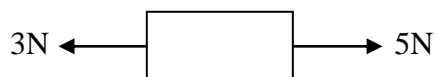




Resultant force

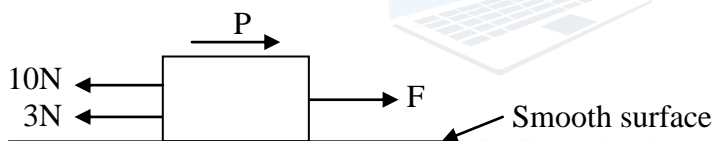
❖ **Answer all the questions.**

01. Two horizontal forces acting on an object are as shown below. The object is,



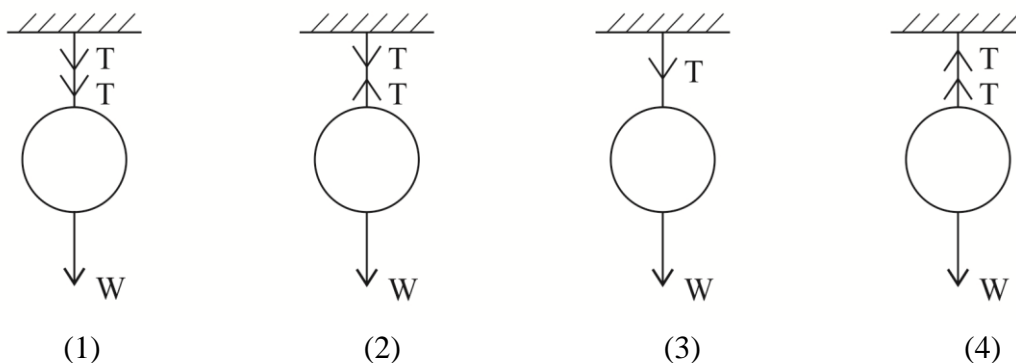
- (1). at rest
- (2). moving in a uniform velocity in the direction of 3N force
- (3). Accelerating in the direction of 5N force
- (4). decelerating in the direction of 5N force

02. What is the force 'F' which needs to be applied to move the object towards the direction 'P' with an acceleration of 4ms^{-1}

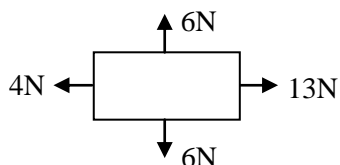


- (1). 10N
- (2). 15N
- (3). 5N
- (4). 23N

03. A ball is hung using a string. If the tension of the string is 'T' and the weight of ball is 'W' which of the following diagrams shows the forces marked correctly?

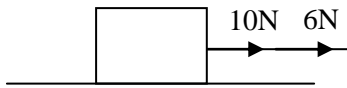


04. The way of acting forces an cuboidal shaped object is given in the diagram. What is the resultant force acts on this object?



- (1). $9\text{N} \rightarrow$
- (2). $12\text{N} \uparrow$
- (3). $10\text{N} \uparrow$
- (4). $4\text{N} \leftarrow$

05. If the object is pulled by two forces 10N and 6N along the same direction, what is the resultant force?



- (1). $4\vec{N}$ (3). $6\vec{N}$
 (2). $16\vec{N}$ (4). $16\vec{N}$

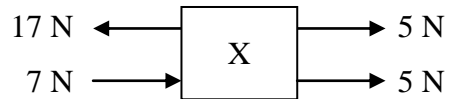
06. The diagram shows a force of 20 N and 8 N acting in opposite directions. What is the resultant force?



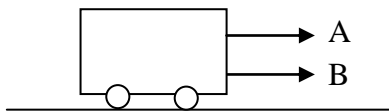
- (1). 8 N (2). 12 N (3). 20 N (4). 28 N

07. The diagram shows how the forces are acting on an object which is kept on a smooth surface. Select the correct statement.

- (1). Object X does not move
 (2). Object X moves towards the force 17 N
 (3). Object X moves towards the force 7 N
 (4). Object X moves towards the force 5 N

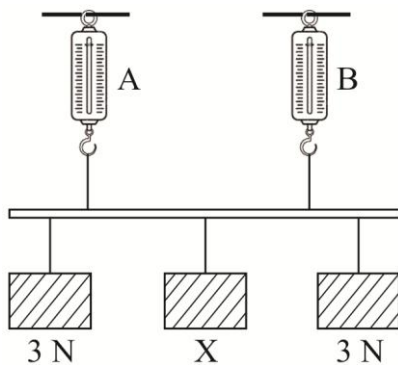


08. When 2 strings tied to a trolley kept on a table are tied parallel, the resultant force is 20 N. If the force exerted on A is 12 N, the force exerted by the string B is



- (1). 20 N (2). 4 N (3). 8 N (4). 1.5 N

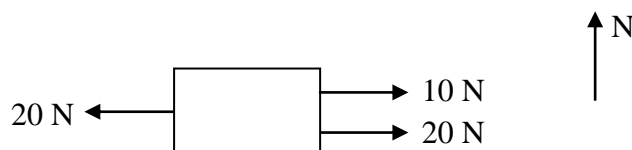
09. A weightless rod is hung by two spring balances A and B as shown in the figure. If the readings of the two spring balances are 5 N and 5 N, what is the value for X?



- (1). 4 N
 (2). 6 N
 (3). 10 N
 (4). 10 N

10. The resultant force of the object is

- (1). 30 N to east
 (2). 10 N to west
 (3). 10 N to east
 (4). 30 N to west




Semi structured essay

01. 50kg of a boy is standing on the floor as mentioned.

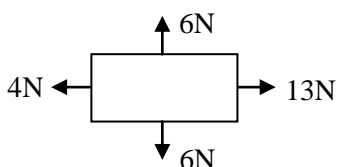
(i). How many forces are acting on him



(ii).  When this student is sitting on a chair, what is/are the place/s where parallel forces are acting?

(iii). What is the resultant force while he is sitting on the chair?

(iv). The way of acting forces on a cuboidal shaped object is given in the diagram. What is the resultant force acting on this object?

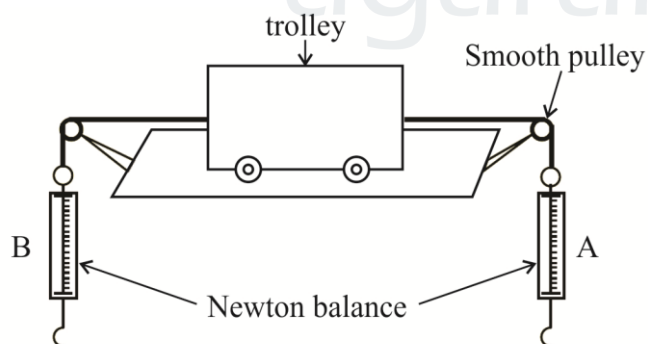


02. When an object is hung by a Newton balance, the reading was 80N.

(i). Draw this in a diagram and mark the forces acting on it.

(ii). If another object of 500g was attached to the Newton balance, what would be the resultant force in Newtons?

03.



A trolley on a smooth table attached to two Newton balance A and B

(i). Apply 4N force on each balance. What is the observation?

(ii). Apply 4N by balance A and 6N force on balance B. What is the observation?

(iii). What is the factor that is trying to explain by this experiment?