilon ε**

**(b) English small letter g**

**(c) English capital letter G**

**(d) By X**

**Answer - (b)**

**Gravitational acceleration is represented by 'g'.**

**749. Who proposed the laws of planetary motion?**

**(a) Isaac Newton**

**(b) Johannes Kepler**

**(c) Galileo**

**(d) Roger Bacon**

**Answer - (b)**

**Kepler proposed three laws of planetary motion.**

**750. Who discovered the law of planetary motion?**

**(a) Galileo**

**(b) Einstein**

**(c) Newton**

**(d) Kepler**

**Answer - (d)**

**Kepler discovered three laws of planetary motion.**

**909. **Which of the following is NOT an electromagnetic wave?****

**(a) Radio**

**(b) Infra-red**

**(c) Microwave**

**(d) Ultrasound**

**Answer - (d)**

**RRB NTPC 08.03.2021 (Shift-I) Stage Ist**

**Ultrasound is a mechanical wave, not electromagnetic.**

**910. **What are transverse waves?****

**(a) In these waves, the particles of the medium vibrate perpendicular to the direction of propagation of the waves**

**(b) In these waves, the particles of the medium vibrate in the parallel direction of propagation**

**(c) These are the waves which do not require medium for their propagation**

**(d) These are longitudinal mechanical waves**

**Answer - (a)**

**RRB NTPC 11.02.2021 (Shift-I) Stage Ist**

**Transverse waves have vibrations perpendicular to the direction of propagation.**

**911. **In longitudinal waves, particles vibrate in the.....direction of transmission the propagation of the wave.****

**(a) Vertical**

**(b) Planner**

**(c) Semicircular**

**(d) Parallel**

**Answer - (d)**

**RRB Group-D 05-11-2018 (Shift-III)**

**Particles in longitudinal waves vibrate parallel to the direction of propagation.**

**912. **In which type of waves do vibrations move parallel to the direction of the wave's movement?****

**(a) Transverse**

**(b) Longitudinal**

**(c) Original**

**(d) Superficial**

**Answer - (b)**

**RRB Group-D 20-09-2018 (Shift-III)**

**Longitudinal waves have vibrations parallel to the direction of propagation.**

**913. **Which colour has the shortest wavelength?****

**(a) Red**

**(b) Orange**

**(c) Blue**

**(d) Purple**

**Answer - (c)**

**RRB NTPC 29.04.2016 (Shift-I)**

**Blue has the shortest wavelength among visible colors.**

**914. **An assertion and a reason are given below****

****Assertion : When a velocity is kept constant and wavelength is halved, then the frequency is doubled****

****Reason : Velocity = Frequency × Wavelength****

****Choose the answer****

**(a) Both assertion and reason are true and reason is the correct explanation of assertion.**

(P) Radio waves - (i) Remote switch of household electronic

(Q) Micro waves - (ii) Radar system

(R) Navigation Infrared Rays - (iii) Cellular Phones

(S) Gamma rays in cancer (iv) Medicine to destroy cancer cells

(a) (ii), (iii), (i), (iv) (b) (i), (ii), (iii), (iv)

(c) (iii), (ii), (i), (iv) (d) (iv), (iii), (ii), (i)

Answer - (c)

RRB NTPC Stage I 29.04.2016 (Shift-III)

Matches the use of each electromagnetic wave correctly.

918. **Dilution occurs where there is air pressure-**

(a) Low

(b) High

(c) Endless

(d) Same

Answer - (a)

RRB Group-D 16-10-2018 (Shift-III)

Dilution occurs in areas of low air pressure.

919. **The compression is**

(a) Zero

(b) Less

(c) Endless

(d) High

Answer - (d)

RRB Group-D 24-09-2018 (Shift-I)

