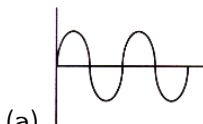


Force, Friction and Sound

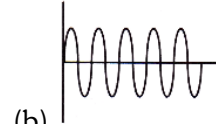
Practice Exercise

1. Force X and Y are applied on an object in opposite directions. If the magnitude of force Y is more than the X, then the net force acting on the object _____.
 (a) X - Y is in the direction of Y.
 (b) Y - X is in the direction of Y.
 (c) X - Y is in the direction of X.
 (d) Y - X is in the direction of X.
 (e) None of these
2. We can conclude that force can change the shape of an object by which of the following examples?
 (a) Breaking of glass on hammering.
 (b) Squeezing of a toothpaste tube.
 (c) Stretching of a spring on applying force.
 (d) All the above
 (e) None of these
3. Which one of the following forces can be applied only when the body is in contact with the object?
 (a) Frictional force (b) Muscular force
 (c) Gravitational force (d) Both (a) and (b)
 (e) None of these
4. S.I. unit of pressure is?
 (a) Newton (b) Pascal
 (c) Metre (d) Newton
 (e) None of these
5. When would depression in the ground be the most:
 (a) When a man stands on the ground
 (b) When a lies upside down on the ground.
 (c) When a tree falls on the ground.
 (d) All the above
 (e) None of these
6. _____ is involved in filling up the liquid into the syringe.
 (a) Atmospheric pressure
 (b) Magnetic pressure
 (c) Frictional force
 (d) Electrostatic force
 (e) None of these
7. The force which always opposes the motion of an object is:
 (a) Gravitational force (b) Frictional force
 (c) Magnetic force (d) Muscular force
 (e) None of these
8. Friction arises due to _____ in the surfaces of objects.
 (a) Softness
 (b) Irregularities
 (c) Atmospheric pressure
 (d) Magnetism
 (e) None of these
9. The net force is zero when the two forces applied on an object are in:
 (a) The same directions
 (b) The opposite directions and are of different in magnitude.
 (c) The same directions and are same in magnitude.
 (d) The opposite directions and are of equal in magnitude.
 (e) None of these
10. Atmospheric pressure _____ with increasing height.
 (a) Increases (b) Decreases
 (c) Remains same (d) Expands
 (e) None of these
11. In which of the following more frictional force will be observed?
 (a) A man walking on a glass.
 (b) A man walking on ice.
 (c) A man walking on a concrete road.
 (d) All the above
 (e) None of these
12. When the force applied in the directions of motion of the object, its spa
 (a) Decreases
 (b) Increases
 (c) Either increases or decreases
 (d) All the above
 (e) None of these

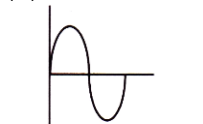
- 13.** School bags have wide straps so as to:
 (i) Increase the pressure on the shoulder.
 (ii) Decrease the pressure on the shoulder.
 (iii) Make the bag's weight fall over a small area of the shoulder.
 (iv) Make the bag's weight fall over a large area of the shoulder.
 (a) (ii) and (iii) (b) (i) and (iii)
 (b) (i) and (ii) (d) (ii) and (iv)
 (e) None of these
- 14.** Friction depends on the:
 (a) Nature of two surfaces.
 (b) Forces with which two surfaces are pressed together.
 (c) Both (a) and (b)
 (d) Either (a) or (b)
 (e) None of these
- 15.** Usually length of vocal cords of men is ____ women.
 (a) Less than (b) Greater than
 (c) Same as (d) Slightly less than
 (e) None of these
- 16.** Pressure at the surface of the pond is ____ the pressure at the bottom of the pond.
 (a) Same as
 (b) Less than
 (c) Greater than
 (d) Slightly greater than
 (e) None of these
- 17.** A force is applied on an object which is in rest. If frictional force is equal to applied force then the body:
 (a) Will move in forward direction.
 (b) Will move in backward direction.
 (c) Will remain in rest.
 (d) Will move in upward direction.
 (e) None of these
- 18.** ____ shaped objects will face minimum resistance while moving in under:
 (a) Rectangular (b) Square
 (c) Oblongata (d) Streamlined
 (e) None of these
- 19.** Which of the following produces sound in Dholak?
 (a) Stretched strings
 (b) Air column
 (c) Stretched membrane
 (d) Keys
 (e) None of these
- 20.** A boy is pushing a table from left to right. The force of friction will act on the table:
 (a) From left to right
 (b) Vertically downwards
 (c) Vertically upwards
 (d) From right to left
 (e) None of these
- 21.** If the same force is applied on a toy car, on which of the following. It will move with maximum speed?
 (a) Wooden surface
 (b) Uneven surface
 (c) Polished marble surface
 (d) Brick wall
 (e) None of these
- 22.** Two boxes filled with books, one is of 2kg and other is of 4kg are kept on a cemented floor. Which one of them would require a larger force to move it from the rest position?
 (a) Box with heavier weight requires more force.
 (b) Box with lighter weight requires more force.
 (c) Both the boxes require same force.
 (d) Either (a) or (b)
 (e) None of these
- 23.** The maximum friction will be observed between two objects when:
 (a) One object which just tends to move over the surface of the other object.
 (b) One object moves slowly over the surface of another object.
 (c) One object rolls over the surface of another object.
 (d) All the above
 (e) None of these
- 24.** P and Q are two forces applied on object O in the same direction, then the resultant force acting on the object is equal to:
 (a) $P - Q$ (b) Zero
 (c) $P + Q$ (d) $P \times Q$
 (e) None of these

