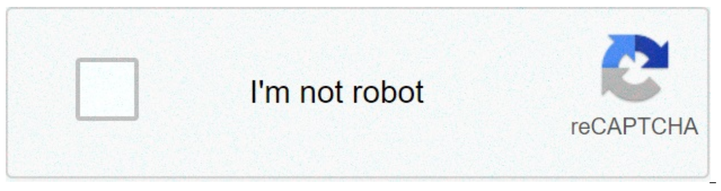


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# Ncert class 6 science chapter 13 questions and answers

VERY SHORT ANSWER TYPE QUESTIONS 1. Name the compound of iron contained in lode stone. Ans: The compound of iron is iron oxide or magnetite. 2. Name the shepherd after which magnet was named. Ans: Magnets. 3. How can you separate a magnetic substance from a mixture? Ans: By using a bar magnet, the magnetic substance is separated from mixture. 4. At which place on a magnet, its magnetic force is maximum? Ans: At poles. 5. In which direction does a suspended magnet come to rest? Ans: Magnet comes to rest in N-S (north-south) direction. 6. What happens when N-pole of a magnet is brought near the N-pole of a suspended magnet? Ans: There is repulsion between these two magnets as there is repulsion between like poles. SHORT ANSWER TYPE QUESTIONS 1. Draw the diagram of (a) Bar magnet (b) Horse-shoe magnet. Ans: 2.Identify magnetic and non-magnetic substances from the list given below: Iron, Steel, Nickel, Plastic, Wood, Copper and a Stainless Steel spoon Ans: 3. Draw a diagram of a magnetic compass. Ans: 4. Write main properties of a magnet. Ans: (i) Magnet has two poles—south pole and north pole. (ii) Poles of magnet cannot be isolated. (iii) Like poles repel each other and unlike poles attract each other. (iv) Freely suspended magnet aligns in N-S direction. 5.Write two methods by which a magnet can be demagnetised. Ans: (1) By hammering the magnet strongly. (2) By heating a magnet strongly and keeping it in the east-west direction. 6. It is advised to keep the magnets away from television, mobiles, CD and computers Explain why? Ans: Television, mobiles, CD, computers and many more devices are made up of magnetic materials and magnets in it. If you bring a magnet closer to it then it will spoil these devices. 7. Few iron nails and screws got mixed with the wooden shavings while a carpenter was working with them.How can you help him in getting the nails and screws back from the scrap without wasting his time in searching with his hands? Ans: With the help of a magnet we can attract all iron nails and screws and can separate them from the wooden shavings. As iron nails and screws are magnetic materials and will get attracted to the magnet,whereas wooden shavings are non-magnetic. 8. It is said that repulsion is a sure test for magnetism. Why is it so? Ans: To identify the magnet, repulsion (like poles of two magnets repel) is the only test which will let you know whether the given rod is an iron rod or a bar magnet. Because a magnet attracts an iron object and unlike poles of magnets also attract each other. 9. A given bar magnet was broken into pieces. Where will be its North and South pole? Ans: If you cut a bar magnet into pieces then the end labelled as North remains north and the other end formed will be south. Similarly the end that was pointing south will be south pole and its opposite end will be the new north pole. 10. You are given two rods. Out of these, one is an iron rod and the other one is magnet, how will you identify these rods? Ans: Take both the rods and suspend them separately. Bring one end of a bar magnet close to both the ends of the suspended rod. If it shows attraction at both the ends then it is an iron rod. If it shows attraction at one end and repulsion at the other end then it is a bar magnet. LONG ANSWER TYPE QUESTIONS 1. Show that a magnet has two poles. What are the properties of the poles of a magnet? Ans. We know that pole is the point where the strength of the magnet is maximum. So more and more iron particles will be attracted at poles of a magnet when we bring a magnet near the iron particles. We will observe the crowdness of particles at the ends of magnet. This indicates the presence of two poles in a magnet. Hence poles are present in a magnet in pair. If a magnet is divided into two parts, each part also possesses a pair of poles. 