



هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission



Preparation Form (A)

National Tests (NAFS)

9th Grade

2026



Section One: Mathematics

Items: 1 - 10

Time: 18 Min.

INSTRUCTIONS

- Read each question carefully, then choose the correct answer.
- Each question has only **one** correct answer.
- Answer all the questions.

1 In a medical center, the nursing team consists of 60 people. If the ratio of male nurses to female nurses is 5:7, how many female nurses are there?

- A. 35
B. 28
C. 25
D. 24

2 What is the equation of the line that is perpendicular to the line $y = \frac{1}{3}x + 1$ and passes through the origin?

- A. $y = \frac{1}{3}x$
B. $y = -\frac{1}{3}x + 1$
C. $y = 3x + 1$
D. $y = -3x$

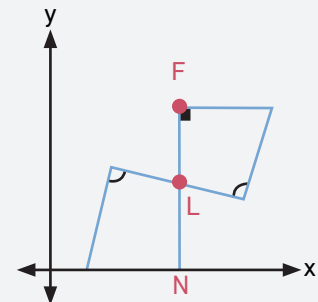
3 Simplify the following expression:

$$(4by)^2(-2bx)(ba)$$

- A. $32b^4y^2xa$
B. $32b^3y^2xa$
C. $-32b^4y^2xa$
D. $-32b^3y^2xa$

4 The coordinate plane shows two symmetric quadrilaterals. $L = (5, 3)$ and $N = (5, 0)$. What are the coordinates of point F?

- A. (5,4)
B. (5,5)
C. (5,6)
D. (5,7)



The figure is not to scale

5 The table shows the weight each of the four trainees can lift. Which trainees lift the same weight, given that 1 pound = 16 ounces?

- A. Ahmad and Khaled
B. Khaled and Fahad
C. Fahad and Saleh
D. Ahmad and Fahad

Trainees	Weight
Ahmad	400 ounces
Khaled	24 pounds
Fahad	20 pounds and 80 ounces
Saleh	18 pounds and 60 ounces

Section Two: Sciences

Items: 11 - 20

Time: 18 Min.

INSTRUCTIONS

- Read each question carefully, then choose the correct answer.
- Each question has only **one** correct answer.
- Answer all the questions.

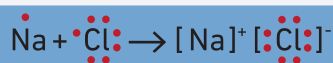




11 While studying the classification of living organisms, Mohammed noticed that the platypus is classified within a small group called monotremes. Why is the platypus classified as a monotreme? Because...

- A. it gives birth to underdeveloped young.
- B. it lays eggs covered with soft shells.
- C. the embryo leaves the uterus and continues its development in a pouch.
- D. the embryo depends on the umbilical cord for its nourishment.

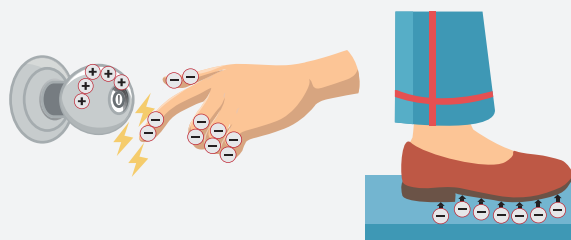
12 What type of bond is formed between the elements in the chemical equation below?



- A. Covalent
- B. Ionic
- C. Metallic
- D. Polar

13 When you touch a door handle or walk on a carpet, an electrical phenomenon happens, as shown in the pictures below. What is the correct scientific term for this?

- A. Electric circuit
- B. Electric potential
- C. Electric discharge
- D. Electric current



14 Which of the following shows the order of media based on the speed of sound, from the fastest to the slowest?

- A. Air, water, steel
- B. Steel, water, air
- C. Air, steel, water
- D. Steel, air, water

15 Which statements in the table below show ways to conserve natural resources?

- A. 1, 2, 3
- B. 1, 2, 4
- C. 2, 3, 4
- D. 1, 3, 4

The statements	
1	Conserve natural resources.
2	Expand large cities into natural lands.
3	Reduce tree cutting in forests.
4	Increase the development of alternative energy sources.

16 A failure to use or store sugar as glycogen causes blood sugar to rise. Which organ's malfunction leads to this?

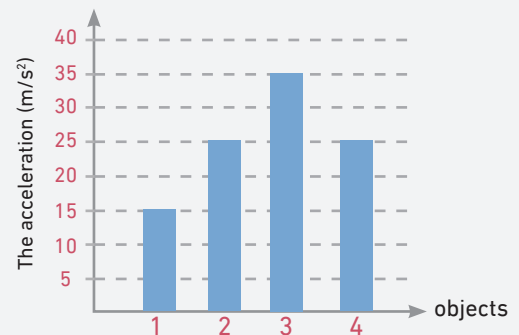
- A. Pancreas
B. Liver
C. Colon
D. Stomach

17 In the adjacent figure, a DNA molecule contains a set of complementary nitrogenous bases. Which nitrogenous base pairs with thymine?

