

Science

Prep.1

First Term 2025 - 2026

November Revision

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Unit Two

* طبقاً لأخر تعديل في المادة للعام الدراسي 2025-2026



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Mr. Ahmed ElBasha

✱ (1) Write the scientific term:

- 1) The charges accumulated on the surfaces of insulated objects. (.....)
- 2) The arrangement of materials according to how easily they lose electrons when rubbed together. (.....)
- 3) The charge formed on a body that loses electrons when rubbed. (.....)
- 4) The mutual force between two similar electric charges. (.....)
- 5) A way of painting in which the object to be painted is charged with a negative charge and the paint spray is charged with a positive charge. (.....)
- 6) The area surrounding an electric charge where its effect appears. (.....)
- 7) Imaginary lines showing the path taken by a small, free-moving positive charge placed in an electric field. (.....)
- 8) The electric charge that the electric field lines point towards. (.....)
- 9) The process of charging an uncharged object with another charged object as a result of their contact. (.....)
- 10) A method of painting metals with a uniform layer without wasting painting material. (.....)
- 11) The device used for the measure of weak electrical charges. (.....)
- 12) A natural rock that has the ability to attract objects made of iron. (.....)
- 13) Materials that are attracted to magnets. (.....)
- 14) An area of a magnet where the magnetic force is the strongest (.....)
- 15) An old tool used to determine the Earth's four main geographical direction. (.....)
- 16) Like magnetic poles repel, and unlike magnetic poles attract. (.....)

- 17) The region surrounding a magnet where the effect of its magnetic force appears. (.....)
-
- 18) Imaginary lines that do not intersect and represent the magnetic force of a magnet. (.....)
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- 19) Materials that are not attracted to magnets. (.....)
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- 20) The geographical pole of Earth, which is represented by the south pole of a freely suspended magnet. (.....)
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- 21) A tool used by forensic experts with iron filings to detect unclear fingerprints. (.....)
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- 22) The product of multiplying the mass of an object x the gravitational field intensity. (.....)
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- 23) Forces that act on objects when they touch each other. (.....)
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- 24) The force that pulls (attracts) all objects downwards towards the center of Earth. (.....)
-
- 25) The force which is responsible for the stability of objects and the falling of rain towards Earth. (.....)
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- 26) Lines that represent Earth's gravitational force. (.....)
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- 27) A natural phenomenon that occurs as a result of the gravitational force between the Moon and Earth. (.....)
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- 28) Regions in the space characterized by immense gravity; so that even light cannot escape from them. (.....)
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- 29) The motion of any object in space around another central object in a curved path because of the gravitational force between them. (.....)
-
- 30) The amount of matter in an object. (.....)
-
- 31) The gravitational force that Earth exerts on an object. (.....)
-
- 32) The measuring unit of weight, symbolized by the symbol (N) (.....)
-
- 33) Areas in space formed as a result of the collapsing of a massive star at the end of its life. (.....)
-
- 34) The phenomenon of daily elevation and recession of water in seas and bays. (.....)
-
- 35) The movement of the Moon around another central object such as Earth in a curved path (.....)

*(2) Choose the right answer:

1. From the electrically conducting materials is

- a. a glass rod. b. a wooden ruler. c. a plastic straw. d. a metal nail.

2. Electric charges are measured in

- a. Newton. b. Coulomb. c. Kilogram. d. Newton/kg.

3. The quantity of static electricity is measured by

- a. Ammeter. b. Coulomb meter. c. Voltmeter. d. Ohmmeter.

4. All of the following materials precede cotton in the electrostatic series, except

- a. silk. b. glass. c. ebonite. d. wool.

5. Which of the following materials gains electrons when rubbed with a piece of wool?

- a. wood. b. glass. c. silk. d. paper.

6. The following materials acquire a negative charge when rubbed with a wooden rod except

- a. glass. b. leather. c. silk. d. wool.