**Answer - (a)**

**RRB NTPC 08-03-2021 (Shift-I) Stage Ist**

**Materials that allows to see but not clearly are called translucent.**

**1092. **Objects that produce their own light, are called-****

**(a) transparent objects**

**(b) clear objects**

**(c) non-luminous objects**

**(d) luminous objects**

**Answer - (d)**

**RRB Group-D 26-09-2018 (Shift-I)**

**Objects that produce their own light are called luminous objects.**

**1093. **How is the refractive index of a substance related to the speed of light in air?****

**(a) Refractive index = speed of light in air × speed of light in matter**

**(b) Refractive index = speed of light in air + speed of light in matter**

**(c) Refractive index = speed of light in matter / speed of light in air**

**(d) Refractive index = speed of light in air / speed of light in matter**

**Answer - (d)**

**RRB JE 27-05-2019 (Shift-I)**

**Refractive index is ratio of speed of light in air to that in medium.**

**1094. **We see the color of grass as green because-****

**(a) It reflects green colored light back to our eyes**

**(b) It absorbs green light**

**(c) It reflects all light except green.**

**(d) It reflects white light on our eyes.**

**Answer - (a)**

**RRB NTPC 04-04-2016 (Shift-III) Stage Ist**

**Grass appears green as it reflects green light.**

**1095. **In which year did Ole Roemer measure the speed of light for the first time in history?****

**(a) 1776**

**(b) 1676**

**(c) 1876**

**(d) 1867**

**Answer - (b)**

**RRB NTPC Stage I 27.04.2016 (Shift-I)**

**Ole Roemer measured speed of light for first time in 1676.**

**1096. **The theory belongs behind stars twinkling is that-****

**(a) The refractive index of the different layers of earth's atmosphere changes continuously, consequently the position of the star's image changes with time.**

**(b) The intensity of light emitted by them changes with time**

**(c) The light from the star is scattered by the dust particles and air molecules in the earth's atmosphere**

**(d) The distance of the stars from the earth changes with time**

**Answer - (a)**

**RRB NTPC 11.04.2016 (Shift-I) Stage Ist**

**Twinkling is caused by change in refractive index of atmosphere layers.**

**1097. **Why does a piece of cloth, which appears green in sunlight, appear black when it is viewed under red light?****

**(a) The cloth completely absorbs red colour wavelength**

**(b) It is due to refraction**

**(c) It is the effect of scattering of light**

**Answer - (a)**

**RRB Group-D 30-08-2022 (Shift-II)**

**1218. **The use of a concave mirror is not:****

**(a) in torches**

**(b) as shaving mirror**

**(c) as rear view mirror**

**(d) in headlights**

**Answer - (c)**

**RRB ALP & Tec. (20-08-18 Shift-I)**

**1219. **The radius of curvature of a concave mirror is 12 cm. Following New Cartesian Sign Convention, the principal focus is located at x =****

**(a) 6 cm**

**(b) –12 cm**

**(c) –6 cm**

**(d) 12 cm**

**Answer - (c)**

**RRB Group-D 30-08-2022 (Shift-I)**

**1220. **Which of the following statements is correct with regard to the reflection of light by a spherical mirror?****

**(A) A convex mirror converges the light rays incident parallel to its principal axis.**

**(B) A concave mirror converges the light rays incident parallel to its principal axis.**

**(C) Convex mirror can form both, real and virtual images.**

**(D) Concave mirror can form both, real and virtual images.**

**(a) Only (A) and (D) are correct**

**(b) Only (A) and (C) are correct**

(c) Only (B) and (C) are correct

(d) Only (B) and (D) are correct

Answer - (d)

RRB Group-D 27-09-2022 (Shift-II)

1221. **If an image formed after reflection from a mirror is virtual and highly diminished, then the position of the object and type of mirror is:**

(a) Between C and F and concave mirror

(b) centre of curvature and concave mirror

(c) infinity and concave mirror

(d) Infinity and convex mirror

Answer - (d)

RRB Group-D 27-09-2022 (Shift-I)

1223. A concave mirror is made from a section of the surface of a sphere of radius 18.0 cm. According to New Cartesian Sign Convention, its principal focus is located at x = _____.

(a) 9 cm

(b) – 18 cm

(c) – 9 cm

(d) 18 cm

Answer - (c)
RRB Group-D– 01/09/2022 (Shift-II) The principal focus of a concave mirror is negative of half its radius.

1224. According the mirror formula, the focal length of a spherical mirror is equal to :

(a)

(b)

(c)

(a) 0.05

(b) 0.3

(c) 0.1

(d) 2

**Answer - (b)**

**RRB Group-D 18-09-2018 (Shift-III)**
**Using mirror formula, magnification is 0.3.**

**1336. The ratio of the height of image to the height of the object is called -**

(a) Lateral inersion

(b) Mirror formula

(c) First law of reflection

(d) Linear magnification

**Answer - (d)**

**RRB NTPC 17.01.2017 (Shift-III) Stage Ist**
**Ratio of image height to object height is called magnification.**

**1337. The magnifying glass is**

(a) convex lens

(b) convex mirror

(c) concave lens

(d) concave mirror

**Answer - (a)**

**RRB J.E. (14.12.2014, Green paper)**
**Magnifying glass is a convex lens.**

**1338. An object at 1.2 cm height is placed 30 cm before a concave mirror of focal length of 20 cm to get a real image at a distance of 60 cm from the mirror. What is the height of the image formed?**

