**This set of Engineering Physics Multiple Choice Questions & Answers (MCQs) focuses on “Acceleration due to Gravity”.**

1. Can earth be regarded as a point object when describing its yearly journey around the sun?  
a) Yes  
b) No

Answer: a  
Explanation: Earth can be regarded as a point object when describing its yearly journey around the sun because the size of the earth is much smaller than the distance from the sun.

2. Displacement can be greater than the distance travelled by an object.  
a) True  
b) False

Answer: b  
Explanation: The displacement of an object can be either equal to or less than the distance travelled by the object. This is because displacement is the shortest distance between the initial and final positions of the object while distance travelled is the length of the actual path traversed by the object.

3. Under what condition is the average velocity equal to the instantaneous velocity?  
a) Varying velocity  
b) Varying speed  
c) Constant velocity  
d) Constant speed

Answer: c  
Explanation: When a body moves with a constant velocity, its average velocity over any time interval is same as instantaneous velocity.

4. How is the speed related to the magnitude of velocity?  
a) Greater  
b) Lesser  
c) Equal  
d) Doesn’t vary

Answer: a  
Explanation: Due to change in direction of motion, the length of the path traversed by a body is generally greater than the magnitude of its displacement. So the speed is greater than the magnitude of the velocity.

5. Two balls of different masses (one lighter and one heavier) are thrown vertically upward with same initial speed. Which one will rise to a greater height?  
a) The lighter one  
b) The heavier one  
c) Neither  
d) Both the balls

Answer: d  
Explanation: Both the balls will rise to the same height. It is because, for a body moving with given initial velocity and acceleration, the distance covered by the body does not depend on the mass of the body.

6. When rain falls vertically downwards, the front screen of a moving car gets wet while the back screen remains dry.  
a) True  
b) False

Answer: a  
Explanation: When the rain is falling vertically downwards, the front screen of a moving car gets wet while back screen remains dry. This is because the rain strikes the car in the direction of relative velocity of rain with respect to the car.

7. Two trains A and B of length 400m each are moving on two parallel tracks with a uniform speed of 72km/h in the same direction, with A ahead of B. The driver of B decides to overtake A and accelerates by 1m/s. If after 50s, the guard of B just brushes past the driver of A, what is the original distance between them?  
a) 50m  
b) 150m  
c) 125m  
d) 1250m

Answer: d  
Explanation:

Let x be the distance between then driver of train A and the guard of train B.

Initially, both trains are moving in the same direction with the same speed of 72km/h.

So relative velocity of B with respect to A = vB-vA = 0.

Hence the train B needs to cover a distance with a= 1m/s, t = 50 s, u = 0  
s = ut + 1/2at**2** = 1250m.

8. A player throws a ball upwards with an initial speed of 29.4m/s. What is the direction of acceleration during the upwards motion of the ball?  
a) Upwards  
b) Diagonal  
c) Projectile motion  
d) Vertically downwards

Answer: d  
Explanation: The ball moves under the effect of gravity. The direction of acceleration due to gravity is always vertically downwards.

9. A particle in one dimensional motion with zero speed may have non-zero velocity.  
a) True  
b) False

Answer: b  
Explanation: Speed is a magnitude of velocity and the magnitude of non-zero velocity cannot be zero.

10. For a particle in one dimensional motion, which of the following is true?  
a) Zero speed at any instant may have zero acceleration at the instant  
b) Zero speed may have non-zero velocity  
c) Constant speed must have zero acceleration  
d) Positive value of acceleration must be speeding up

Answer: c  
Explanation: When a particle moves with a constant speed in the same direction, neither the magnitude nor the direction of velocity changes and so acceleration is zero. In case a particle rebounds instantly with the same speed, its acceleration will be infinite which is physically not possible.

11. A bullet fired into a fixed target loss half of its velocity after penetrating 3cm. How much further will it penetrate before coming to rest assuming that it faces constant resistance in motion?  
a) 1.5cm  
b) 1cm  
c) 3cm  
d) 2cm

Answer: b  
Explanation: If u is initial velocity then v=u/2 s=3cm  
As v2-u2=2as  
a = -u2/8  
Now v=0  
Initial velocity=u/2  
s=1cm  
Thus the bullet will penetrate a further distance of 1cm before coming to rest.