7. When a bar magnet is divided into several parts,

- a. the magnet loses its magnetic properties.
b. each part forms a new magnet with one pole.
c. each part forms a new magnet with two poles.
d. one part forms a north pole and the other forms a south pole.

8. The geographical direction in which a freely suspended bar magnet rests aligns is known as the direction of

- a. East - West. b. North - East. c. South - West. d. North - South.

9. One end of a rod is attracted to a bar magnet. Which of the following describes the nature of the rod?

- a. A rod of nickel only. b. A rod of nickel or a magnet.
c. A magnet only. d. A rod of nickel or copper.

10. All the following are artificial magnets, except

- a. lodestone. b. magnetic ring.
c. bar magnet. d. magnetic needle.

11. All the following metals are attracted to a magnet, except

- a. iron. b. nickel. c. cobalt. d. aluminum.

12. When a magnet is brought close to a mixture containing the filings of each of silver, copper, iron, aluminum and cobalt, the materials attracted to the magnet are

- a. iron only. b. silver and copper only.
c. iron and cobalt only d. aluminum and silver only.

13. When magnets are suspended freely, the north pole of the magnet points towards the geographical pole of Earth.

- a. east b. north c. south d. west

14. The south pole of a compass needle points to

- a. the geographical east pole of Earth. b. the geographical north pole of Earth.
c. the geographical west pole of Earth. d. the geographical south pole of Earth.

15. All of the following are non-magnetic materials, except

- a. Cu b. Ag c. Au d. Fe

16. Which of the following is considered a magnetic material?

- a. Wooden stick. b. A silver ring. c. An iron nail. d. A copper pot.

17. Which of the following forces affect objects at a distance without touching ?

- a. Gravitational forces and collision forces. b. Magnetic forces and friction forces.
c. Electrostatic forces and elasticity forces. d. Gravitational and magnetic forces.

18. The orbital motion of satellites depends on

- a. electrostatic forces. b. gravitational forces.
c. magnetic forces d. friction forces.

19. What is the Gravitational field intensity affecting an object with a mass of 15 kg and a weight of 45 N?

- a. 0.333 N/kg b. 3 N/kg c. 10 N/kg d. 675 N/kg

20. If the weight of an object on the surface of the earth is 600 N, then the gravitational force of moon on this object is equal to

- a. 100 kg b. 100 N c. 3600 kg d. 3600 N

21. What is the force that causes a ball to fall from high position to the Earth's surface?

- a. Gravity. b. Magnetism. c. Friction. d. Collision.

22. The phenomenon of tides occurs daily.

- a. once b. twice c. three times d. four times

23. The phenomenon of tides is the result of the gravitational force between

- a. Earth and the Moon. b. Earth and the Sun.
c. The Sun and the Moon. d. Earth and water.

24. The weight of an object on the surface of Earth is always

- a. less than its mass. b. equal to its mass.
c. greater than its mass. d. equal to zero.

25. If the mass of an object on the surface of Earth is 10 kg, so its mass in the outer space equals

- a. 0 b. 10 kg c. 100 kg d. 0.1 kg

26. The gravitational field intensity of the Moon is equal to

- a. $\frac{1}{6}$ of the gravitational field intensity of the Sun.
b. $\frac{1}{6}$ of the gravitational field intensity of Earth.
c. six times the gravitational field intensity of the Sun.
d. six times the gravitational field intensity of Earth.

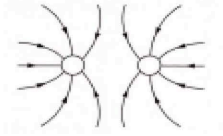
27. Gravitational field intensity of Earthas we move away from the center of earth

- a. decreases b. increases c. remains constant d. disappears

28. The ratio between the weight of an object at the base of a mountain and its weight at the top of the mountain is one.

- a. greater than. b. less than. c. equal to. d. double of.