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Download NCERT Solutions Class 6 Science chapter 13 Fun With Magnets In PDF Format You can also download here the NCERT Solutions Class 6 Science chapter 13 Fun With Magnets in PDF format. Click Here to download NCERT Solutions for Class 6 Science chapter 13 Fun With Magnets Q.1: Fill in the blanks: (i) Artificial magnets are made in different shapes such as _____ (ii) The materials which are attracted towards magnets are called and _____ (iii) Paper is not a material._____ (iv) In olden days, sailors used to find direction by suspending a piece of_____ (v) A magnet always has poles_____ Ans : (i) Artificial magnets are made in different shapes such as bar magnets, horse-shoe magnets, and cylindrical magnets. (ii) Materials which are attracted towards magnets are called magnetic materials. (iii) Paper is not a magnetic material. Paper is not attracted by magnet. Hence, it is not a magnetic material. (iv) In olden days, sailors used to find direction by suspending a piece of bar magnet . A freely suspended magnet always comes to rest in the North-South direction. Hence, sailors used to find direction by suspending a piece of bar magnet. (v) A magnet always has two poles. A magnet has two poles called the south pole (S) and the north pole (N). Q.2: State whether the following statements are 'True' or 'False'. (i) A cylindrical magnet has only one pole. (ii) Artificial magnets were discovered in Greece. (iii) Similar poles of a magnet repel each other. (iv) Maximum iron filings stick in the middle of a bar magnet when it is brought near them. (v) Bar magnets always point towards the North-South direction. (vi) A compass can be used to find the East—West direction at any place. (vii) Rubber is a magnetic material. Ans : (i) False Magnets always have two poles; the north pole and the south pole. A cylindrical magnet also has two poles. (ii) False Artificial magnets were not discovered in Greece. Only natural magnets were discovered in Greece. (iii) True Like poles of magnets repel each other, while unlike poles of magnets attract each other. The south pole of a magnet attracts the north pole of another magnet and repels the south pole of that magnet. (iv) False The amount of iron filings that stick to a bar magnet depends on the strength of the magnet. The magnetism of a bar magnet is maximum at its two poles and minimum in the middle. Hence, maximum iron filings will stick at the two ends of the magnet and minimum in the middle. (v) True A freely suspended magnet always points towards the North-South direction. (vi) True A magnetic compass always points towards the North—South direction. If the North—South direction is known, then the East—West direction can also be determined. This direction is perpendicular to the North-South direction, i.e., perpendicular to the compass needle in the same plane. (vii) False Rubber is not attracted by a magnet. Hence, it is a non-magnetic material. Q.3: It was observed that a pencil sharpener gets attracted by both the poles of a magnet, although its body is made of plastic. Name a material that might have been used to make some part of it. Ans : The blade of a pencil sharpener is made of iron. Iron is a magnetic material. Since magnets can attract objects made of magnetic materials, a pencil sharpener gets attracted towards both poles of a magnet. Answer: The blade of a pencil sharpener is made of iron. Iron is a magnetic material. Since magnets can attract objects made of magnetic materials, a pencil sharpener gets attracted towards both poles of a magnet. Q.4: Column I shows different positions in which one pole of a magnet is placed near the other. Column II indicates the resulting action between them for each situation. Fill in the blanks. Ans : Like magnetic poles repel each other, while unlike magnetic poles attract each other. Q.5: Write any two properties of a magnet. Ans : Two properties of a magnet are: (i) Magnets attract objects made of magnetic materials like iron. (ii) Like magnetic poles repel each other, while unlike magnetic poles attract each other. NCERT / CBSE Book for Class 6 Science You can download the NCERT Book for Class 6 Science in PDF format for free. Otherwise you can also buy it easily online. Click here for NCERT Book for Class 6 Science Click here to buy NCERT Book for Class 6 Science All NCERT Solutions Class 6 All NCERT Solutions You can also check out NCERT Solutions of other classes here. Click on the class number below to go to relevant NCERT Solutions of Class 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12. Class 4 Class 5 Class 6 Class 7 Class 8 Class 9 Class 10 Class 11 Class 12 Download the NCERT Solutions app for quick access to NCERT Solutions Class 6 Science Chapter 13 Fun With Magnets. It will help you stay updated with relevant study material to help you top your class! 