- A. Adenine
B. Cytosine
C. Uracil
D. Guanine

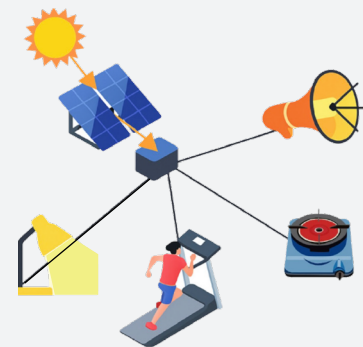
18 The graph below shows the acceleration of four objects with identical mass that were pushed with the same force. Which object was most affected by friction?

- A. 1
B. 2
C. 3
D. 4



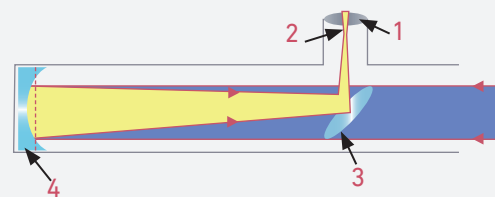
19 Based on the following figure, trace the pathways of energy transformations from the solar panels, then identify the incorrect option among the following.

- A. Light, Electrical, Light
B. Light, Electrical, Chemical
C. Light, Electrical, Thermal
D. Light, Electrical, Sound



20 In the reflecting telescope shown below, which component collects the incoming light?

- A. 1
B. 2
C. 3
D. 4





Section Three: Reading

Items: 21 - 25

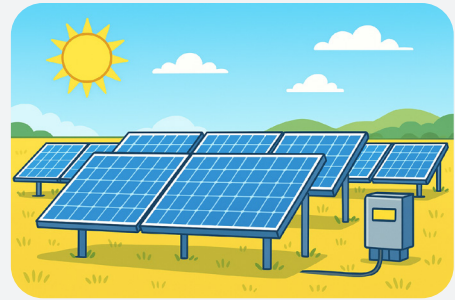
Time: 18 Min.

INSTRUCTIONS

- Read the whole passage before you answer the questions.
- Read each question carefully, then choose the correct answer.
- Each question has only **one** correct answer.
- Answer all the questions.

Solar panels are devices that collect sunlight and convert it into usable electricity. They are becoming increasingly common around the world. You can often see them installed on rooftops or in large fields known as solar farms. These panels are an important source of renewable energy because they use the power of the Sun, which is clean, free, and unlimited. Unlike traditional energy sources such as coal and oil, solar power does not produce harmful gases or cause air pollution.

The main material used in most solar panels is silicon, a type of **semiconductor**. A semiconductor is a material that sometimes conducts electricity and sometimes does not, depending on how it is treated. When sunlight hits the surface of a solar panel, the energy from the light **excites** the electrons inside the silicon atoms, causing them to move. This movement of electrons produces an electric current, which is the basic form of electricity.



Each solar panel contains many smaller units called solar cells. A single cell can only produce a small amount of electricity, but when hundreds of cells are linked together, they can generate enough power to run household appliances or even supply electricity to an entire building. To get the best results, panels are usually positioned to face the Sun directly and installed in areas that receive strong sunlight for many hours each day, such as deserts or open fields.

However, the electricity that comes from solar panels is in a form known as direct current (DC), while most homes and businesses use alternating current (AC). To solve this, the electric flow must pass through a device called an inverter. The inverter changes DC into AC, allowing the energy to power lights, computers, and other machines safely.

Solar panels can also store energy when they are connected to batteries. This stored energy can be used at night or on cloudy days when there is little sunlight. Because of these advantages, many countries are investing in solar power projects to reduce their dependence on fossil fuels. Solar energy helps protect the environment, lower electricity bills, and create a cleaner and more sustainable future for everyone.

21 Which word has a similar meaning to “excites” as used in the text?

- | | |
|----------------|---------------|
| A. underscores | B. stimulates |
| C. prevents | D. ignores |



22 In the text, the term “**semiconductor**” refers to the material that...

- A. generates electricity continuously.
 - B. never carries or passes electricity at all.
 - C. used to store electrical energy permanently.
 - D. generates electricity under certain conditions.
-

23 Why do most homes need an inverter when using solar panels?
Because it...

- A. changes the electricity into a form suitable for household use.
 - B. protects the solar system from overheating and weather damage.
 - C. increases the amount of sunlight the panels receive to be used later.
 - D. helps store the solar power for use during the night or on cloudy days.
-

24 How does the electricity produced by solar panels differ from the electricity used in most homes?

- A. Homes rely on energy from power, while solar panels create electricity from sunlight.
 - B. Homes generate electricity from the grid for daily use, while solar panels store it in batteries.
 - C. Solar panels produce direct current (DC), while homes use alternating current (AC) to run appliances.
 - D. Solar panels produce alternating current (AC), while homes require direct current (DC) to operate devices.
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25 To which academic field or subject is this text most closely related?

- A. Environmental Science
 - B. Human Geography
 - C. Civil Engineering
 - D. Applied Physics
-

End of test

Answer Key

#	Answer Key
1	A
2	D
3	C
4	C
5	D
6	C
7	C
8	A
9	C
10	B
11	B
12	B
13	C
14	B
15	D
16	A
17	A
18	A
19	B
20	C
21	B
22	D
23	A
24	C
25	A





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