***(3) Complete the following:**

1. The amount of weak electrical charges is measured by device and measured in unit.
2. Similar electric charges, while different electric charges
3. Iron is considered a / an material for electricity, while glass is considered a / an material for electricity.
4. When a glass rod is rubbed with a piece of leather, the glass rod acquires a charge and the piece of leather acquires a charge.
5. When both silk and paper are rubbed with a piece of cotton, the silk acquires charge while the paper acquires an electric charge.
6. When a piece of silk is rubbed with a piece of wool, electrons are transferred from the piece of to the piece of
7. Electric field lines start from charge and end at the charge.
8. The opposite figure represents the electric force lines of two charges 
9. The device is used to determine the type of a charged object.
10. If the two leaves of an electroscope do not diverge when an object touches its disc, this indicates that the object is
11. is from the conducting materials, while is from the non-conducting materials
12. The object that loses electrons is charged with a charge, while the object that gains electrons is charged with a charge
13. The electric charges attract each other, while the electric charges repel each other.
14. The magnetic force is strongest at and gets weaker as you move closer to the

15. The north pole (N) of the Earth's magnet represents the pole of the Earth, while the south pole (S) of Earth's magnet represents the pole of Earth.
16. magnetic poles repel each other, while magnetic poles attract each other.
17. The magnetic field lines concentrate at
18. Artificial magnets are found in many shapes such as, or
19. The can be separated from a mixture of iron filings and sand using
20. When a magnet is brought close to pieces of nickel and aluminum, is attracted to the magnet, while is not attracted to it.
21. The magnetic needle of the compass is placed inside a box made of
22. The north pole of a magnet is symbolized by the letter, while the south pole is symbolized by the letter
23. When a magnet is suspended freely, its south pole points to the geographical pole of the Earth.
24. Force of occurs between the north pole of one magnet and the south pole of another magnet, while a force of occurs between two south poles.
25. Magnetic field lines start from the pole and end at the pole.
26. Similar magnetic poles, while different magnetic poles
27. Forces acting on objects are generally classified into and forces.
28. Friction forces are forces, while gravitational forces are forces
29. By increasing the distance between two objects, the gravitational force between them
30. The force that causes the falling of an apple on Earth is the force.
31. Tides are at their peak when the Moon is or
32. The object's doesn't change from one place to another, while its changes from one place to another.
33. Mass is measured in unit, while weight is measured in unit.
34. Objects fall towards Earth's surface by a force called and this force increases by increasing in the of the object.
35. Gravitational field intensity by moving away from Earth's surface.
36. The device is used to measure the object's weight.

*(4) Put (\checkmark) or (X) :

1. The charge of the rubbed object varies depending on the type of rubbing material. ()
2. When synthetic leather is rubbed with a piece of silk, the silk loses electrons. ()
3. Electrons are neutrally charged particles that are not deflected by the electric field. ()
4. The two gold leaves diverge when the electroscope is charged. ()
5. Fuel tanks are connected with metal chains that touch the ground to discharge static electricity. ()
6. The magnetic field lines around a magnet can be seen. ()
7. The magnetic forces between a magnet and magnetic materials in its field are only attractive forces. ()
8. Glass and rubber are non-magnetic materials. ()
9. Magnets have the ability to attract all minerals. ()
10. Metal paper clips are attracted to the magnet. ()
11. The density of iron filings is greatest at the middle of the magnet. ()
12. When a magnet is divided into several parts, each part becomes a new magnet with a north and south poles. ()
13. Magnetic forces increase as we get closer to the poles of the magnet. ()
14. The compass box is made of plastic so that it does not affect the direction of the magnetic needle. ()
15. The north pole of a magnet attracts the north pole of another magnet. ()
16. The compass needle is deflected when a magnet is brought close to it. ()
17. The south pole of a magnet is symbolized by the letter S and is often colored red. ()
18. Magnetic forces increase as we get closer to the middle of the magnet. ()
19. The magnetic north pole of Earth represents the geographical north pole of earth ()
20. When a piece of nickel is brought close to a magnetic pole, a repulsive force occurs between them. ()
21. The phenomenon of tides occurs periodically every 24 hours. ()
22. Black holes are formed as a result of collapse of a huge planet at the end of its life. ()
23. Less the distance between two objects, less the gravitational force between them. ()