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It is important for the students to go through these NCERT solutions to get knowledge of the type of question asked in the chapter.Class 6 Science Chapter 13 Fun With Magnets Questions and Answers PDFExercise QuestionsQuestion 1: Fill in the blanks in the following:(i) Artificial magnets are made in different shapes such as_____ ,_____ and _____(ii) The materials which are attracted towards a magnet are called_____(iii) Paper is not a _____(iv) In olden days, sailors used to find direction by suspending a piece of _____(v) A magnet always has _____ poles.Ans:(i) bar magnet, horseshoe magnet and cylindrical magnet(ii) magnetic materials(iii) magnetic(iv) bar magnet(v) two or a pair ofQuestion 2. State whether the following statements are true or false:(i) A cylindrical magnet has only one pole.(ii) Natural magnets were discovered in Greece.(iii) Similar poles of a magnet repel each other.(iv) Maximum iron filings stick in the middle of a bar magnet when it is brought near them.(v) Bar magnets always point towards North-South direction when suspended freely in air.(vi) A compass can be used to find East-West direction at any place.(vii) Rubber is a magnetic material.Answer: (i) False(ii) True(iii) True(iv) False(v) True(vi) True(vii) FalseQuestion 3: It was observed that a pencil sharpener gets attracted by both the poles of a magnet although its body is made of plastic. Name a material that might have been used to make some part of it.Answer: There is a blade in pencil sharpener which is made up of iron. Iron is a magnetic material that is why it is attracted by the poles of magnet.Question 4: Column I shows different positions in which one pole of a magnet is placed near that of the other. Column II indicates the resulting action between them for each situation. Fill in the blanks.Column IColumn IIN-N_____N-___AttractionS-N_____-NRepulsionAnswer:Column IColumn IIN – NRepulsionN – SAttractionS – NAttractionS – SRepulsionQuestion 5: Write any two properties of a magnet.Answer: Two properties of magnet are as followsOpposite poles of two magnets attract each other while like poles of two magnets repel each other.A freely suspended magnet always aligns in N-S direction.Question 6: Where are poles of a bar magnet located?Answer: The poles of bar magnet are located at its two end points.Question 7: A bar magnet has no markings to indicate its poles. How would you find out near which end is its north pole located?Answer: Hang up the magnet by a light thread so that it hangs freely. When it comes to rest, we notice that the magnet is lying in a North-South direction.Question 8: You are given an iron strip. How will you make it into a magnet?Answer:Take a rectangular piece of iron bar.Take a bar magnet and keep in contact with one of its poles with one edge of the bar of iron.Without lifting the bar magnet, move it along the length of the iron bar till you reach the other end.Lift the magnet and bring the pole (the same pole you started with) to the same point of the iron bar from which you beganMove the magnet again along the iron bar in the same direction as you did before. Repeat this process about 30-40 times.Bring few all pins near to the iron bar and check if it is converted to a magnet or not.Question 9: How is a compass used to find directions?Answer:  A compass is a small case of glass. A magnetised needle is pivoted inside the box. The needle can rotate freely. Compass also has a dial with directions marked on it. The compass is kept at the place where we want to know the directions. When the needle comes to rest it indicates north-south direction. The compass is then rotated until the north and south marked on the dial are at the two ends of the needle. Usually, different colours are used to point the ends of needle to identify the north and the south poles.Question 10: A magnet