* **Choose the correct alternative from those given below question** [22]

1. A _____ exerted by an object on another is a force.
   (A) Push or pull (B) Contact or non-contact force
   (C) Pressure (D) Magnitude

   Ans.: (A) Push or pull

2. The force exerted by the Earth to pull the object towards itself is called
   (A) electrostatic force (B) gravitational force
   (C) muscular force (D) contact force

   Ans. : (B) gravitational force

3. Muscular force is also called _____ force.
   (A) non-contact (B) contact (C) gravitational (D) magnetic

   Ans. : (B) contact

4. The force exerted by a charged body on another charged body
   (A) gravitational force (B) electrostatic force
   (C) non-contact force (D) contact force

   Ans. : (B) electrostatic force

5. Force changes the
   (A) motion of the body (B) speed of the body
   (C) shape of body (D) all of these

   Ans. : (D) all of these

6. The force exerted by our muscles is called
   (A) electrostatic force (B) muscular force
   (C) gravitational force (D) non-contact force

   Ans. : (B) muscular force

7. During dry weather, while combing hair, sometimes we experience hair flying apart. The force responsible for this is
   (A) force of gravity (B) electrostatic force
   (C) force of friction (D) magnetic force

   Ans. : (B) electrostatic force

8. Two objects repel each other. This repulsion could be due to the
   (A) frictional force only
   (B) electrostatic force only

(C) magnetic force only

(D) either a magnetic or an electrostatic force

Ans. : (C) magnetic force only

9. Which one of the following forces is a contact force?

(A) Force of gravity (B) Force of friction

(C) Magnetic force (D) Electrostatic force

Ans. : (B) Force of friction

10. Force can be measured by

(A) magnitude (B) mass (C) weight (D) volume

Ans.: (A) magnitude

11. Force can affect the state of motion of a body by changing

(A) direction or speed (B) increasing speed

(C) state of position (D) force of friction

Ans.: (A) direction or speed

12. Force is

(A) power (B) pressure (C) friction (D) None of these

Ans. : (D) None of these

13. Force acting on a surface in a direction perpendicular to it is known as

(A) thrust (B) force (C) pressure (D) density

Ans.: (A) thrust

14. Which is not a non-contact force?

(A) Electrostatic force (B) Magnetic force

(C) Force due to gravity (D) Muscular force

Ans. : (D) Muscular force

15. Force exerted during the digestion of food

(A) force of gravity (B) pressure

(C) muscular force (D) longitudinal force

Ans. : (C) muscular force

16. The standard unit of force is

(A) $\frac{\text{metre}}{\text{second}}$ (B) newton (C) metre × second (D) $\frac{\text{gram}}{\text{weight}}$

Ans. : (B) newton

17. The force exerted by an animal's body is called

(A) muscular force (B) mechanical force

(C) gravitational force (D) magnetic force

Ans.: (A) muscular force

18. One kilogram is

(A) 98 N (B) 9.8 N (C) 0.98 N (D) 0.098 N

Ans. : (B) 9.8 N

19. A spring balance is used for measuring

(A) mass (B) weight (C) pressure (D) speed

Ans. : (B) weight

20. The force is always attractive in nature and extends to infinity

(A) magnetic force (B) electrostatic force

(C) gravitational force (D) frictional force

Ans. : (C) gravitational force

21. Assertion (A): In the game of tug of war, sometimes the rope doesn't seem to move to any side even if strong forces are applied from both sides.
Reason (R): Equal force applied from opposite sides on any object makes the net applied force zero.

(A) Both (A) and (R) are true, and (R) is the correct explanation of (A).

(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A).

(C) (A) is true, but (R) is false.

(D) (A) is false, but (R) is true.

Ans.: (A) Both (A) and (R) are true, and (R) is the correct explanation of (A).

22. Assertion (A): The force due to air in a column of the height of the atmosphere and area 15 cm × 15 cm (nearly equal to the area of your head) is nearly equal to the force of gravity on an object of mass 225 kg, then it is also bearable.
Reason (R): The atmospheric pressure is neutralised by the force of gravity experienced by us.

(A) Both (A) and (R) are true, and (R) is the correct explanation of (A).

(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A).

(C) (A) is true, but (R) is false.

(D) (A) is false, but (R) is true.

Ans. : (C) (A) is true, but (R) is false.