24. Black holes can be used to generate electricity. ()
25. Elasticity forces are field forces, while collision forces are contact forces. ()
26. Tides occur 14 times a week. ()
27. Tides are at their peak when the Moon is a crescent. ()
28. The motion of satellites around Earth depends on Earth's gravitational force. ()
29. The greater the mass of an object, the greater its weight. ()
30. The Moon's gravitational force on an object is greater than the gravitational force of Earth on it. ()
31. The weight of an object increases as it rises above the surface of Earth. ()
32. The weight of an object on the surface of Earth is equal to its weight on the surface of Jupiter planet. ()

*(5) **Correct the underline words:**

1	The compass box is made of <u>iron</u> .	(.....)
2	<u>Lightning rod</u> is an old tool used to determine the four geographical directions.	(.....)
3	The least force of attraction of a magnet is at <u>the poles</u> .	(.....)
4	The region around a magnet where the effect of its magnetic force appears is called the <u>gravity</u>	(.....)
5	When the N pole of a magnet is brought close to the <u>A</u> pole of another magnet, they repel each other.	(.....)
6	The ratio between the mass of an object on the surface of the Moon and its mass on the surface of Earth is <u>6 : 1</u>	(.....)
7	The weight of the object on the surface of Earth is six times the weight of the object on the surface of <u>Mars</u> .	(.....)
8	The direction of Earth's gravitational force is towards <u>the surface</u> of Earth.	(.....)
9	<u>Repulsion</u> is a natural phenomenon that occurs twice a day and is used to cleanse water bodies from impurities.	(.....)
10	<u>Spiral motion</u> occurs as a result of the gravitational force between an object moving in a curved path in space around another central object.	(.....)

✱ **(6) Give reasons for:**

1. The paper scraps are attracted to a wooden rod that has been rubbed with a piece of wool.

.....

2. When the ebonite rod is rubbed with a piece of cotton, the cotton acquires a positive charge.

.....

3. Neutrons do not deviate when passing through an electric field.

.....

4. Electrostatic plating is preferred for coating metals.

.....

5. Hearing a crackling sound when taking off woolen clothes in winter.

.....

6. Metal chains are suspended from the fuel truck and touch the ground.

.....

7. Iron and cobalt are both magnetic materials.

.....

8. Copper and gold are considered nonmagnetic materials.

.....

9. Not all metals are magnetic materials.

.....

10. The density of iron filings increases at the poles of a magnet

.....

11. The magnetic needle of a compass is placed in a copper box.

.....

12. Gravity is one of the important forces for the life of living organisms on Earth.

.....

13. Occurrence of orbital motion of the Moon around the Earth.

.....

14. The weight of an object on Earth's surface is always greater than its mass.

.....

15. Rain falls and all objects fall towards Earth

.....

16. The occurrence of tides phenomenon in the seas and oceans.

.....

17. The formation of black holes in space.

.....

18. The mass of an object does not change from one place to another.

.....

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*(7) What are the results of:

1. Rubbing a wooden rod with a piece of cotton.

.....

2. Touching a charged object to the electroscope disc.

.....

3. Bringing a negatively charged object close to an electroscope disc charged with a negative charge.

.....

4. A magnet is brought close to a mixture of iron and gold filings.

.....

5. A magnetic brush is brought close to iron filings and then passed over a surface with unclear fingerprints.

.....

6. A magnet is dipped into nickel filings.

.....

7. A bar magnet is suspended freely.

.....

8. The south pole of a magnet is brought close to the north pole of another magnet that is freely suspended.

.....

9. Increasing altitude above Earth's surface.

(concerning the Earth's gravitational field intensity)

.....

10. The collapse of a massive star at the end of its life

.....

11. Launching of an object outside Earth's gravitational field into outer space

(according to the mass of the object).

.....

12. Moving of an object from the surface of Earth to the surface of the Moon

(according to relation to the mass and weight of the object).