12. From a building 2 balls A and B are thrown such that A is thrown upward and B is thrown downward. If vA and vB are their respective velocities on reaching the ground, then \_\_\_\_\_\_\_\_\_\_\_\_\_  
a) vB is greater than vA  
b) vB = vA  
c) vB is lesser than vA  
d) Their velocities depend on their masses.

Answer: b  
Explanation: Suppose the ball A is thrown upward with velocity u and ball B is thrown downward with same velocity u. After reaching the highest point the ball A comes back to its position with the same velocity in downward direction. As the 2 balls fall from the same position with the same velocity, both attain the same velocity on reaching the ground.

13. The displacement of the body is given to be proportional to the cube of time elapsed. The magnitude of acceleration of body is \_\_\_\_\_\_\_\_\_\_\_\_  
a) Increasing with time  
b) Decreasing with time  
c) Constant but not zero  
d) Zero

Answer: a  
Explanation: s=kt3  
Velocity=ds/dt=3kt2  
Acceleration=dv/dt=6kt  
Clearly acceleration increases uniformly with time.

14. When a ball is thrown vertically upwards, at the maximum height \_\_\_\_\_\_\_\_\_\_\_\_  
a) The velocity is zero and therefore there is no acceleration acting in the particle  
b) The acceleration is present and therefore the velocity is not zero  
c) Acceleration depends on the velocity  
d) Acceleration is independent of the velocity

Answer: d  
Explanation: When a ball is thrown vertically upward, at the maximum height the acceleration becomes independent of the velocity.

15. Tom and Jerry are running forward at the same speed. They are following a rubber ball at a constant speed v as seen by the thrower. According to Sam, who’s standing on the ground, the speed of the ball is \_\_\_\_\_\_\_\_\_\_\_\_  
a) Same as v  
b) Greater than v  
c) Less than v  
d) Zero

Answer: b  
Explanation: As they are moving in the same direction, the relative velocity of the ball with respect to Tom or Jerry will be  
vB=v+v(Tom or Jerry)  
For Sam, the speed of the ball will be greater than v.

**Engineering Physics Questions and Answers – Laws Governing Gravity**

1. Which of the following is true about the universe?  
a) It is an open system  
b) It is a closed system  
c) It is an isolated system  
d) It is an international system

Answer: c  
Explanation: In spite of all the violent phenomenon occurring in this universe all the time, the total energy if the universe remains constant. The total energy remains constant only in an isolated system. Thus the universe is an example of an isolated system.

2. Which of the following holds good in all natural processes?  
a) The Doppler Effect  
b) Newton’s law of gravitation  
c) Electromagnetic law  
d) Lenz’s law

Answer: b  
Explanation: It states that every body in the universe is attracted to every other body with a force directly proportional to the product of their masses and inversely proportional to the square of the distance between them. Hence it holds good in all natural processes.

3. Strong nuclear force is independent of charge.  
a) True  
b) False

Answer: a  
Explanation: Nuclear forces between a proton and proton, a neutron and neutron are nearly equally strong. This indicated that the strong nuclear force does not depend on the charge on the charge of the nucleons.

4. Which of the following leads to the law of conservation of energy?  
a) Gravity  
b) Isotropy  
c) Nuclear force  
d) Homogeneity of time

Answer: d  
Explanation: If we perform an experiment at a certain place today and repeat it after one year at the same place, we obtain the same results. This symmetry of nature with respect to translation or displacement of time is called homogeneity of time and it leads to the law of conservation of energy.

5. Which of the following leads to the law of conservation of angular momentum?  
a) Isotropy of space  
b) Homogeneity of time  
c) Nuclear force  
d) Gravity

Answer: a  
Explanation: Law of nature takes the same form everywhere in the universe. That is there is no particular location in the universe. This symmetry of the laws of nature with respect to translation in space is called homogeneity of space and gives rise to the law of conservation of linear momentum.

6. Which of the following is the SI unit of luminous intensity?  
a) Sterdian  
b) Radian  
c) Mole  
d) Candela

Answer: d  
Explanation: Candela is the SI unit of luminous intensity. One candela is the luminous intensity, in a given direction, of a source that emits monochromatic radiation of frequency 540×1012 hertz and that has a radiant intensity of 1/683 watt per sterdian in that direction.

7. Sterdian is the SI unit of which of the following?  
a) Phase angle  
b) Luminous intensity  
c) Mass  
d) Solid angle

Answer: d  
Explanation: Sterdian is defined as the solid angle subtended at the centre of a sphere by a surface of the sphere equal in area to that of a square, having each side equal to the radius of the sphere.

