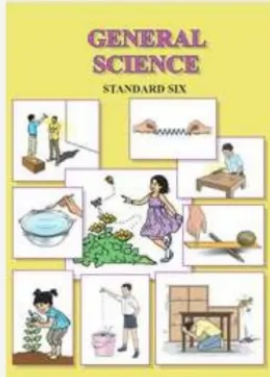


Maharashtra Board Solutions Class

6-Science: Chapter 10- Force and Types of Force

BOOK SOLUTIONS
CLASS 6
GENERAL SCIENCE

CHAPTER 10
Force and Types of Force

Maharashtra Board Solutions→



For any clarifications or questions you can write to info@indcareer.com

Postal Address

IndCareer.com, 52, Shilpa Nagar, Somalwada Nagpur - 440015
Maharashtra, India

WhatsApp: +91 9561 204 888, **Website:** <https://www.indcareer.com>

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>



Maharashtra Board Solutions Class

6-Science: Chapter 10- Force and Types of Force

Class 6: Science Chapter 10 solutions. Complete Class 6 Science Chapter 10 Notes.

Maharashtra Board Solutions Class 6-Science: Chapter 10- Force and Types of Force

Maharashtra Board 6th Science Chapter 10, Class 6 Science Chapter 10 solutions

Questions and Answers

1. Choose the term and fill in the blanks:

Question a.

..... has to be applied to change the of a object.

(moving, direction, force)

Answer:

force, direction, moving

Question b.

When an elephant drags a wooden log over the land, the forces that are applied on the log are, and

(muscular force, mechanical force, gravitational force, frictional force)

Answer:

muscular force, gravitational force, frictional force.

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-force-and-types-of-force/>

Question c.

A ball was set rolling on a large table. If its has to be changed, a will have to be applied on it.

(force, motion, gravitation)

Answer:

motion, force

Question d.

The force of friction always acts the motion.

(along, against)

Answer:

against

2. Match the following:

Question a.

Column 'A'

1. An ox pulling a cart
2. Lifting heavy iron object with a crane
3. Weighing with a spring balance
4. Applying brakes to a bicycle.
5. Picking up pieces of paper with a plastic scale.

Column 'B'

- a. Magnetic force
- b. Electrostatic force
- c. Muscular force
- d. Gravitational force
- e. Frictional force

Answer:

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>

Column 'A'

Column 'B'

1. An ox pulling a cart
2. Lifting heavy iron object with a crane
3. Weighing with a spring balance
4. Applying brakes to a bicycle.
5. Picking up pieces of paper with a plastic scale.

- c. Muscular force
- a. Magnetic force
- d. Gravitational force
- e. Frictional force
- b. Electrostatic force

3. One or more forces are acting in the following examples. Name them.

Question a.

An object falling from a tall building

Answer:

Gravitational force

Question b.

An aeroplane flying in the sky.

Answer:

Mechanical force

Question c.

Squeezing sugarcane juice with a squeezer.

Answer:

Muscular or mechanical force

Question d.

Winnowing foodgrain

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>

Answer:

Muscular force, gravitational force

4. Explain in your own words giving one example each.

Muscular force, gravitational force, mechanical force, electrostatic force, the force of friction and magnetic force.

Question a.

Muscular force:

Answer:

The force applied with the help of muscles is called muscular force.

e.g. When a bullock pulls the load of a cart with sugarcane, he uses the force of his muscles that is muscular force.

Question b.

Gravitational force:

Answer:

The force applied by the earth to pull the objects towards itself is called gravitational force.

e.g. When a fruit falls from a tree, it is the gravitational force of the earth that pulls the fruit.

Question c.

Mechanical force:

Answer:

The force applied by means of a machine is called mechanical force. Some machines run by muscular force while some use electricity or fuel.

e.g. Washing machine, electric pump uses electricity to work.

Question d.

Electrostatic force:

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>

Answer:

Static electricity is produced on materials like rubber, plastic and ebonite due to friction. The force exerted by such electrically charged materials is called electrostatic force, e.g. When a plastic comb is rubbed against the dry hair, comb develops electrostatic charge.