.....

13. Approach to the center of Earth

(according to the object weight)

.....

6 An object has a mass equals to 60 kg is on the surface of the earth.

[Given that Earth's gravitational field intensity= 10 N/kg]

Calculate its weight on:

- (1) The surface of Earth.
- (2) The surface of the Moon.

.....

.....

.....

7 If the Earth's gravitational field intensity at a certain position is 10 N/kg, **calculate** the mass of an object weighing 490 N at Earth's surface.

.....

.....

.....

8 An object with a mass of 9 kg on the surface of Earth, **calculate:**

[Given that Earth's gravitational field intensity= 10 N/kg]

- (1) Its weight on the surface of Earth.
- (2) Its mass on the surface of the Moon.

.....

.....

.....

Model Answer

*(1) Write the scientific term:

- | | | | |
|-------------------------|-------------------------------------|---------------------------|-------------------------------|
| 1. Static electricity | 10. Electroplating | 18. Magnetic field lines | 26. Gravitational field lines |
| 2. Electrostatic series | 11. Colomb meter | 19. Non magnetic material | 27. Tides |
| 3. Positive charge | 12. Lodestone | 20. South poles | 28. Black holes |
| 4. Repulsion force | 13. Magnetic material | 21. Magnetic brush | 29. Orbital motion |
| 5. Electroplating | 14. Magnetic poles | 22. Weight | 30. Mass |
| 6. Electric field | 15. Compass | 23. Friction force | 31. Weight |
| 7. Electric field lines | 16. Law of attraction and repulsion | 24. Gravitational force | 32. Newton |
| 8. Negative charge | 17. Magnetic field | 25. Gravitational force | 33. Black holes |
| 9. Charging by contact | | | 34. Tides |
| | | | 35. Orbital motion |

*(2) Choose the right answer:

- | | | | | | | |
|------|------|-------|-------|-------|-------|-------|
| 1. D | 5. B | 9. B | 13. B | 17. D | 21. A | 25. B |
| 2. B | 6. A | 10. A | 14. D | 18. B | 22. B | 26. B |
| 3. B | 7. C | 11. D | 15. D | 19. B | 23. A | 27. A |
| 4. C | 8. D | 12. A | 16. C | 20. B | 24. C | 28. A |

*(3) Complete the following:

- | | | |
|---------------------------|----------------------------|--------------------------|
| 1. Colomb meter - N | 13. Different – similar | 26. Repel – attract |
| 2. Repel – attract | 14. Poles – middle | 27. Contact – field |
| 3. Magnetic – nonmagnetic | 15. North – south | 28. Contact – field |
| 4. Positive – negative | 16. Similar – different | 29. Decrease |
| 5. Positive – negative | 17. Poles | 30. Gravitational |
| 6. Silk – wool | 18. Ring , bar and needle | 31. Full moon – new moon |
| 7. Positive – negative | 19. Iron filling – magnet | 32. Mass |
| 8. Negative | 20. Nickle – aluminum | 33. Kg – N |
| 9. Electroscope | 21. Plastic | 34. Gravity – Mass |
| 10. Uncharged | 22. N – S | 35. Decrease |
| 11. Iron – plastic | 23. South | 36. Spring scale |
| 12. Positive – negative | 24. Attraction – repulsion | |
| | 25. North – south | |

*(4) Put (√) or (X) :

- | | | | | |
|----------|-----------|-----------|-----------|-----------|
| 1. (√) | 8. (√) | 15. (X) | 22. (X) | 29. (√) |
| 2. (√) | 9. (X) | 16. (√) | 23. (X) | 30. (X) |
| 3. (X) | 10. (√) | 17. (X) | 24. (X) | 31. (X) |
| 4. (√) | 11. (X) | 18. (X) | 25. (X) | 32. (X) |
| 5. (√) | 12. (√) | 19. (√) | 26. (X) | |
| 6. (X) | 13. (√) | 20. (X) | 27. (X) | |
| 7. (√) | 14. (√) | 21. (X) | 28. (√) | |