8. How many light years are there in one metre?  
a) 9.46×1015ly  
b) 1.057×10-16ly  
c) 1ly  
d) 1×10-16ly

Answer: b  
Explanation: 1 light year = 9.46×1015m  
1m = 1/(9.46×1015)ly = 1.057×10-16ly.

9. The radius of gold nucleus is 41.3fermi. Express its volume in m3.  
a) 41.3×10-15 m3  
b) 2.95×10-40 m3  
c) 4.19 m3  
d) 29.33 m3

Answer: b  
Explanation: Radius = 41.3 Fermi = 41.3×10-15m  
V = 4/3 πr3 = 2.95×10-40 m3.

10. Convert an acceleration of 2km/h2 into cm/s2.  
a) 2×105 cm/s2  
b) 0.0027 cm/s2  
c) 0.0154 cm/s2  
d) 0.055 cm/s2

Answer: c  
Explanation: a = 2 km/h2  
a = 0.0154 cm/s2.

# Engineering Physics Questions and Answers – Moment of Inertia and its Significance

This set of Engineering Physics Questions and Answers for Aptitude test focuses on “Moment of Inertia and its Significance”.

1. The instantaneous speed of the point of contact during rolling is zero.  
a) True  
b) False

Answer: a  
Explanation: A rolling body can be imagined to be rolling about an axis passing through the point of contact of the body and the ground. Hence the instantaneous speed of the point of contact is zero.

2. A mass m is moving with a constant velocity along a line parallel to the x-axis, away from the origin. Its angular momentum with respect to the origin \_\_\_\_\_\_\_\_\_\_\_  
a) Is zero  
b) Remains constant  
c) Goes on increasing  
d) Goes on decreasing

Answer: b  
Explanation: Angular momentum = Mass of momentum  
L = mv×h = constant  
As the particle moves, m, v and h all remain unchanged.

3. A particles undergoes uniform circular motion. About which point on the plane of the circle, will the angular momentum of the particles remain conserved?  
a) Centre of the circle  
b) On the circumference of the circle  
c) Inside the circle  
d) Outside the circle

Answer: a  
Explanation: In uniform circular motion, centripetal force acts towards the centre. Torque due to such a force about the centre is zero. Hence the angular momentum is conserved about the centre of the circle.

4. If the resultant of all the external forces acting on a system of particles is 0, then from an inertial frame, one can surely say that \_\_\_\_\_\_\_\_\_\_\_  
a) Linear momentum of the system does not change in time  
b) Kinetic energy of the system does not change in time  
c) Angular momentum of the system does not change in time  
d) Potential energy of the system does not change in time

5. Statement 1: If there is no external torque on the body about its centre of mass, then the velocity of the centre of mass remains constant.  
Statement 2: The linear momentum of the isolated system remains constant.  
a) Statements 1 and 2 are true and statement 2 is the correct explanation of statement 1  
b) Statement one and two are true and statement2 is not the correct explanation of statement1  
c) Statement 1 is true, statement 2 is false  
d) Statement 2 is true, statement 1 is false

Answer: d  
Explanation: The absence of external torque does not ensure the absence of external force. If an external force is present, then the velocity of the centre of mass will not remain constant. Thus statement 1 is false.

6. If a person standing on a rotating disc stretches out his hands, the angular speed will \_\_\_\_\_\_\_\_\_\_\_  
a) Increase  
b) Decrease  
c) Remains same  
d) Increases and then decreases

Answer: b  
Explanation: As the person stretches out his hands, his moment of inertia increases. To conserve angular momentum, his angular speed increases.

7. Analogue of mass in rotational motion is \_\_\_\_\_\_\_\_\_\_\_  
a) Moment of inertia  
b) Angular momentum  
c) Gyration  
d) Angular acceleration

Answer: a  
Explanation: Analogue of mass in rotational motion is the angular momentum

8. Moment of inertia of an object does not depend upon \_\_\_\_\_\_\_\_\_\_\_  
a) Mass of object  
b) Mass of distribution  
c) Angular velocity  
d) Axis of rotation

Answer: c  
Explanation: Moment of inertia does not depend on the angular velocity of the object but depends on all factors given in other options.

