Test Form Canadian PB

Science

Official GED Practice Test

GED Testing Service
American Council on Education
Dear Student,

Congratulations on deciding to earn your high school credential!

Why should you take the GED Practice Tests? Because they are similar in content, difficulty, and format to the actual GED Tests. These Practice Tests will provide you with a solid introduction to the types of topics and questions you can expect to find on the GED Tests. They will also help you practice your test-taking skills under simulated test conditions. (Note that the Practice Tests are only half as long as the actual tests.) Additionally, the scores you earn on the Practice Tests will help you estimate your scores on the actual GED Tests. With all this practice, by the time you walk into the actual test center, you’ll feel confident and prepared to do your best!

Here are a few tips to help you do well on both the Practice and GED Tests:

• Read all directions and questions carefully and completely.

• Pick the single best answer. All multiple-choice questions have five answer choices. There are no “trick” questions. Some questions in the math sections ask you to grid in your own numerical solution to a problem; in these cases, you will not have multiple-choice options.

• Answer every question. If you get stuck on a question, move on. Complete the rest of the test, and then come back to the questions you skipped. Eliminate the answer choices that you know are wrong and pick the best remaining answer. Even if you are unsure, mark an answer choice for every question because you will not be penalized for wrong answers.

The Practice Test is a good predictor of your success on the actual GED Tests. Use the guidelines below and consult with your teacher or tutor to help you determine your readiness to take the tests.

• If your Practice Test scores are much higher than those required to pass the tests, you are probably ready to take the actual GED Tests.

• If your Practice Test scores are about the same as the required scores, consider studying more before taking the actual GED Tests.

• If your Practice Test scores are significantly lower than the required scores, we encourage you to attend class, work with a tutor, or study GED books before taking the actual GED Tests.

We wish you much success as you work to earn your high school credential and accomplish your other educational, professional, and personal goals. Good luck!

Sincerely,
Joan C. Auchter, Executive Director
GED Testing Service Staff
Directions: Choose the one best answer to each question.

1. An astronaut in a space vehicle traveling from Earth to the Moon is in potential danger of being harmed by the Sun's ultraviolet radiation. Which of the following measures would BEST protect the astronaut from this radiation?
   (1) wearing sunglasses that completely cover the astronaut's eyes
   (2) wearing gloves and a helmet
   (3) equipping the space vehicle with a Geiger counter to detect the amount of radiation
   (4) keeping the space vehicle in the shade during the day
   (5) constructing the space vehicle of materials that block out such ultraviolet rays

2. There are many different kinds of birds in the world, and each kind has adaptations that enable its successful survival in its environment. The mouth of a bird is a toothless beak. Some birds have short, stout beaks for eating insects. Other birds have beaks shaped like hooks for tearing meat. A few kinds of birds have beaks that are long and strawlike for collecting nutrients from flowers. Still other kinds have spearlike beaks or pouches for catching and eating fish.

Bird Length: 7.5 to 10 centimetres
(3 to 4 inches)

Which of the following types of food does the bird in the drawing above most likely feed on?
   (1) fish
   (2) worms
   (3) seeds
   (4) nectar
   (5) insects
3. Electricity occurs when electrons move through substances. Electronics, a branch of physics that studies the behavior of electricity in vacuum tubes and semiconductors, has made possible many modern inventions. These include the radio and telephone, as well as radar and computers.

Which communication device requires knowledge of electronics for its development?

(1) mechanical typewriter
(2) television
(3) adding machine
(4) binoculars
(5) sundial

4. An earthquake is a shaking of the earth. This happens when rocks move along a fault.

Which of the following observations is an indication that an earthquake may be ready to take place?

(1) A previously unknown fault is discovered.
(2) Tremors are detected in the ground.
(3) Birds begin their seasonal migrations on time.
(4) Storm clouds begin to gather overhead.
(5) The soil cracks as a drought continues.

5. Table salt is sodium chloride. It is an ionic solid. These ions become dispersed or dissolved in water. As table salt is added to water, a point is reached at which no more salt dissolves and solid salt collects in the bottom of the glass. At this point, the solution is saturated.

Which of the following choices would cause more salt to dissolve?

(1) Pour the solution into a flat pan.
(2) Cool the glass to 15° Celsius.
(3) Pour the solution into a larger glass.
(4) Add more water to the glass.
(5) Remove solid salt from the glass.