was brought from different directions towards a toy boat that has been floating in water in a tub. Affect observed in each case is stated in Column I. Possible reasons for the observed affects are mentioned in Column II. Match the statements given in Column I with those in Column II.Column IColumn IIBoat gets attracted towards the magnetBoat is fitted with a magnet with north pole towards its headBoat is not affected by the magnetBoat is fitted with a magnet with its south pole toward its headBoat moves towards the magnet if north pole of the magnet is brought near its headBoat has a small magnet fixed along its lengthBoat moves away from the magnet when north pole is brought near its headBoat is made of magnetic materialBoat floats without changing its directionBoat is made up of non-magnetic materialAnswer:Column IColumn IIBoat gets attracted towards the magnetBoat is made up of magnetic materialBoat is not affected by the magnetBoat is made up of non-magnetic materialBoat moved towards the magnet when north pole is brought near its headBoat is fitted with a magnet with south pole towards its headBoat moves away from the magnet when north pole is brought near its headBoat is fitted with a magnet with north pole towards its headBoat floats without changing its directionBoat has a small magnet fixed along its lengthClass 6 Science Chapter 13 Fun With Magnets Extra QuestionsClass 6 Science Chapter 13 Fun With Magnets From Extra Questions section includes multiple choice questions (MCQs), short and answer type questions etc. All these questions are very important from examination point of view.Extra QuestionsMultiple Choice Questions (MCQs)(i) Which is an example of a magnetic substance?(a) Iron(b) Nickel(c) Cobalt(d) All of theseAnswer: (d) All of these(ii) Magnets have a shape(a) cylindrical(b) ball ended(c) horse shoe(d) all of theseAnswer: (d) all of these(iii) When a bar magnet is brought near iron dust, most of the dust sticks(a) near the middle(b) equally everywhere(c) near two ends(d) at the middle and endsAnswer: (c) near two ends(iv) A freely suspended bar magnet rests in(a) north-south directions(b) east-west directions(c) upside down(d) any direction by chanceAnswer: (a) north-south directions(v) Attraction is seen between the poles of two bar magnets in the case of(a) N-pole of one magnet with N-pole of other(b) N-pole of one magnet with S-pole of other(c) S-pole of one magnet with S-pole of other(d) all of these cases will show attractionAnswer: (b) N-pole of one magnet with S-pole of other(vi) Which is a natural magnet?(a) Magnetite(b) Hematite(c) Bakelite(d) CopperAnswer: (a) Magnetite(vii) Choose the wrong statement(a) Heat can destroy magnetic properties of a magnet. '(b) Magnets are made up of different materials and different shapes.(c) There is a maximum attraction in middle of a magnet.(d) Magnetite does not show magnetic properties.Answer: (d) Magnetite does not show magnetic properties.(viii) The magnetic properties of a magnet cannot be destroyed by(a) hammering(b) heating(c) dropping on a hard surface(d) boilingAnswer: (d) boiling(ix) Which two ends of a magnet are called magnetic poles?(a) North pole(b) South pole(c) North and south pole(d) Self demagnetisationAnswer: (c) North and south pole(x) Magnets attract(a) wood(b) plastic(c) paper(d) ironAnswer: (d) ironShort Answer Type QuestionsQuestion 1. Who discovered magnet?Answer: An old shepherd who lived on Create Island named Magnes discovered it.Question 2. Name the country in which it (magnet) was discovered.Answer: Greece.Question 3. When was magnetite discovered?Answer: Magnetite was discovered around 800 B.C.Question 4. What is magnetite called now?Answer: Magnetite like materials are called magnets now.Question 5. What are magnetic materials (substances)?Answer: Materials which get attracted by the magnet are called magnetic materials (substances).Question 6. What are non-magnetic substances?Answer: Substances which are not attracted by magnet are called non-magnetic substances.Question 7: Write the names of some non-magnetic substances.Answer: Rubber, Cotton, Plastic, Wood, Button, Cloth, etc.Question 8. Name the first magnet.Answer: Lodestone.Question 9. What is lodestone?Answer: Lodestone is a type of