*** Answer the following as requested in detail.** **[10]**

23. Define the different types of forces.

Ans. : Force can act on a body from a distance or by being in contact with it. Depending on this, forces can be classified as contact and non-contact forces.

- Contact forces: When a force is applied to an object by direct or indirect physical contact, the applied force is called a contact force.
- Muscular and frictional forces are examples of contact forces.
- Muscular force: The force resulting from the action of muscles is known as the muscular force.
- Frictional force: The force resisting the relative motion of solid surfaces, fluid layers, and material elements sliding against each other.
- Non-contact forces: When a force is applied to an object by another body that is not in direct contact with it is called a non-contact force.
- Gravitational, magnetic, and electrostatic forces are examples of non-contact forces.
- Gravitational force: The attractive force of the Earth, which acts upon all objects, is known as the force of gravity or just gravity.
- Electrostatic force: The force exerted by a charged body on another charged or uncharged 1 body is known as electrostatic force.
- Magnetic force: The force exerted between a magnet and another magnet or magnetic material is known as magnetic force.

24. Define force. What are its effects on objects?

Ans. : A force is a push or pull upon an object resulting from its interaction with another object. It has both magnitude and direction, making it a vector quantity. The unit of force is Newton (N), named after Isaac Newton.
Effects of force :
- Motion change: A stationary object may begin to move; a moving object may stop or change speed.
- Direction change: Force can alter the direction of a moving object.
- Shape change: Some forces deform objects, such as squashing or stretching them.
Examples:
- Kicking a football (starts motion)
- Applying brakes (stops motion)

*** Fill in the blanks:** **[10]**

25. The strength of a force is usually expressed by its _____

Ans. : Magnitude

26. _____ force is the force resulting due to the action of muscles.

Ans. : Muscular

27. Force of friction is an example of _____ force.

Ans. : Contact

28. Force has _____ as well as direction.

Ans. : Magnitude

29. Fruits fall _____ due to the force of gravity.

Ans. : Downward

30. The body at rest is called _____ body.

Ans. : Stationary

31. _____ and _____ forces are the two kinds of forces.

Ans. : Contact, Non-Contact

32. Force exerted by magnet is called _____ force.

Ans. : Magnetic

33. We apply force on _____ while walking.

Ans. : Ground

34. Force is _____ to pressure.

Ans. : Directly Proportional

*** Answer the following questions in short.** **[88]**

35. Why is it easier to slip on a wet surface?

Ans. : It is easier to slip on a wet surface due to reduced friction between the foot and the surface. Water acts as a lubricant, minimizing the grip and making it easier to slide.

36. Is it essential for an object applying force on another object to always be in contact with it?

Ans. : No, it is not essential for an object applying force on another object to always be in contact with it. Forces can be applied through contact (contact forces) or without direct contact (non-contact forces).

37. Does it mean that there are two kinds of electrical charges?

Ans. : Yes, there are two types of electric charge: positive charge and negative charge. These charges are fundamental properties of matter.

38. Why do all the objects fall towards the Earth?

Ans. : Objects fall towards the Earth due to gravity, a force of attraction between any two objects with mass. Earth's gravity pulls all objects towards its center, causing them to fall. This force is stronger for objects with more mass, and it weakens with distance.

39. What is the difference between weight and mass?

Ans. : Mass is the amount of matter in an object. Weight is the downward force acting upon an object due to gravity. On planet Earth, the two quantities are proportional.

40. When you drop a coin in a glass of water, it sinks, but when you place a bigger wooden block in water, it floats. Explain.

Ans. : A coin sinks in water because its density (mass per unit volume) is greater than that of water. A wooden block floats because its density is less than that of water, causing it to be buoyed up by the water.

41. Is any force being applied to an object in a non-uniform motion?

Ans. : Yes, for an object to be in non-uniform motion, a force must be acting upon it. Non-uniform motion, also known as accelerated motion, means the object's velocity is changing, either in speed or direction, or both. This change in velocity requires a force to be applied.

42. Is there any force that acts on them? What exerts this force?

Ans. : Yes, there is a force acting on any object in the universe, and it is called gravity. Gravity is a force of attraction that exists between any two objects with mass. The Earth, due to its large mass, exerts a gravitational force on all objects near it, pulling them towards its center.

43. How does an applied force change the speed of an object?

Ans. : If the applied force is in the direction of motion, the speed of the object increases. But if the force is applied in the direction opposite to the motion, then it decreases the speed of the object.