Question e.

The force of friction:

Answer:

When two surfaces rub against each other, a force of friction is produced. This force always acts against direction of motion, e.g. A ball rolling over a flat surface stops at certain distance due to friction between the ball and the surface.

Question f.

Magnetic force:

Answer:

The force exerted by a magnet is called magnetic force.

e.g. In a pin holder, the magnet attracts the pins.

5. Why?

Question a

Machines are oiled from time to time.

Answer:

To reduce the friction between the parts of machines, they are oiled. This will help efficient working of machines.

Question b.

An object thrown upwards comes down after reaching a point.

Answer:

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>

An object is pulled by the gravitational force of the earth. Hence an object thrown upwards comes down after reaching at certain point.

Question c.

Powder is sprinkled on a carrom board.

Answer:

When powder is sprinkled on a carrom board, friction between the coin and the board decreases so that the coin can be pocketed easily.

Question d.

The ramp at a railway station has a rough surface.

Answer:

The rough surface of the ramp increases the friction between feet and the surface. This helps us to walk on the ramp without skidding or falling.

6. In what way are we different?

Question a.

Muscular force and Mechanical force

Answer:

Muscular force	Mechanical force
1. The force applied with the help of muscles is called muscular force. e.g. A boy kicking a football.	1. The force applied by means of machine is called mechanical force. e.g. An electric pump works on electricity.
2. It is created by our muscles.	2. It is created by electricity or fuel or muscular force

Question b.

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>

A force of friction and Gravitational force

Answer:

Force of friction

1. When two surfaces rub against each other, the force of friction comes into force.

2. It comes to act between two surfaces.

Gravitational force

1. The force applied by the earth to pull an object towards itself, is called a gravitational force.

2. It exists between two objects or an object and the earth.

7. Write answers to the following questions in your own words.

Question a.

What are the things that can be done by applying force?

Answer:

By applying force:

1. we can set an object in motion.
2. we can stop a moving object.
3. we can change the speed or direction or both of a moving object.
4. we can change the shape of an object.

Question b.

What is meant by weight?

Answer:

1. The gravitational force acting on an object is called its weight.
2. Greater force must be applied to lift a greater weight.

Question c.

Which machines run on muscular force?

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>

Answer:

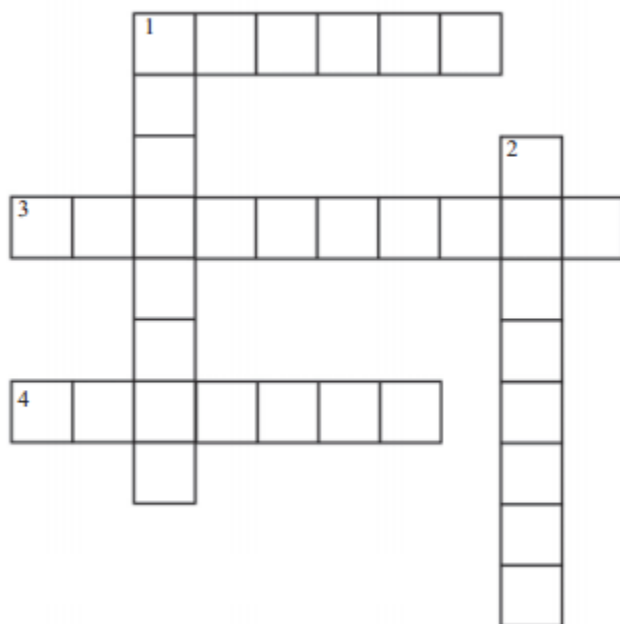
The machines that run on muscular force are:

1. Bicycle
2. Hand cart
3. Boat
4. Cycle rickshaw
5. Stretching of a spring
6. Ball pen
7. Vegetable chopper
8. Sharpener
9. Pulley
10. Fruit peeler

8. Solve the following crossword puzzle.

Question a.

Solve the following crossword puzzle.