9. Statement 1: If polar ice melts, days will be longer.  
Statement 2: Moment of inertia decreases and thus angular velocity increases.  
a) Both statement 1 and 2 are true and statement2 is the correct explanation of the statement1  
b) Both statement 1 and 2 are true but the statement2 is not the correct explanation of the statement1  
c) Statement 1 is true but statement 2 is false  
d) Statement 1 and 2 are false

Answer: a  
Explanation: As the polar ice melts, water so formed flows towards the equator. The moment of inertia of the earth increases. To conserve angular momentum, angular velocity decreases. This increases the length of the day.

10. The moment of inertia of a body about a given axis is 1.2kgm2. Initially, the body at rest. In order to produce a rotational kinetic energy of 1500 joule, an angular acceleration of 25radian/sec2 must be applied about the axis for duration of \_\_\_\_\_\_\_\_\_\_\_  
a) 4s  
b) 2s  
c) 8s  
d) 10s

Answer: b  
Explanation: Rotational kinetic energy = 1/2 Iω2  
1500=1/2×1.2×ω2  
ω=√(3000/1.2)=50rad/s  
t=(ω-ω0)/α=(50-0)/25  
t=2sec.

# Engineering Physics Questions and Answers – Forces

This set of Engineering Physics Multiple Choice Questions & Answers (MCQs) focuses on “Forces”.

1. Force is a polar vector.  
a) True  
b) False

Answer: a  
Explanation: Force is a polar vector because it has a point of application. It is a push or a pull that tends to change the state of rest or of uniform motion of a body.

2. A body is moving along a straight path. What will happen to the body in the absence of an external field?  
a) It will stop  
b) It will move with the same speed in a different path  
c) It will move with the same speed along the same straight path  
d) It will move with a reduced speed along the same path

Answer: c  
Explanation: Galileo stated that on a horizontal plane an object should move with a constant velocity in a straight line path. Therefore a body moving along a straight path will continue to move in the same direction with the same speed even in the absence of external forces.

3. A person is standing in a bus. When the bus starts moving forward suddenly \_\_\_\_\_\_\_\_\_\_\_  
a) The person moves forward  
b) The person remains stationary  
c) The person is unaffected  
d) The person moves backward

Answer: d  
Explanation: A person standing in a bus moves backward when the bus moves forward. When the bus moves forward, the lower part of his body begins to move along with the bus while the upper part of his body continues to remain at rest due to inertia. That is why a person falls backward when the bus starts.

4. When a moving bus suddenly stops, a person sitting \_\_\_\_\_\_\_\_\_\_\_  
a) Stands up  
b) Falls forward  
c) Falls backward  
d) Is unaffected

Answer: b  
Explanation: As the bus stops, the lower part of the person’s body comes to rest along with the bus while the upper part of his body continues to remain in motion due to inertia and therefore the person falls forward.

5. If a body has more mass, it had more inertia.  
a) True  
b) False

Answer: a  
Explanation: Mass of the body is the measure of its inertia. If a body has more mass, it is more difficult to change its state of rest or of uniform motion.

6. Which of the following is also known as the law of inertia?  
a) Newton’s second law of motion  
b) Newton’s third law of motion  
c) Aristotelian law of motion  
d) Newton’s first law of motion

Answer: d  
Explanation: According to Newton’s first law of motion, every body continues in its state of rest or uniform motion unless an external force acts upon it. This inability of a body to change its state of rest or of uniform motion along a straight path is called inertia of a body. Hence the first law of motion is also called a law of inertia.

7. When we shake the branch of a tree, its fruits and dry leaves fall down. This is an example of \_\_\_\_\_\_\_\_\_\_\_  
a) Inertia of motion  
b) Inertia of rest  
c) Inertia of direction  
d) Newton’s third law of motion

Answer: b  
Explanation: On shaking, the branch comes into motion while the dry fruits and leaves tend to remain at rest, inertia at rest, and so get separated. Thus the falling of leaves and fruits when the branch is shaken is an example of inertia of rest.

8. A ball thrown upward in a moving train does not come back into the thrower’s hand.  
a) True  
b) False

Answer: b  
Explanation: The ball acquires the horizontal velocity of the train and maintains it during its upward and downward motion. In this period the ball covers the same horizontal distance as the train, so it comes back into the thrower’s hands.