44. What is the similarity between electrostatic and magnetic forces?

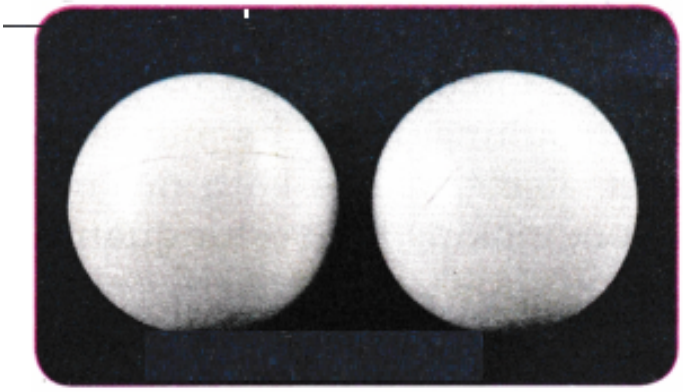
Ans. : Both are non-contact forces.
Both are attractive as well as repulsive forces.

45. What are the effects of force on an object?

Ans. : -Force can change the state of motion of an object.
- Force changes the speed of a moving object.
- Force can cause an object to turn or change direction.
- force can change the shape of an object.

46. Two thermocol balls held close to each other move away from each other. When they are released, name the force that might be responsible for this phenomenon. Explain.

Ans. : Electrostatic force is responsible for this phenomenon. The two balls have similar charges, which is why they move away due to repulsion between them.



47. Name the forces acting on the car stuck to an electromagnet in a Junkyard. Which one of them is larger?

Ans. : Magnetic force (in the upward direction) and force of gravity or the weight of the car (downward).
Magnetic force is larger than the force of gravity.

48. Which force is responsible for the downward movement of a parachute? Will he come down with the same speed without the parachute?

Ans. : The force of gravity is responsible for this downward movement. No, without a parachute, he will come down at a higher speed.

49. What may be the consequences when a force is applied to an object?

Ans. : When a force is applied to an object, the consequence will be a
- change in the shape of the object.
- change in the state of motion of the object.

50. The force changes the shape of the dough.

Ans. : The force changes the shape of the dough.

51. Distinguish between contact forces and non-contact forces with examples.

Ans. : Contact Force: A Force that can be applied only when it is in contact with an object is called a contact force.
Examples: muscular force, frictional force.
Non-contact force : The force exerted on an object without touching it is known as a non-contact force.
Examples : gravitational force, magnetic force.

52. What is force?

Ans. : self

53. Name the SI unit of force.

Ans. : self

54. Give one example of a contact force.

Ans. : self

55. What kind of force is gravity?

Ans. : self

56. What causes a ball to stop rolling on the floor?

Ans. : self

57. Name the various types of forces.

Ans. : self

58. What is the necessary condition for a force to come into play?

Ans. : self

59. What can be the result of a force applied on an object?

Ans. : self

60. What happens to the springs of a sofa when we sit on it?

Ans. : self

61. What is muscular force?

Ans. : self

62. Define the force of friction.

Ans. : self

63. What is electrostatic force?

Ans. : self

64. Define contact and non-contact forces with examples.

Ans. : self

65. How does friction affect motion?

Ans. : self

66. Why do objects fall to the ground when dropped?

Ans. : self

67. What is the role of muscular force in daily life?

Ans. : self

68. Explain how force can change the shape of an object.

Ans. : self

69. Based on the interaction, what are the two categories of forces?

Ans. : self

70. What will be the net force on an object when two forces act on an object in the same direction?

Ans. : self

71. What are non-contact forces? Write the different types of non-contact forces.

Ans. : self

72. Describe different types of forces with suitable examples.

Ans. : self

73. Explain how force can change the state of motion and shape of an object.

Ans. : self

74. Discuss the effects of friction and how it can be both helpful and harmful.

Ans. : self

75. Compare gravitational, magnetic, and electrostatic forces.

Ans. : self

76. Why do we experience less pressure when wearing flat shoes on sand compared to pencil heels?

Ans. : self

77. A force may make an object move from rest. It may change the speed of an object if it is moving. It may change the direction of motion of an object. It may bring about a change in the shape of an object. It may cause some or all of these effects. While a force may cause one or more of these effects, it is important to remember that none of these actions can take place without the action of a force.
Q.1. What will happen if force is applied to an object at rest?
Q.2. What are some possible effects when force is applied to any object?