Down:

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>

1. force is applied to push a scooter that has failed.

2. force can be used to pick up scattered pins.

Across:

3. A pulls iron nails towards itself.

4. force is used when farm is ploughed with a tractor.

5. It is due to the force of that raindrops fall to the ground.

Answer:



Activity:

Question 1.

Collect more information about the various forces that are used in our day-to-day life.

Question 2.

Make a list of such actions where many forces are applied simultaneously.

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>

Important Questions and Answers

Choose the term and fill in the blanks:

Question 1.

When powder is sprinkled on a carrom board, friction

(increases, decreases)

Answer:

decreases

Question 2.

Electrostatic force is due to

(gravitation, friction)

Answer:

friction

Question 3.

Fruits fall on the ground due to force.

(mechanical, gravitational)

Answer:

gravitational

Question 4.

Friction between two rough surfaces is than between two smooth surfaces.

(greater, lesser)

Answer:

greater

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>

Question 5.

The sound created by a stone dropped in a bucket of water from 100 cm height is than that dropped from 20 cm height.

(milder, louder)

Answer:

louder

Question 6.

A scooter has stopped in the middle of the road as the petrol tank has become empty. So Raju has to use force to take it to petrol pump.

(mechanical, muscular)

Answer:

muscular

One or more forces are acting in the following examples. Name them.

Question 1.

Srikant is playing basketball

Answer:

Muscular force

Question 2.

Raju rubs a peacock feather between pages of his notebook

Answer:

Electrostatic force

Question 3.

When you rub the palm of your hands, you feel the heat on the palms

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>

Answer:

Frictional force

Question 4.

A blacksmith uses a hammer to beat the hot piece of iron

Answer:

Muscular force

Question 5.

A cricketer hits the ball, but it stops just before the boundary line

Answer:

Frictional force

Question 6.

We can walk on the road without falling down.

Answer:

Frictional force

Give scientific reasons:

Question 1.

Magnet is used to lift heavy iron bar.

Answer:

A magnet attracts the iron bar. As a result it is easier to lift the heavy iron bar using magnetic force.

Question 2.

An inflated balloon when rubbed against a silk cloth, pulls the hair on our skin.

Answer:

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>

When an inflated balloon is rubbed against a silk cloth, it develops electrostatic force due to friction. This force pulls the hair on our skin.

Question 3.

We are likely to slip when we walk on a oily or wet floor.

Answer:

Wet or oily floor reduces the friction between our feet and surface. Hence we are likely to slip on wet or oily floor.

Distinguish between:

Question 1.

Force of friction and Electrostatic force

Answer:

Force of friction	Electrostatic force
1. It exists between any two surfaces in contact.	1. It develops where certain objects are rubbed against certain material.
2. No electric charge is developed, sometimes heat is developed. e.g. A brake is applied on a bicycle.	2. Electric charge is developed. e.g. Thermocol rubbed against silk cloth.

Answer the following:

Question 1.

Why do planets revolve round the sun in definite orbits?

Answer:

1. The gravitational force operates between the sun and the planets in the solar system.
2. Hence, they revolve round the sun in definite orbits.

Question 2.

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>

Which forces are acting upon an aeroplane taking off into the sky?

Answer:

Aeroplane uses mechanical force, Pilot exerts muscular force. Frictional force between aeroplane and air, gravitational force due to weight of an aeroplane.

Question 3.

What happens to the iron nail when the magnet is taken away from it?

Answer:

1. As we take the magnet away from the iron nail, it does not attract the iron nail as magnetic force decreases.
2. Magnet is unable to exert force if the nail is not placed in the range of the magnetic field.

Question 4.

When brakes are applied while riding a bicycle, it stops after running a distance. Why?

Answer:

1. When brakes are applied while riding a bicycle, frictional force comes to act between the tyres of the bicycle and the surface.
2. This force opposes the tendency of the bicycle to stop.
3. Hence, the bicycle has to overcome this force before it stops.

Can you tell?

Question 1.