6. It has been estimated that the world’s energy needs are doubling every 10 years. Currently, fossil fuels are the major resource used to meet the industrialized world’s energy needs.

Since the amount of fossil fuel on Earth is finite, what must be done to meet the potential energy needs of the year 2100, if the rate of increase in energy use continues at the current rate?

(1) The current supplies of fossil fuels should be stockpiled for use in the future.
(2) The coal now being mined should be converted to oil to save energy.
(3) Oil production should be reduced and the difference made up by coal production.
(4) Exploration for fossil fuels should stop so that some will be left.
(5) Alternatives to fossil fuels must be developed for use in the future.
7. According to the chart below, which group of adults has daily caloric requirements of between 2000 and 2200 calories?

**Average Daily Calorie Requirements**

<table>
<thead>
<tr>
<th>Level of Activity</th>
<th>Adult Female</th>
<th>Adult Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sedentary</td>
<td>1700</td>
<td>2500</td>
</tr>
<tr>
<td>Moderately Active</td>
<td>2100</td>
<td>2900</td>
</tr>
<tr>
<td>Active</td>
<td>2500</td>
<td>3300</td>
</tr>
</tbody>
</table>

(1) active adult males  
(2) sedentary adult females  
(3) moderately active adult males  
(4) sedentary adult males  
(5) moderately active adult females

8. Most insect stings are painful because of the small amount of acidic venom injected. When baking soda is applied to an insect bite, the pain disappears. Why does this occur?

The baking soda

(1) neutralizes the venom  
(2) is contained in insect venom  
(3) is an acidic substance  
(4) is an effective insect repellent  
(5) is a combination of water and salt

9. Equal weights hanging on the opposite ends of a pole will have a balance point at the middle of the pole.

In the drawing below, José is carrying water in the buckets shown but wishes to carry more water.

```
How could José carry more water and keep the load balanced?

(1) Use a longer pole and continue to carry it in the middle.  
(2) Use a heavier pole but keep the buckets the same size.  
(3) Use smaller but heavier buckets.  
(4) Add water in the same amount to both buckets.  
(5) Add water to one bucket but not to the other.
```
10. The treated plant plotted in the graph below was given a synthetic growth hormone.

**Effect of Growth Hormone on Plants**

![Graph showing growth of treated and untreated plants](image)

On the basis of this experiment, in which of the following ways could these results be applied to weed control?

Weeds could be controlled by

1. cutting them off after they have grown for 4 days
2. allowing them to become crowded
3. treating them with synthetic growth hormone
4. allowing them to reach a certain height
5. cutting off part of their root systems

11. Hydrocarbons are chemical compounds composed of atoms of only two elements: carbon and hydrogen. The structures at the beginning of a series of straight-chained hydrocarbons are shown below.

<table>
<thead>
<tr>
<th>Methane</th>
<th>Ethane</th>
<th>Propane</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ \text{H}_4 ]</td>
<td>[ \text{H}_2\text{H}_2 ]</td>
<td>[ \text{H}_3\text{H}_3 ]</td>
</tr>
</tbody>
</table>

\[ \text{C} - \text{Carbon} \quad \text{H} - \text{Hydrogen} \]

How does each chemical structure in the series differ from the previous structure?

1. by 1 carbon and 1 hydrogen
2. by 1 carbon and 2 hydrogens
3. by 2 carbons and 1 hydrogen
4. by 2 carbons and 2 hydrogens
5. by 2 carbons and 3 hydrogens
Questions 12 through 16 refer to the following information:

Tropical rain forests are located along the equator in South America, Africa, and Asia. The temperature and precipitation across the equator are both consistently high year-round. These areas are therefore able to produce and maintain abundant and diverse plant and animal populations.

Rain forests are made up of very distinct layers: the forest floor, the understory, the canopy, and the emergent layer. The forest floor is a relatively dark place, where the trees struggle to reach the small amount of sunlight that can penetrate the foliage. Ferns and saplings also grow here. The understory may have seedlings, bushes, and shrubs that reach 50 to 80 feet above the ground. The canopy is a dense, continuous layer, rising 100 to 130 feet. Most rain forest life grows or dwells in the canopy. Finally, there is the emergent layer. It consists of trees that poke randomly out of the dense canopy. Each of these layers supports a unique combination of life.