Ans. : self

78. The force of friction always acts on all the moving objects, and its direction is always opposite to the direction of motion. Since the force of friction arises due to contact between surfaces, it is also an example of a contact force.
Q.1. On which object does friction work?
Q.2. How is the friction generated?

Ans. : self

*** State whether the following sentences are true or false. Correct the false sentences and rewrite them.** **[9]**

79. A force is always required to change the speed of motion of an object.

Ans. : true: A force is indeed always required to change the speed of motion of an object. If there is no force acting on an object, it will maintain its current speed and direction (unless it's already at rest, in which case it will stay at rest).

80. Due to friction, the speed of the ball rolling on a flat ground increases.

Ans. : false: Friction opposes motion, so it will decrease the speed of a rolling ball.

81. There is no force between two charged objects placed at a small distance apart.

Ans. : false: There is a force between charged objects. This force can be attractive or repulsive depending on the charges. But it is always present when charges are close to each other.

82. Magnitude is the strength of a force.

Ans. : false

83. Force can change the shape of an object.

Ans. : true

84. At least two objects must interact for a force to come into play.

Ans. : false

85. Magnetic force is a non-contact force.

Ans. : true

86. An apple from a tree falls on the ground due to the force of gravity.

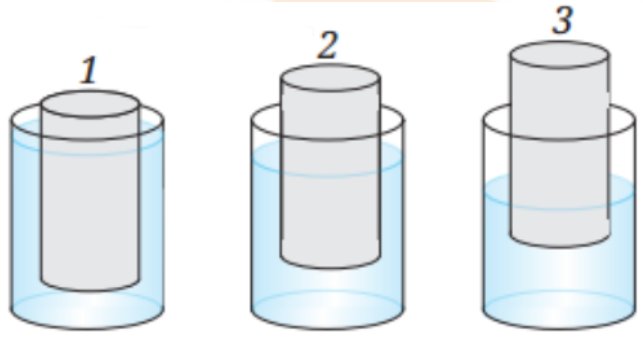
Ans. : true

87. Newton is the unit of force.

Ans. : true

*** Answer the following questions in short.** **[36]**

88. Three objects, 1, 2, and 3 of the same size and shape but made of different materials, are placed in the water. They dip to different depths as shown in the figure.



If the weights of the three objects 1, 2, and 3 are w1, w2, and w3, respectively, then

(i) w1 = w2 = w3

(ii) w1 > w2 > w3

(iii) w2 > w3 > w1

(iv) w3 > w1 > w2

(A) w1 = w2 = w3 (B) w1 > w2 > w3 (C) w2 > w3 > w1 (D) w3 > w1 > w2

Ans. : (ii) w1 > w2 > w3,

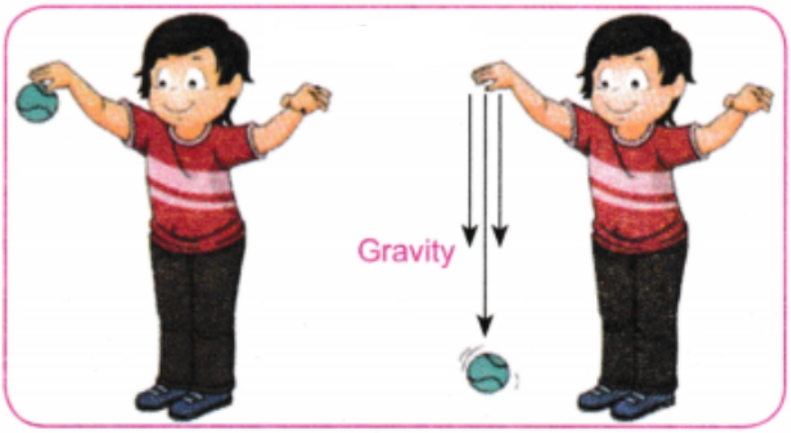
The relationship between the weights of the objects is w1 > w2 > w3

Object 1 is the deepest meaning it displaces the most water.
Object 2 is less deep than object 1 but deeper than object 3.
Object 3 is the least deep, meaning it displaces the least amount of water.
Since the objects have the same size and shape, the greater the depth, the greater the weight of the object (assuming they are all made of the same material).
Hence, the object with the greatest weight will sink the deepest, and the object with the least weight will be the closest to the surface.