What happens when you hold the two ends of a spring and pull them apart?

Answer:

Its shape changes due to the force exerted by pull.

Question 2.

What happens when a blacksmith hammers a red hot piece of iron?

Answer:

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>

Shape of iron piece changes.

Observe and discuss:

Observe the figures given and name the force needed for the motion.

Question 1.

Boat with boatman.



Answer:

Muscular force

Question 2.

Bullock cart.

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>



Answer:

Muscular force

Question 3.

A tractor.



Answer:

Mechanical force

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>

Question 4.

Sewing machine.



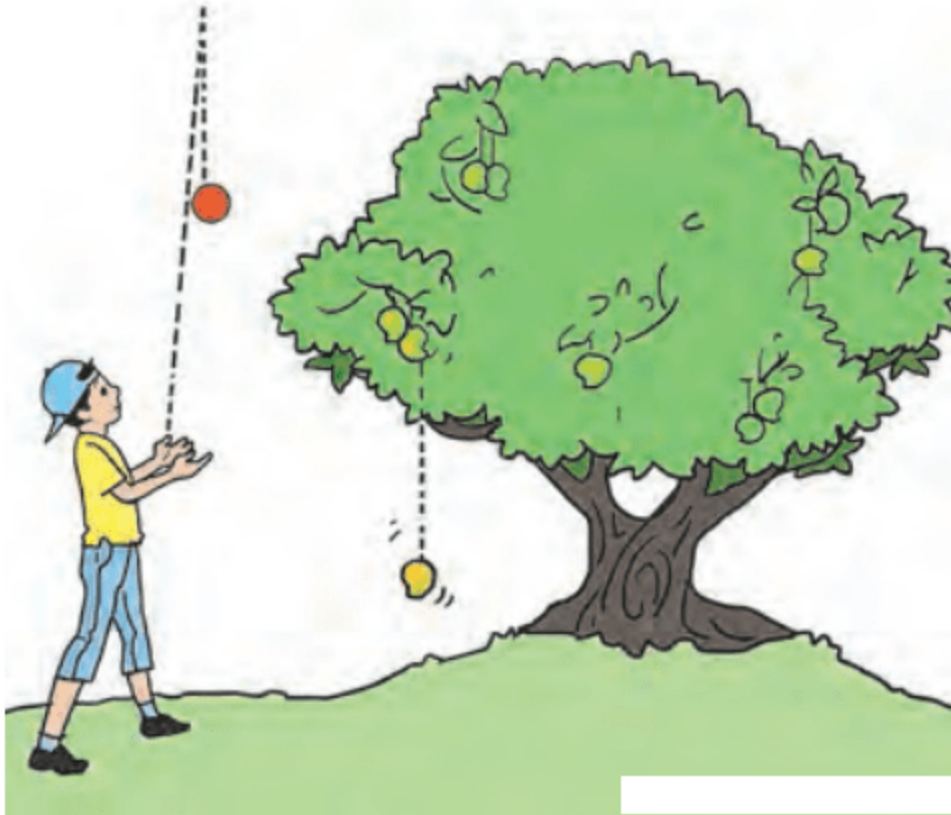
Answer:

Mechanical force

Question 5.

Fruit falling from tree.

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>



Answer:

Gravitational force

Question 6.

A man carrying heavy sac.

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>



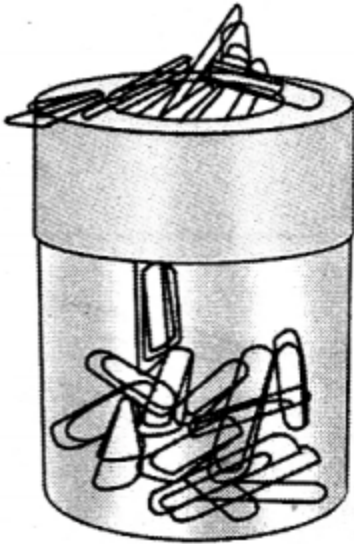
Answer:

Gravitational force

Question 7.

A pin holder.