iron. It bears the properties of magnet.Question 10. Make a list of given substances into two groups – magnetic and non-magnetic.Answer: Key, Wood, Glass, Alpin, Chalk, Pencil, Nail, Cup of tea, Book, Rubber, Needle, Fork, tableMagnetic substancesNon-magnetic substancesKey, alpin, nail, needle, fork (because all these stick to the magnet)Wood, glass, chalk, pencil, cup of tea, book, rubber. (none of these sticks to the magnet)Question 11. How many poles are there in a magnet?Answer: There are two poles in a magnet, north-pole and south-pole.Question 12. To which part of the magnet do the most of the iron filings (or pins) stick?Answer: Most of the iron filings (or pins) stick to the poles, i.e., north and south poles. At these poles of magnet magnetic effect is maximum.Question 13. To which part of the magnet do none or only a few iron filings (or pins) stick?Answer: Minimum number of iron filings stick to the middle part of the magnet. Magnet has its magnetic effect least in this part (middle part).Question 14. Which is the north-pole of a bar magnet?Answer: It is the tip of a bar magnet which points towards the north direction.Question 15. Which is the south-pole of a bar magnet?Answer: It is the tip of a bar magnet that points towards the south direction.Question 16. Where are south and north poles of earth's magnet?Answer: Earth's magnetic south-pole is near the geographic north-pole and north-pole of earth's magnet is near geographic south-pole.Question 17. What happens when a pole of a bar magnet say its north-pole is marked with a chalk and suspended freely? What do you observe on rotating the bar magnet?Answer: The marked pole comes to rest in north direction. On rotating, after some time, it again comes to rest in north direct0n.Question 18. Mark the north-poles of two bar magnets and bring the poles of the magnets near each other, and note down your observations in table.Answer:Poles, facing one anotherThey are calledWe observeNorth-SouthOpposite polesAttractionNorth-NorthSimilar polesRepulsionSouth-SouthSimilar polesRepulsionSouth-NorthOpposite polesAttractionQuestion 19. What will happen to the magnet when we cut it into two pieces?Answer: When we cut a bar magnet into two pieces, both these pieces act as magnets and we get two magnets.Question 20. When a bar magnet was brought close to a compass, the orientation of the needle became as shown in figure. Identify the poles on the ends of the bar magnet marked A' and 'B'. Explain how you arrived at your answer.Answer: Orientation of the needle clearly shows that red marked 'end (north-pole) attracts the end of bar magnet marked "A". It means both these are unlike poles and the end of bar magnet marked "A" is south-pole. End marked 'B' is north-pole because like (same) poles repel each other.Question 21. In which direction does freely suspended magnet rest?Answer: A freely suspended magnet always points in the north-south direction.Question 22. How did we come to know that magnet is helpful to find (detect) directions?Answer: About 800 years ago, Chinese saw that a hanging lodestone always comes to rest in a particular direction i.e., north-south. Therefore, they came to know about finding the direction with the help of lodestone.Question 23. Why is compass needle kept in a closed glass vessel?Answer: Compass needle is a small and thin magnet used to find the direction. If it is kept in open, it may deflect in any direction due to pressure exerted by air. So to know right direction, it is kept covered by glass covering.Question 24. Does the compass needle point in different directions?Answer: The compass needle has a magnetic needle closed in a glass covering. The needle can rotate on its pin pointed base. Its red marked end always indicates towards the north direction. It always rests in north-south directions. We use it to find out the direction.Question 25. Hang a bar magnet with a thread on a stand and rotate the base of stand. What will happen?Answer: The direction of bar magnet is not changed as we rotate the stand. It is because a freely suspended magnet comes to rest in particular direction, i.e., north-south directions. In this activity, only stand changes its direction.Question 26. How do the shipmen find the direction