Because of the unusual structure of the rain forest, many plants and animals have had to adapt to their environment. One example of plant adaptation is the size of the leaves. In the canopy, where sunlight is abundant, the leaves are small. However, deeper in the forest where the sunlight is rare, the leaves are large and are able to bend to follow the Sun’s rays all day.

An animal that is well adapted to survive in the rain forest is the sloth. Sloths are one of the most common large mammals in the rain forests. Their body temperature varies with the environment, so they may be seen hanging in a sunny opening for hours to absorb the heat. Their fur is very thick and is patterned to allow rainwater to run off instead of being absorbed. Sloths also have tiny, green algae growing in their fur. The algae allow them to better blend into the green leaves of the canopy.

12. Based on the passage, what is one reason sloths can likely be found living in the canopy?
   • Sloths
     (1) are fast-moving animals that jump from tree to tree
     (2) are meat eaters that catch their prey high in the trees
     (3) do not like rain, so they need to live under the large canopy leaves
     (4) need sunlight and have adapted to blend into the leaves
     (5) need protection from insects that inhabit the forest floor

13. What is the correct arrangement of a rain forest from the lowest layer to the highest?

     (1) emergent layer, understory, canopy, forest floor
     (2) emergent layer, canopy, understory, forest floor
     (3) forest floor, understory, canopy, emergent layer
     (4) forest floor, canopy, understory, emergent layer
     (5) forest floor, emergent layer, understory, canopy

14. Why do rain forests have abundant and diverse plant and animal populations?

     (1) There are few predators to harm the animals.
     (2) Laws protect flowers from being picked.
     (3) Temperatures are mild year-round.
     (4) Rainfall is sporadic and low year-round.
     (5) Rainfall and temperatures are high year-round.
15. In which layer of the rain forest would a fern most likely live?
(1) the canopy  
(2) the understory  
(3) the forest floor  
(4) the emergent layer  
(5) a subterranean nest

16. Based on the information provided, what is the BEST definition of the word “adaptation”?
(1) an elimination of a group of living things from an environment  
(2) a characteristic of members of a population that enhances their survival rate  
(3) a mechanism that controls certain activities of animals  
(4) any disruption of the natural environment  
(5) a naturally occurring group of organisms living in an area

Question 17 refers to the following information and graph.

Evidence collected by a preschool teacher and presented in the graph below compares the number of ear infections suffered by children (from birth to age 6 years) to the number of cigarettes smoked in the children's homes per day.

Cigarette Smoke and Ear Infections

![Graph showing the correlation between number of cigarettes smoked and number of ear infections]

17. Which of the following represents the most appropriate conclusion to be drawn from the information presented?
(1) Cigarette smoke in the home may contribute to the number of ear infections in children:  
(2) Children become immune to cigarette smoke as they grow older.  
(3) Cigarette smoke causes colds and flu.  
(4) Ear infections are not related to smoking in the home.  
(5) Small children have more ear infections than do adults.
18. An oil well penetrates some folded rocks, as shown in the diagram below. In the center of the fold is trapped a layered mixture of water, oil, and gas.

Which fact best explains the order of layers within the center of the fold?

(1) Gas is the least dense material of the three; water is the most dense.
(2) Gas and oil take thousands of years to form.
(3) Gas forms at a higher temperature than does oil.
(4) Some oil wells produce only gas; some produce only oil.
(5) Rocks naturally contain some amount of water.

19. From the shape of the rear molar teeth in animals A and B, which foods are most likely to make up the main part of their respective diets?

- Tooth of animal A
- Tooth of animal B

(1) Animal A eats grass; animal B eats meat.
(2) Animal A eats meat; animal B eats grass.
(3) Both animals eat meat only.
(4) Both animals eat grass only.
(5) The shape of the molar teeth gives no clue to an animal’s diet.

20. The peregrine falcon was almost eliminated in the 1950s and 1960s by the pesticide DDT. After DDT was banned in the early 1970s, environmentalists released to the wilderness, falcons hatched in captivity. In 1995, a total of 1200 breeding pairs existed in the United States.

Which statement provides the best evidence to support the environmentalists' conclusion that the peregrine falcon should be taken off the endangered species list?