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>

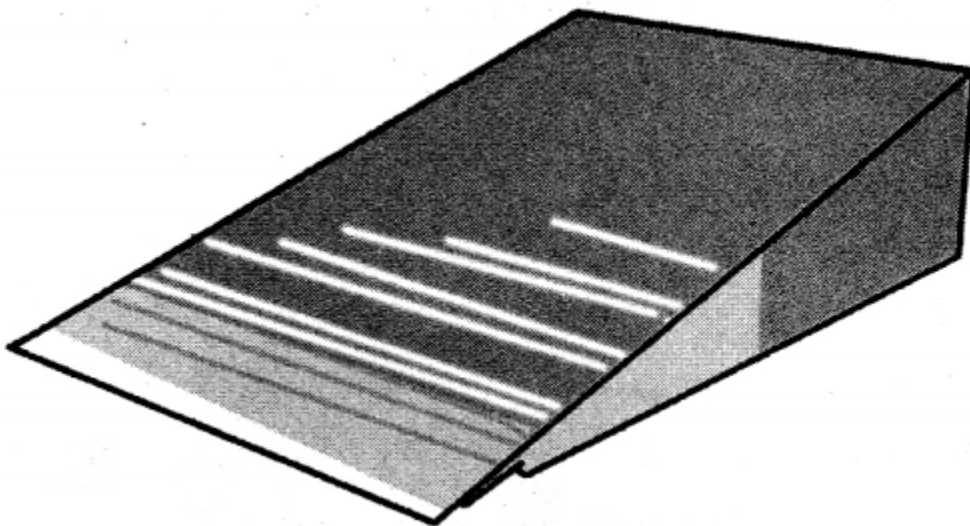


Answer:

Magnetic force

Question 8.

A ramp.



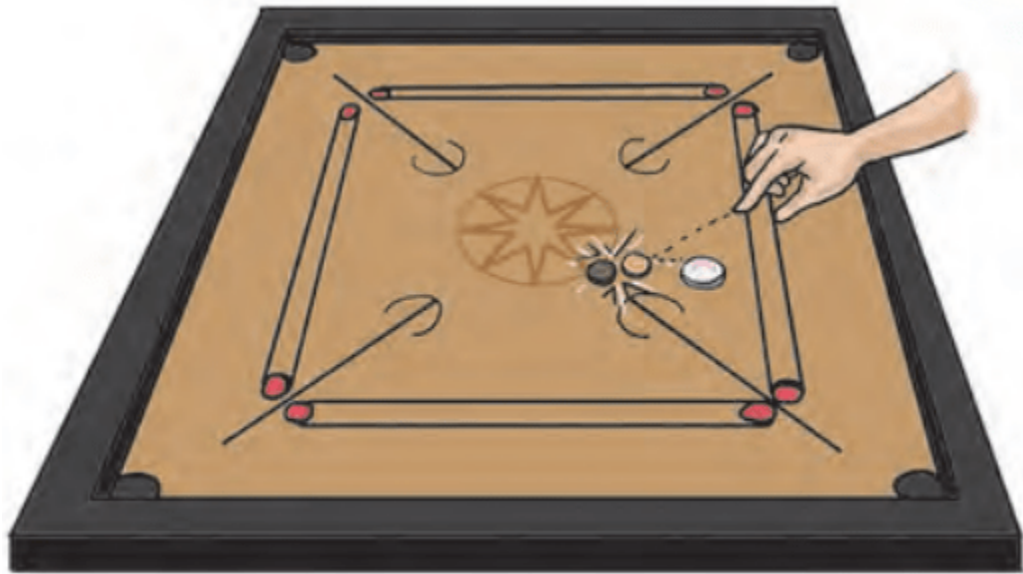
<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>

Answer:

Gravitational force

Question 9.

Carrom board.



Answer:

Frictional force

Question 10.

Mixer grinder.