(a) -2.4 cm

(b) 1.2 cm

(c) -3.6 cm

(d) 2.4 cm

**Answer - (a)**

**RRB ALP & Tec. (31-10-18 Shift-I)**
**Using mirror formula, image height is -2.4 cm.**

**1339. A simple magnifying Glass includes:**

(a) Convex lens of high focal length

(b) Concave lens of short focal length

(c) Concave lens of high focal length

(d) Convex lens of short focal length

**Answer - (d)**

**RRB JE (14.12.2014, Green paper)**
**Magnifying glass has convex lens of short focal length.**

**1340. The mirror always produces an image of the object that is virtual, large and of equal size.**

(a) concave

(b) trapezoidal

(c) plane

(d) convex

**Answer - (c)**

**RRB Group-D 05-10-2018 (Shift-I)**
**Plane mirror forms virtual, equal size image.**

**1341. A ray of light in glass is incident at an angle of 30o on the surface separating glass from air. The ray is refracted in the air at an angle of _____ and the refracted ray ____ in the plane of the incident ray.**

(a) more than 30o, does not lie

(b) more than 30o, lies

(c) less than 30o, does not lie

(d) less than 30o, lies

Answer - (b)

RRB Group-D– 08/09/2022 (Shift-II)
Angle of refraction is more than 30° and ray lies in the plane of incidence.

1342. The refractive index of a diamond is 2.42. Then the speed of light in the diamond is :

(a) 2.48 × 108 m/s

(b) 1.24 × 108 m/s

(c) 3 × 108 m/s

(d) 1.72 × 108 m/s

Answer - (c)

RRB Group-D– 06/10/2022 (Shift-III)
Using refractive index and speed of light in vacuum, speed in diamond is calculated.

1343. If light enters from air to some median A having a refractive index of 1.33, then what is the speed of light in the medium A?

(a) 2.67 × 108 m/s

(b) 1.67 × 108 m/s

(c) 2.26 × 108 m/s

(d) 1.97 × 108 m/s

Answer - (b)

RRB Group-D– 26/08/2022 (Shift-III)
Using refractive index of medium and speed of light in air, speed in medium is calculated.

1344. **In the figure shown below, the incident ray and the emergent ray in the respective order aregivenby:**

(a) BC and CD

(b) AB and CD

**Answer - (b)**

**RRB Group-D– 26/08/2022 (Shift-III)**

**Using the formula for compound lens, the combination is calculated to act as a convex lens of focal length 25 cm.**

**1484. **Light enters the eye from _____ .****

**(a) Ciliary Muscle**

**(b) Cornea**

**(c) Iris**

**(d) Lens**

**Answer - (b)**

**RRB NTPC 03.04.2021 (Shift-II) Stage Ist**

**Light first enters the eye through the cornea.**

**1485. **Short sightedness is also called as_____.****

**(a) Hypermetropia**

**(b) Myopia**

**(c) Ametropia**

**(d) Presbiopia**

**Answer - (b)**

**RRB NTPC 08.04.2021 (Shift-II) Stage Ist**

**Short sightedness is also known as myopia.**

**1486. **For a person with hypermetropia or far-sightedness, the near point, is ____ farther away from the normal near point.****

**(a) 27 cm**

**(b) 26 cm**

**(c) 25 cm**

**(d) 24 cm**

**Answer - (c)**

**RRB NTPC 07.03.2021 (Shift-I) Stage Ist**

**For a person with hypermetropia, the near point is 25 cm farther from the normal near point.**

**1487. **The ..... oval spot in the human eye is the area of best vision****

**(a) yellow**

**(b) white**

**(c) green**

**(d) blue**

**Answer - (a)**

**RRB NTPC 16.02.2021 (Shift-II) Stage Ist**

**The yellow spot is the area of best vision in the human eye.**

**1488. **The ability of the eye to focus on both, near and distant objects, by adjusting its focal length, is called the ..... of the eye.****

**(a) refractiveness**

**(b) adjustment**

**(c) accommodation**

**(d) suitability**

**Answer - (c)**

**RRB NTPC 11.01.2021 (Shift-I) Stage Ist**

**The ability to focus on both near and distant objects is called accommodation of the eye.**

**1489. **Near-sightedness in humans is called:****

**(a) Myopia**

**(b) Hypermetropia**

**(c) Cataract**

(d) Presbyopia

Answer - (a)

RRB NTPC 18.01.2021 (Shift-I) Stage Ist

Near-sightedness is also known as myopia.