(1) Nesting sites are interfering with land development.
(2) The cost for research and preservation is high.
(3) The peregrine falcons are the most commonly found birds in North America.
(4) Captivity-hatched falcons have been placed and are reproducing well in the wild.
(5) People are more ecologically informed today than they were in the 1950s.
21. Genes occur on pairs of chromosomes inside the nucleus of a cell. In each pair, one chromosome is from the sperm cell, and one chromosome is from the egg cell. If each human cell contains 46 chromosomes, how many chromosomes are present in each egg or sperm cell?

(1) 6  
(2) 12  
(3) 23  
(4) 46  
(5) 92

Question 22 refers to the following information and graph.

A warehouse worker placed a heavy package at the upper end of an inclined board, as shown in the diagram below. The package slid down the board with increasing speed.

Which of the pieces of equipment shown above should be used for this precise measurement?

(1) A  
(2) B  
(3) C  
(4) D  
(5) E

22. Which of the following factors BEST explains the movement of the package?

(1) the temperature around the package  
(2) the width of the board  
(3) the volume of the package  
(4) the force due to gravity  
(5) the length of the board

23. For a given experiment, 80 millilitres of water must be measured using appropriate equipment for precision measuring.
24. Certain gases in the atmosphere trap energy from the Sun. Many scientists are concerned that the burning of fuel is increasing the amount of these gases in the atmosphere.

![Diagram of energy from the Sun reaching the Earth through the atmosphere]

Which of the following conditions, if true, would support the hypothesis that levels of energy-trapping gases are increasing?

1. an increase in the length of coastline for each continent
2. an increase in the size of the glaciers
3. a decrease in the worldwide ocean level
4. a decrease in evaporation from the ocean
5. an increase in the average daily temperature

25. Which biome is represented by the precipitation and temperature data in the diagram below? (1 inch = 2.54 centimetres)

![Climate Data graph showing temperature and precipitation over months]

<table>
<thead>
<tr>
<th>Month</th>
<th>Temperature</th>
<th>Precipitation (centimetres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>J</td>
<td>-22°F</td>
<td>1.0 cm</td>
</tr>
<tr>
<td>F</td>
<td>-14°F</td>
<td>1.5 cm</td>
</tr>
<tr>
<td>M</td>
<td>-3°F</td>
<td>2.0 cm</td>
</tr>
<tr>
<td>A</td>
<td>14°F</td>
<td>3.0 cm</td>
</tr>
<tr>
<td>J</td>
<td>32°F</td>
<td>4.0 cm</td>
</tr>
<tr>
<td>J</td>
<td>54°F</td>
<td>5.0 cm</td>
</tr>
<tr>
<td>S</td>
<td>44°F</td>
<td>6.0 cm</td>
</tr>
<tr>
<td>O</td>
<td>32°F</td>
<td>10.0 cm</td>
</tr>
<tr>
<td>N</td>
<td>14°F</td>
<td>9.0 cm</td>
</tr>
</tbody>
</table>

**KEY**
- Blue = Average monthly precipitation
- Purple = Average monthly temperature

(1) desert (North America)
(2) grassland (temperate region)
(3) tropical rain forest (equatorial region)
(4) tundra (arctic region)
(5) broad-leaved forest (temperate region)
SCIENCE
Tests of General Educational Development

Directions

The Science Test consists of multiple-choice questions intended to measure general concepts in science. The questions are based on short readings that often include a graph, chart, or figure. Study the information given and then answer the question(s) following it. Refer to the information as often as necessary in answering the questions.

You will have 40 minutes to answer the 25 questions in this booklet. Work carefully, but do not spend too much time on any one question. Be sure you answer every question.

Do not mark in this test booklet. Record your answers on the separate answer sheet provided. Be sure that all requested information is properly recorded on the answer sheet.

To record your answers, fill in the numbered circle on the answer sheet that corresponds to the answer you select for each question in the test booklet.

FOR EXAMPLE:

Which of the following is the smallest unit in a living thing?

(1) tissue
(2) organ
(3) cell
(4) muscle
(5) capillary

(On Answer Sheet) 1 2 4 5

The correct answer is "cell"; therefore, answer space 3 would be marked on the answer sheet.

Do not rest the point of your pencil on the answer sheet while you are considering your answer. Make no stray or unnecessary marks. If you change an answer, erase your first mark completely. Mark only one answer space for each question; multiple answers will be scored as incorrect. Do not fold or crease your answer sheet. Return all test materials to the test administrator.

DO NOT BEGIN TAKING THE TEST UNTIL TOLD TO DO SO