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>



Answer:

Mechanical force



<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>

Maharashtra Board Solutions

Class 6 Science

- Chapter 1- Natural Resources - Air, Water and Land
- Chapter 2- The Living World
- Chapter 3- Diversity in Living Things and their Classification
- Chapter 4- Disaster Management
- Chapter 5- Substances in the Surroundings - Their States and Properties
- Chapter 6- Substances in Daily Use
- Chapter 7- Nutrition and Diet
- Chapter 8- Our Skeletal System and the Skin
- Chapter 9- Motion and Types of Motion
- Chapter 10- Force and Types of Force
- Chapter 11- Work and Energy
- Chapter 12- Simple Machines
- Chapter 13- Sound
- Chapter 14- Light and the Formation of Shadows
- Chapter 15- Fun with Magnets
- Chapter 16- The Universe

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>

About About Maharashtra State Board (MSBSHSE)

The Maharashtra State Board of Secondary and Higher Secondary Education or MSBSHSE (Marathi: महाराष्ट्र राज्य माध्यमिक आणि उच्च माध्यमिक शिक्षण मंडळ), is an **autonomous and statutory body established in 1965**. The board was amended in the year 1977 under the provisions of the Maharashtra Act No. 41 of 1965.

The Maharashtra State Board of Secondary & Higher Secondary Education (MSBSHSE), Pune is an independent body of the Maharashtra Government. There are more than 1.4 million students that appear in the examination every year. The Maha State Board conducts the board examination twice a year. This board conducts the examination for SSC and HSC.

The Maharashtra government established the Maharashtra State Bureau of Textbook Production and Curriculum Research, also commonly referred to as Ebalbharati, in 1967 to take up the responsibility of providing quality textbooks to students from all classes studying under the Maharashtra State Board. MSBHSE prepares and updates the curriculum to provide holistic development for students. It is designed to tackle the difficulty in understanding the concepts with simple language with simple illustrations. Every year around 10 lakh students are enrolled in schools that are affiliated with the Maharashtra State Board.

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>

FAQs

Where do I get the Maharashtra State Board Books PDF For free download?

You can download the Maharashtra State Board Books from the eBalbharti official website, i.e. cart.ebalbharati.in or from this article.

Add image

How to Download Maharashtra State Board Books?

Students can get the Maharashtra Books for primary, secondary, and senior secondary classes from here. You can view or download the Maharashtra State Board Books from this page or from the official website for free of cost. Students can follow the detailed steps below to visit the official website and download the e-books for all subjects or a specific subject in different mediums.

Step 1: Visit the official website ebalbharati.in

Step 2: On the top of the screen, select "Download PDF textbooks"

Step 3: From the "Classes" section, select your class.

Step 4: From "Medium", select the medium suitable to you.

Step 5: All Maharashtra board books for class 11th will now be displayed on the right side.

Step 6: Click on the "Download" option to download the PDF book.

Who developed the Maharashtra State board books?

As of now, the MSCERT and Balbharti are responsible for the syllabus and textbooks of Classes 1 to 8, while Classes 9 and 10 are under the Maharashtra State Board of Secondary and Higher Secondary Education (MSBSHSE).

How many state boards are there in Maharashtra?

The Maharashtra State Board of Secondary & Higher Secondary Education, conducts the HSC and SSC Examinations in the state of Maharashtra through its nine Divisional Boards located at Pune, Mumbai, Aurangabad, Nasik, Kolhapur, Amravati, Latur, Nagpur and Ratnagiri.

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>

About IndCareer

IndCareer.com is a leading developer of online career guidance resources for the Indian marketplace. Established in 2007, IndCareer.com is currently used by over thousands of institutions across India, including schools, employment agencies, libraries, colleges and universities.

IndCareer.com is designed to assist you in making the right career decision - a decision that meets your unique interests and personality.

For any clarifications or questions you can write to **info@indcareer.com**

Postal Address

IndCareer.com
52, Shilpa Nagar,
Somalwada
Nagpur - 440015
Maharashtra, India

WhatsApp: +91 9561 204 888

Website: <https://www.indcareer.com>

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-6-science-chapter-10-for-ce-and-types-of-force/>