*(5) Correct the underline words:

- | | | | |
|------------|-------------------|-----------|-------------|
| 1. Plastic | 4. Magnetic field | 6. 1:1 | 9. Tides |
| 2. Compass | 5. N | 7. Moon | 10. Orbital |
| 3. Center | | 8. Center | |

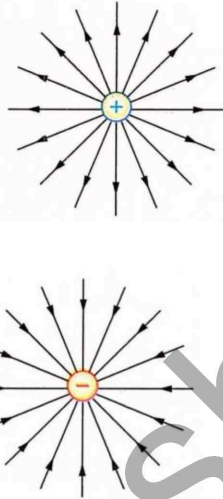
✱(6) Give reasons for:

1. This is due to the rod being charged with static electricity.
2. Because cotton precedes the ebonite in the electrostatic series so it tends to lose electrons and becomes positively charged.
3. Because they are neutrally charged.
4. Because It makes the paint layer uniform and reduces waste.
5. Because during friction between the body and the woolen clothing, there is a discharge of the electric charges that have accumulated on the body.
6. To discharge the electric charges .
7. Because they are attracted to magnet.
8. Because they are not attracted to magnet.
9. Because some metals, such as copper, gold, and silver, are not attracted to magnet.
10. Because the magnetic forces are at their maximum at the poles of the magnet.
11. To prevent the attraction between the magnetic needle and the box
12. Because it is is responsible for The stability of objects, the falling of rain.
13. Due to the gravitational force between them.
14. Because the weight of an object is equal to the product of its mass and Earth's gravitational field intensity.
15. Because of the gravitational force.
16. Due to the gravitational force between the Moon and Earth.
17. As a result of the collapse of a massive star at the end of its life.
18. Because the mass of an object is the amount of matter in this object, which is a constant amount and does not change.

✱(7) What are the results of:

1. Cotton gains a negative electric charge, while wood gains a positive electric charge.
2. The leaves of the electroscope diverge (spread a part).
3. The divergence of the leaves of the electroscope increases.
4. Only the iron filings are attracted to the magnet.
5. Some iron filings stick to the traces left by fingerprints, making them visible and then helping in revealing unclear fingerprints.
6. Nickel filings are attracted to the magnet.
7. It will take fixed direction which is north and south direction.
8. The two magnetic poles attract each other.
9. The gravitational force decreases.
10. It forms black holes
11. The mass remain as it is and doesn't change
12. Mass remain as it is and weight decrease.
13. The weight increases.

*(8) Problems:

1	<ol style="list-style-type: none"> 1. negative charge 2. positive charge 3. negative charge 4. A. negative – B. positive 	2	 <ol style="list-style-type: none"> 1. 2.
3	<ol style="list-style-type: none"> 1. Friction force 2. Gravitational force 3. Motion of moon around earth 	4	Weight on earth = mass × g = 50 × 10 = 500 N
5	Weight on earth = mass × g = 20 × 10 = 200 N	6	<ol style="list-style-type: none"> 1. Weight on earth = mass × g = 60 × 10 = 600 N 2. Weight on moon = weight on earth / 6 = 600 / 6 = 100 N
7	Mass = Weight on earth / g = 490 / 10 = 49 Kg	8	<ol style="list-style-type: none"> 1. Weight on earth = mass × g = 9 × 10 = 90 N 2. Mass = 9 Kg

تطبيق



مذكرات جاهزة للطباعة

لتحميل الملفات التعليمية مجاناً للمعلم والطالب

مذكرات وملازم / مراجعات وملخصات / امتحانات / كتب الوزارة /
أدلة المعلم / دفاتر التحضير / سجلات مدرسية / أوراق تأسيس

امسح الكود بموبايلك علشان تقدر تثبت التطبيق

وتقدر ف أي وقت تحمّل ال نفسك فيه ببلاش

هيغنيك عن البحث والجروبات والقنوات الكثيرة