89. Why does it feel harder to pedal a bicycle when going uphill than on flat ground?

Ans. : When we cycle uphill, we're constantly fighting against the Earth's gravitational pull, which tries to pull us back down. This force acts perpendicular to the ground on a flat surface, meaning it doesn't directly oppose our forward movement. But on a slope, a portion of the gravity acts against our direction of motion, requiring us to exert more force to move forward and upward.

90. Does the Earth pull every object with equal force?



Ans. : No, the Earth does not pull every object with equal force. The force of gravity is stronger on objects with greater mass. While the Earth exerts a gravitational pull on all objects, the strength of that pull depends on the mass of the object being attracted.

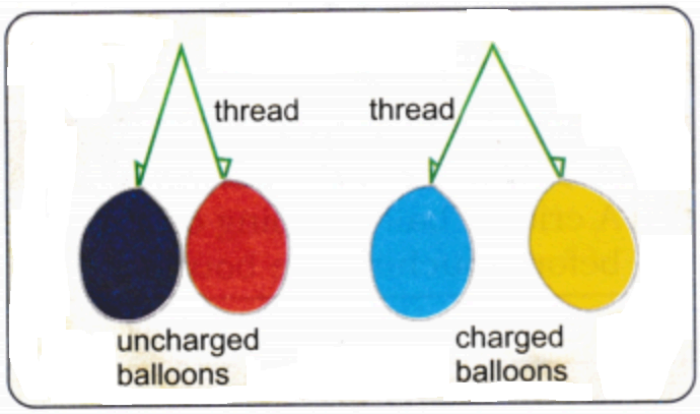
91. If we place some objects on water, some of them float, while others fall to the bottom. The gravitational force of the Earth is acting on all objects, so why don't all objects fall to the bottom?

Ans. : While the Earth's gravitational force acts on all objects, whether they sink or float in water depends on the buoyant force and the density of the object relative to water. Objects with a density lower than water experience a stronger buoyant force, causing them to float, while those with a higher density experience a weaker buoyant force and sink.

92. Two balloons rubbed with a woollen cloth are brought near each other. What would happen and why?

Ans. : When two balloons are rubbed with a woollen cloth and brought near each other, they will repel each other. This happens because both balloons will acquire a

negative charge when rubbed with wool, and like charges repel.

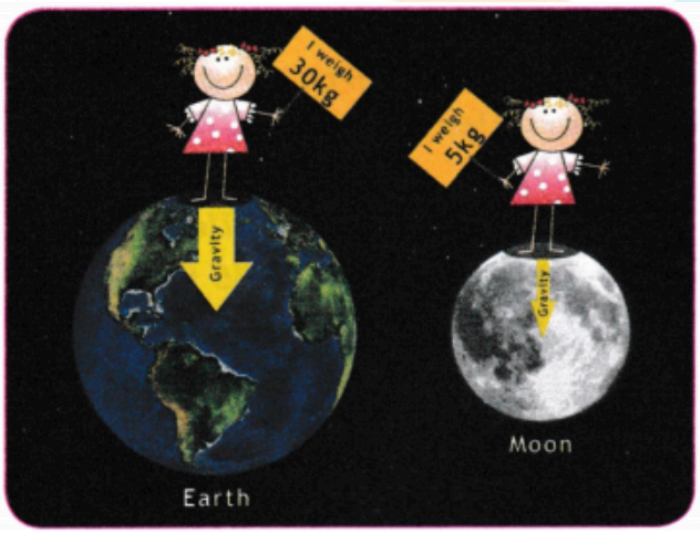


93. Why do we sometimes slip on smooth surfaces like ice or polished floors? Explain.

Ans. : When we walk on surfaces like ice, we often slip, which means we lose our balance and fall. This happens because the force that helps us stay upright and move forward (friction) is not enough. These surfaces have fewer irregularities. Minimizing the contact area and the force of friction between the surface and our shoes makes it easier to slide instead of grip. A layer of water, even a thin one on ice, can further reduce friction by acting as a lubricant, making the surface even more slippery.

94. The weight of an object on the Moon becomes one-sixth of its weight on Earth. What causes this change? Does the mass of the object also become one-sixth of its mass on the Earth?

Ans. : The change in an object's weight on the moon compared to Earth is due to the difference in gravitational force. The moon's gravity is significantly weaker than Earth's, roughly one-sixth as strong. However, the mass of an object remains the same regardless of location; only weight changes with gravitational pull.