9. A dog is chasing a hare and the hare runs in a zigzag path. What happens?  
a) The dig becomes confused  
b) The dog catches the hare easily  
c) It becomes difficult for the dog to catch the hare  
d) The hare dies

Answer: c  
Explanation: When the hare runs in a zigzag path, it becomes difficult for the dog to catch the hare. This is because the dog has more mass and hence has more inertia of direction than that of the hare.

10. The driver of a car suddenly sees a broad wall in front of him. What he should do?  
a) Brake sharply  
b) Turn sharply  
c) Keep going  
d) Jump out of the car

Answer: a  
Explanation: Suppose FB is the force required in applying brakes to stop the truck in distance d, then  
FB × d = 1/2mv2  
Suppose FT is the force required in taking a turn of radius d then,  
FT = 2FB  
Clearly, it is better to apply brakes than to take a circular turn.

# Engineering Physics Questions and Answers – Friction and Forces

This set of Engineering Physics Multiple Choice Questions & Answers (MCQs) focuses on “Friction and Forces – 1”.

1. The coefficient of kinetic friction is less than the coefficient of static friction.  
a) True  
b) False

Answer: a  
Explanation: The value of kinetic energy is directly proportional to the normal reaction between the two surfaces. Thus the coefficient of kinetic friction is less than the coefficient of static friction.

2. The coefficient of static friction is \_\_\_\_\_\_\_\_\_\_\_  
a) Less than the coefficient of kinetic friction  
b) Greater than the coefficient of limiting friction  
c) Equal to the coefficient of kinetic friction  
d) Equal to the tangent of the angle of friction

Answer: d  
Explanation: The angle which the resultant of the limiting friction and the normal reaction which makes the normal reaction is called the angle of friction. But the tangent of the angle of friction is equal to the coefficient of static friction.

3. Which of the following kinetic friction is smaller?  
a) Limiting friction  
b) Static friction  
c) Rolling friction  
d) Sliding friction

Answer: c  
Explanation: The force which comes into play when a body rolls over the surface of another body is called rolling friction. For the same magnitude of a normal reaction, rolling friction is always greater than the sliding friction.

4. A cubical block rests on an inclined plane of μ = 1/√3, determine the angle of inclination when the block just slides down the inclined plane?  
a) 40°  
b) 50°  
c) 30°  
d) 20°

Answer: c  
Explanation: When the block just slides down the inclined plane, the angle of inclination is equal to the angle of response.  
tan α = μ= 1/√3  
α = 30°.

5. A mass of 4kg rests on a horizontal plane. The plane is gradually inclined until at an angle θ= 15° with the horizontal, the mass just begins to slide. What is the coefficient of static friction between the block and the surface?  
a) 0.814  
b) 0.27  
c) 1.5  
d) 3.5

Answer: b  
Explanation: θ = 15° is the angle of response.  
Coefficient of friction, μ = tan θ = tan 15° = 0.27.

6. A scooter weighs 120kg f. Brakes are applied so that wheels stop rolling and start skidding. Find the force of friction if the coefficient of friction is 0.4.  
a) 60kg f  
b) 48kg f  
c) 25kg f  
d) 32kg f

Answer: b  
Explanation: Weight of the scooter = 120kg f  
μ = 0.4  
f = μ×weight of the scooter = 0.4×120 = 48kg f.

7. How is friction due to air reduced?  
a) Streamlining  
b) Lubrication  
c) By using ball bearings  
d) By polishing

Answer: a  
Explanation: Friction due to air is considerably reduced by streamlining the shape pf the body moving through air. For example, jets have a streamline shape.

8. Friction can be increased by \_\_\_\_\_\_\_\_\_\_\_  
a) Using air cushion  
b) Lubricants  
c) Using sand  
d) Using ball bearings

Answer: c  
Explanation: By throwing sand the force of friction between the wheels and the track becomes easier. On rainy days, we throw sand on the slippery ground. This increases the friction between our feet and the ground and reduces the chance of slipping.

9. When moving along a curved path, he \_\_\_\_\_\_\_\_\_\_\_  
a) Leans inwards  
b) Leans outwards  
c) Is still  
d) Leans sideways

Answer: a  
Explanation: When a cyclist goes around a curved path, a centripetal force is required. The force between the tyres and the road is small to provide the necessary centripetal force. That is why a cyclist going around a curve leans inwards because the horizontal component of the normal reaction provides the necessary centripetal force.