- 25.** A list of mediums is given below:
 (i) Wood (ii) Water
 (iii) Air (iv) Vacuum
 In which of these mediums can sound travel?
 (a) (i) and (ii) only
 (b) (i), (ii) and (iii) only
 (c) (iii) and (iv) only
 (d) (ii), (iii) and (iv) only
 (e) None of these
- 26.** 100 Pascal is equal to:
 (a) 100 *Newton* (b) 1000 N/m^2
 (c) 100 N/m^2 (d) 10,000 N/m^2
 (e) None of these
- 27.** As we go up in the atmosphere from the surface of earth, the atmosphere pressure decreases due to decrease in _____ of air above us.
 (a) Length (b) Weight
 (c) Colour (d) Mixture
 (e) None of these
- 28.** While playing tugs of war we often feel that the rope is slipping through our hands. We rub soil on our hands to:
 (a) Decrease friction
 (b) Increase friction
 (c) Increase pressure
 (d) To increase area of contact
 (e) None of these
- 29.** Friction can be reduced by:
 (a) Polishing the surface.
 (b) Greasing the surfaces.
 (c) Using wheels.
 (d) All the above
 (e) None of these
- 30.** Ball bearing is used between the hub of wheel and axle to _____ the friction.
 (a) Increase (b) Reduce
 (c) Rub (d) Maximize
 (e) None of these
- 31.** When a pencil is thrown upwards, then its speed goes on decreasing, because of:
 (a) Electrostatic force
 (b) Frictional force
 (c) Muscular force
 (d) Gravitational force
 (e) None of these
- 32.** Drag force is applied by which of the following and in which direction?
 (a) Solids, in the direction or opposite to the direction of motion.
 (b) Liquids, in the direction of motion of the object only.
 (c) Gases, in the direction of motion of the object only.
 (d) Fluids, in the direction opposite to the direction of motion of the object.
 (e) None of these
- 33.** If the amplitude of a vibration is doubled then the loudness of the sounds will become:
 (a) Half (b) One-fourth
 (c) Doubled (d) Four times
 (e) None of these
- 34.** Frequency of vibration is directly proportional to _____ of sound.
 (a) Amplitude (b) Loudness
 (c) Pitch (d) Time period
 (e) None of these
- 35.** Which one of the following is a high frequency wave?
- 


(a)



(b)



(c)



(d)
- (e) None of these
- 36.** If we strike a wooden table with a steel spoon lightly we hear a feeble sound but if we hit the wooden table hard with steel spoon, a loud sound is heard because:
 (a) Amplitude of vibration is high in case of loud sound.
 (b) Amplitude of vibration is low in case of feeble sound.
 (c) Both (a) and (b)
 (d) Either (a) or (b)
 (e) None of these

- 37.** Which one of the following statements is correct?
(i) Loudness of sound is directly proportional to the square of amplitude vibrations.
(ii) Sound can travel through vacuum.
(iii) Speed of sound is maximum in solids.
(iv) The outer part of ear is called ear canal.
(a) (i) and (ii) (b) (ii) and (iii)
(c) (i) and (iii) (d) (i) and (iv)
(e) None of these
- 38.** Which one of the following is not a bone of ear?
(a) Anvil (b) Hammer
(c) Humerus (d) Stirrup
(e) None of these
- 39.** Unit of measuring loudness is:
(a) Hertz (b) Metre/Second
(c) Metre (d) Decibel
(e) None of these
- 40.** In order to increase the loudness of a sound we have to:
(a) Decrease its frequency of vibration.
(b) Increase its frequency of vibration.
(c) Increase its amplitude of vibration.
(d) Decrease its amplitude of vibration.
(e) None of these

Answer Key

1. D	2. D	3. D	4. B	5. A
6. A	7. B	8. B	9. D	10. B
11. B	12. B	13. D	14. C	15. B
16. B	17. C	18. D	19. C	20. D
21. C	22. A	23. A	24. C	25. B
26. C	27. B	28. B	29. D	30. B
31. D	32. D	33. D	34. C	35. B
36. C	37. C	38. C	39. D	40. C