1490. **..... lenses are used by people suffering from myopia -**

(a) cylindrical

(b) convex-concave

(c) concave

(d) convex

Answer - (c)

RRB Group-D 04-10-2018 (Shift-II)

Concave lens is used to correct myopia.

1491. **A disorder in which a person cannot see a distant object clearly is called.**

(a) hypermetropia

(b) night blindness

(c) myopia

(d) strivismus

Answer - (c)

RRB NTPC 11.04.2016 (Shift-III) Stage Ist

Inability to see distant objects clearly is called myopia.

1492. **Where is the image of an object formed in the eye of a person suffering from long-sightedness?**

(a) on the retina

(b) on the cornea

(c) behind the retina

**1777. In an ideal transformer:**

**(a) There is no resistance in the coils**

**(b) There is no loss in the core**

**(c) The core has infinite permeability (magnetism)**

**(d) All of them**

**Answer - (d)**

**RRB J.E. (14.12.2014, Green paper)**

**All the characteristics apply to an ideal transformer.**

**1778. The resistivity of copper is:**

**(a) 1.69 × 10-10 Ωm**

**(b) 1.69 × 10-8 Ωm**

**(c) 1.69 × 108 Ωm**

**(d) 1.69 × 109 Ωm**

**Answer - (b)**

**RRB Group-D 02-11-2018 (Shift-II)**

**Resistivity of copper is 1.69 × 10-8 Ωm.**

**1779. The resistance of a conductor is directly proportional to:**

**(a) Area of cross section**

**(b) Volume**

**(c) Length**

**(d) Temperature**

**Answer - (c)**

**RRB Group-D 28-09-2018 (Shift-I)**

**Resistance is directly proportional to length of conductor.**

**1780. Two resistors of 20 Ω are connected in parallel to each other in a circuit. Then this combination is added with a resistance of 10 Ω in series and a battery of 6 V. What will be their equivalent resistance ?**

**(a) 10 Ω**

**(b) 30 Ω**

**(c) 5 Ω**

**(d) 20 Ω**

**Answer - (c)**

**RRB ALP & Tec. (21-08-18 Shift-II)**

**Using concept of series and parallel combination.**

**1781. The tendency of conductor to oppose the flow of current is :**

**(a) Power**

**(b) electric potential**

**(c) resistance**

**(d) conductance**

**Answer - (c)**

**RRB Group-D– 02/09/2022 (Shift-III)**

**Property of opposing current flow is called resistance.**

**1782. Two identical resistors are connected in parallel to a 6 V battery. The total power dissipated in the circuit is 12 W. The current in each resistor is :**

**(a) 4.0 A**

**(b) 2.0 A**

**(c) 0.5 A**

**(d) 1.0 A**

**Answer - (b)**

**RRB Group-D– 08/09/2022 (Shift-III)**

(a) voltmeter

(b) ammeter

(c) rheostat

(d) battery

Answer - (d)

RRB JE 28.06.2019 (Shift-IV)

Connecting a conductor between battery terminals provides a continuous flow of current to maintain potential difference.

1999. Which of the following substances has very high resistance?

(a) conductor

(b) semi-conductor

(c) insulators

(d) superconductors

Answer - (c)

RRB Group-D 23-08-2022 (Shift-I)

Insulators have very high resistivity and resistance.

2000. Consider the following statements about magnetic field due to a bar magnet :

I. There is no field inside the bar magnet.

II. The field lines inside the bar magnet are directed from its north pole to the south pole.

Which of the above statements is/are correct ?

(a) Neither I nor II

(b) Only II

(c) Only I

(d) Both I and II

Answer - (a)

**RRB Group-D– 08/09/2022 (Shift-II)**

**Both statements about magnetic field inside a bar magnet are incorrect.**

**2001. Consider the following statements about an electric motor :**

**I. It uses a commutator that reverses the direction of the current in the coil after each half rotation.**

**II. The direction of the force on an arm of the coil can be found using Fleming's left hand rule.**

**Which of the above statements is/are correct ?**

**(b) Both I and II**

**RRB Group-D– 08/09/2022 (Shift-III)**

**Both statements about an electric motor are correct.**