10. A train has to negotiate a curve of radius 400m. By how much should the putter rail be raised with respect to inner rail for speed of 48 km/h? The distance between the rails is 1m.  
a) 0.20m  
b) 0.0454m  
c) 0.45m  
d) 0.020m

Answer: b  
Explanation: h = (v2 l)/rg  
h = 402/32 = 0.0454m.

# Engineering Physics Questions and Answers – Waves

This set of Engineering Physics Multiple Choice Questions & Answers (MCQs) focuses on “Waves”.

1. When a pebble is dropped into a pond of still water, what happens?  
a) Particles move  
b) Waves move  
c) The pebble moves  
d) Water moves

Answer: b  
Explanation: When a pebble is thrown in still water, a circular pattern of alternate crests spread out. The kinetic energy makes the particles to oscillate which comes in contact with it. The energy gets transferred to the particles of the next layer which also begins to oscillate. Thus it is the disturbance or waves that move forward and not the particles of the medium.

2. Mechanical waves are called elastic waves.  
a) True  
b) False

Answer: a  
Explanation: Waves which require a medium for their propagation are called mechanical waves. They are also called elastic waves because they depend on the elastic properties of a medium.

3. What are the essential properties a medium must possess for the propagation of mechanical waves?  
a) Stable pressure  
b) Maximum friction  
c) Constant temperature  
d) Minimum friction

Answer: d  
Explanation: The friction force amongst the particles of the medium should be negligibly small so that they continue oscillating for a sufficiently long time and the wave travels a sufficiently long distance through the medium

4. Transverse waves can be formed in fluids.  
a) True  
b) False

Answer: b  
Explanation: Transverse waves travel in the form of crests and troughs. They involve changes in the shape of the medium. So they can be transmitted through media which have rigidity. As fluids do not sustain shearing stress, transverse waves cannot be formed in them.

5. Which of the following waves can be transmitted through solids, liquids and gases?  
a) Transverse waves  
b) Electromagnetic waves  
c) Mechanical waves  
d) Longitudinal waves

Answer: d  
Explanation: Longitudinal waves involve changes in the volume and density of the medium. Since all media can sustain compressive stress, longitudinal waves can be transmitted through all the three types of media.

6. For an aluminium the modulus of rigidity is 2.1×1010 N/m2 and density is 2.7×103 kg/m3. Find the speed of transverse waves in the medium.  
a) 27.9×103 m/s  
b) 2.79×103 m/s  
c) 25.14×103 m/s  
d) 24.1×103 m/s

Answer: b  
Explanation: Speed = √(Ƞ/ƿ)  
Speed = 2.79×103 m/s.

7. Sound travels through a gas under which of the following condition?  
a) Isothermal condition  
b) Non-isothermal condition  
c) Adiabatic condition  
d) Transverse condition

Answer: c  
Explanation: The compressions and rarefactions are formed so rapidly that the heat generated in the regions of compressions does not get time to pass into the regions of rarefactions so as to equalize the temperature. So when sound travels through gas, the temperature remains constant. Therefore, it is adiabatic.

8. What kind of wave is formed in organ pipes?  
a) Transverse stationary waves  
b) Electromagnetic waves  
c) Mechanical waves  
d) Longitudinal stationary waves

Answer: d  
Explanation: When two identical longitudinal waves travelling in opposite directions overlap, a longitudinal stationary wave is formed. Thus, the waves produced in organ pipes are longitudinal stationary waves.

9. A wave transmits momentum. Can’t it transfer angular momentum?  
a) Yes  
b) No

Answer: b  
Explanation: A wave transmitting momentum cannot transmit angular momentum because a transfer of angular momentum means the action of a torque which causes rotator motion.

10. What is the most fundamental property of wave?  
a) Temperature  
b) Pressure  
c) Frequency  
d) Wavelength

Answer: c  
Explanation: When a wave travels from one medium to other, its wavelength as well as velocity may change. This is the reason that frequency is the fundamental property of a wave.

11. Which of the following is also known as pressure waves?  
a) Transverse waves  
b) Longitudinal waves  
c) Mechanical waves  
d) Stationary waves

Answer: b  
Explanation: Longitudinal waves travel in a medium as series of alternate compressions and rarefactions and hence are called pressure waves.

12. In which medium sound travels faster?  
a) Solid  
b) Liquid  
c) Gas  
d) Water vapour

Answer: a  
Explanation: Sound travels in solid with the highest speed because the coefficient of elasticity of solids is much greater than the coefficient of elasticity of liquids and gases.