even when north pointing pole star is not visible?Answer: Shipmen during navigation can find the direction with the help of magnetic needle. This is believed to be first used by Chinese.Question 27. Can an ordinary vessel be magnetised?Answer: Yes, to magnetise ordinary vessel, it would have to be buried in the earth for many years.Question 28. What happens when similar poles come close to each other?Answer: They repel each other.Question 29. When do two magnets attract each other?Answer: Two magnets attract each other when their unlike (opposite) poles come close to each other.Question 30. What do you mean by magnetic field?Answer: The region around the magnet where its magnetic influence can be felt is called the magnetic field of the magnet.Question 31. What is MRI?Answer: Magnetic Resonance Imaging (MRI) is a medical diagnostic technique which uses the magnetic field inside the body for obtaining images of different parts of the body.Long Answer Type QuestionsQuestion 1. What are the properties of a magnet?Answer:It attracts iron pieces towards itself.It always aligns itself in the same direction, if left to rotate freely.It is composed of oxides of iron ($Fe_3O_4$).Question 2. What are soft and hard magnetic materials?Answer: Soft iron is called soft magnetic material because it loses its magnetism easily. Soft iron is used in making electromagnets.Steel is called a 'hard' magnetic material because it does not lose its magnetism so easily. It is used to make permanent magnets.Question 3. Are both poles of a magnet similar?Answer: No, the two poles of a magnet are not similar (alike). Both have different tendency. The pole that points towards the north is called north-pole while the pole pointing always towards the south is called south-pole.Question 4. Why does bar magnet always point in north-south directions?Answer: Bar magnet always points in north-south directions when left freely suspended because earth itself behaves like a magnet and north-pole of bar magnet is attracted towards south-pole of earth's magnet and vice versa.Question 5. Can we isolate north-pole or south-pole?Answer: No, we cannot isolate north-pole of a magnet from its south-pole or vice versa. If you break a bar magnet into two halves, you will not get a single north or south pole but two magnets each with its north and south-poles.Question 6. Do magnetic poles exist separately like charges? Explain.Answer: Magnetic poles do not exist separately like positive and negative charges. This means that it is not possible to isolate a north pole of a magnet from its south pole by cutting the magnet from the middle. Whenever a bar magnet is cut into two halves, we get two new magnets, each with its north and south poles. This will continue indefinitely even if extremely small pieces of bar magnets are obtained. Thus magnetic pole always exist in pairs.Question 7. Can a magnet be demagnetised? How?Answer: Yes, a magnet can be demagnetised:By packing like poles of two magnets in same direction.By hammering the magnet hard.By heating the magnet strongly.Question 8. How should two-bar magnets be kept?Answer: After using it, two-bar magnets should be placed inside a wooden box so that:the poles of two magnets lie opposite to each other.a wooden piece should be kept between the two magnets.metallic caps should be put on the poles, otherwise they will attract other magnetic objects.Question 9. Match the following items given in Column A with that in Column B:Column AColumn B(a) Magnetite(i) Non-magnetic substances(b) Iron, nickel, cobalt(ii) Used to find out N-S directions(c) Leather, plastic, wax(iii) Attract each other(d) Lodestone(iv) Natural magnet(e) Compass(v) Repel each other(f) Like poles of two magnets(vi) Discovered magnet accidently(g) Opposite poles of two magnets(vii) Magnetic, substances(h) Magnus(viii) Name of first magnetAnswer:Column AColumn B(a) Magnetite(iv) Natural magnet(b) Iron, nickel, cobalt(vii)  Magnetic substances(c) Leather, plastic, wax(i) Non-magnetic substances(d) Lodestone(viii) Name of first magnet(e) Compass(ii) Used to find out N-S directions(f) Like poles of two magnets(v) Repel each other(g) Opposite poles of two magnets(iii)Attract each other(h) Magnus(vi) Discovered magnet accidently