95. What can be the result of a force applied to an object?

Ans. : Force applied to an object may result in :
- change in the shape of the object.

- change in the direction of motion of an object.
- change in speed of an object if it is moving.
- movement of an object from rest.
- some or all of the above effects.

96. Give three examples of forces exerted by muscles in our body.

Ans. : The three examples of muscular force in our body are :
- Blood circulation in our body.
- Inhalation and exhalation of air by the lungs.
- Running by the muscles of the legs.

97. Name some non-contact forces with examples.

Ans. : Some non-contact forces are :
Gravitational force
Example : A ball projected upwards falls back on Earth.
Magnetic force
Example: The force exerted by a magnet on iron.
Electrostatic force
Example: Sticking an inflated balloon to the wall after rubbing it with a dry cloth.

98. Prove that the force of friction depends on the nature of the two surfaces in contact.

Ans. : Collect the following things: A thick book, nylon cloth, gunny cloth, plastic sheet, jute cloth, and sandpaper. Place the book on each of the materials and slide it on the floor one by one. If our book slides off the plastic sheet or nylon cloth, use adhesive tape to stick it firmly on the surface of the book. We will observe that the different materials offer different amounts of resistance to sliding. This activity shows that the force of friction depends on the nature of the surface in contact. In general, a smooth surface offers less friction than a rough surface.

99. Read the given passage below and answer the question:In a game of volleyball, players often push the moving ball to their teammates to make a winning move. Sometimes the ball is returned to the other side of the court by pushing or smashing it. In cricket, a batsman plays his or her shot by applying a force on the ball with the bat.

Q.1. What kind of force is applied by a batsman on a ball while hitting it?
(a) Magnetic Force
(b) Muscular Force

(c) Frictional Force
(d) Gravitation Force
Q.2. Force can be defined as:
(a) Work done
(b) Energy required to do work
(c) Push or Pull
(d) Push only
Q.3. In the given example of a volleyball game, what changes in force were brought about on the volleyball?
(a) Change in direction of motion
(b) Change in shape
(c) Change in state of motion
(d) Both Option (a) and (c)

Ans. : 1. Option (b) is correct.
Explanation: While hitting a ball, the force is caused by the action of muscles in the batsman's body. The force resulting from the action of muscles is known as the muscular force.
2. Option (c) is correct.
Explanation: A push or a pull on an object is called a force.
3. Option (a) and (c)
Explanation: When players hit the volleyball, its speed changes, and also the direction of its motion changes.

*** Answer the following questions in details [4 marks]** **[12]**

100. Why do we feel 'light' or like we are 'floating' just after our swing reaches its highest point and begins to come down?

Ans. : The feeling of lightness or floating experienced on a swing just after it reaches its highest point and begins to descend is due to a change in acceleration and the resulting sensation of reduced gravitational force. As the swing moves upward, it slows down, and at its highest point, it momentarily stops before changing direction. During this brief moment, the force of gravity is still acting on us, but it's not

counteracted by any upward force from the swing, leading to a feeling of weightlessness. As the swing starts to descend, we accelerate downwards, and the feeling of lightness intensifies because our body is essentially falling with the swing.

101. If a ball is thrown upwards, it slows down, stops momentarily, and then falls back to the ground. Name the forces acting on the ball and specify their directions.
1. During its upward motion
2. During its downward motion
3. At its topmost position

Ans. : When a ball is thrown upwards, the only force acting on it throughout its entire motion is gravity, which pulls it downwards. However, depending on the motion of the ball, the direction of this force relative to the ball's velocity changes.
1. During its upward motion: The force of gravity is downwards, opposing the upward motion of the ball, causing it to slow down.
2. During its downward motion: The force of gravity is still downwards, but now it aligns with the ball's direction of motion, accelerating it downwards.
3. At its topmost position: The ball has zero velocity, meaning it's momentarily stationary. At this point, the force of gravity is still downwards, but since the ball is not moving upwards or downwards, it has no net effect on the ball's motion.

102. A ball is released from the point P and moves along an inclined plane and then along a horizontal surface as shown in the figure. It comes to a stop at point A on the horizontal surface. Think of a way so that when the ball is released from the same point P, it stops (i) before the point A, (ii) after crossing the point A.

Ans. : The ball's motion is governed by the forces of gravity and friction. On the inclined plane, gravity provides the acceleration for the motion. On the horizontal surface, only friction acts on the ball.
• Stopping before A: Increasing friction on the horizontal surface will cause the ball to decelerate more rapidly, meaning it will come to a stop sooner, potentially before reaching point A.
• Stopping after A: Decreasing friction on the horizontal surface will reduce the deceleration, allowing the ball to travel further before losing all its kinetic energy and stopping.

*** Answer the following questions in on sentence** **[27]**

103. What is a force?

Ans. : A push or pull on an object is called force.

104. How many objects are needed to apply a force?

Ans. : At least two objects are needed to apply a force.

105. What is muscular force?

Ans. : The force resulting from the action of muscles is known as muscular force.

106. What is contact force?

Ans. : A force that can be applied only when it is in contact with an object is called a contact force.

107. Is gravity a property of Earth only?

Ans. : No

108. Name the force due to which every object falls on Earth.

Ans. : Gravitational force

109. What type of force is gravitational force?

Ans. : Non-Contact force

110. What kind of force is friction?

Ans. : contact force

111. Is it true that force acting on an object can also change its shape?

Ans. : Yes, it is true.

112. While sieving grains, small pieces fall. Which force pulls them down?

Ans. : Gravitational force

113. How can we change the speed and the direction of a moving body?

Ans. : By applying force.

114. Give two examples of contact force.

Ans. : Muscular force
Force of friction

115. Name the force exerted on a ball of dough to make a flat chapati.

Ans. : Muscular force

116. What kind of force is an electrostatic force?

Ans. : Non-contact force

117. Give one example of gravitational force.

Ans. : An apple falling from the tree to the ground.

118. What will be the net force on an object when two forces act on an object in the same direction?

Ans. : Forces applied on an object in the same direction add to one another.

119. During dry weather, clothes made of synthetic fibre often stick to the skin. Which type of force is responsible for this phenomenon?

Ans. : Magnetic force

120. Does the force of gravitation exist between two astronauts in space?

Ans. : Yes

121. A ball of dough is rolled into a flat chapatti. Name the force exerted to change the shape of the dough.

Ans. : Muscular force.

122. Where do we apply a force while walking?

Ans. : While walking, we apply force on the ground.

123. Does the force of gravity act on dust particles?

Ans. : Yes

124. A gas-filled balloon moves up. Is the upward force acting on it larger or smaller than the force of gravity?

Ans. : Upward force is larger than the force of gravity.

125. What happens when the two forces act in the opposite direction on an object?

Ans. : If two different forces act in opposite directions on an object, the net force acting on it is the difference between the two forces.

126. A girl is pushing a box towards the east. In which direction should her friend push the box so that it moves faster in the same direction?

Ans. : Towards the east.

127. A chapati maker is a machine that converts balls of dough into chapatis. What effect of force comes into play in this process?

Ans. : The force changes the shape of the dough.

128. Is there any other contact force?

Ans. : Yes. Force of friction.

129. What is muscular force? Why is it called a contact force?

Ans. : Muscular force: The force resulting from the action of muscles is known as muscular force. Since muscular force can be applied only when it is in contact with an object, it is also called a contact force.

* **Match the Following.** **[8]**

130.

Column A (Type of Force)	Column B (Example)
Q.1. Muscular force	(a) A cricket ball stopping on its own just before touching the boundary line
Q.2. Magnetic force	(b) A child lifting a school bag

Q.3. Frictional force	(c) A fruit falling from a tree
Q.4. Gravitational force	(d) A compass needle pointing North

Ans. :

Column A (Type of Force)	Column B (Example)
(i) Muscular force	(b) A child lifting a school bag
(ii) Magnetic force	(d) A compass needle pointing North
(iii) Frictional force	(a) A cricket ball stopping on its own just before touching the boundary line
(iv) Gravitational force	(c) A fruit falling from a tree

131.

Column I	Column II
Q.1. Newton	(i) Non-contact force
Q.2. Magnetic force	(ii) Unit of force
Q.3. 1 kilogram	(iii) Net force acting on a body
Q.4. Resultant force	(iv) 9.8 N

Ans. :

Column I	Column II
(a) Newton	(ii) Unit of force
(b) Magnetic force	(i) Non-contact force
(c) 1 kilogram	(iv) 9.8 N
(d) Resultant force	(iii) Net force acting on a body

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