

## MINI TEST 1

A snowfall consists of myriads of **minute** ice crystals that fall to the ground in the form of frozen precipitation. The formation of snow begins with these ice crystals in the subfreezing strata of the middle and upper atmosphere when there is an adequate supply of moisture present. At the core of every ice crystal is a minuscule nucleus, a solid particle of matter around which moisture condenses and freezes. Liquid water droplets floating in the supercooled atmosphere and free ice crystals cannot coexist within the same cloud, since the vapor pressure of ice is less than that of water. This enables the ice crystals to rob the liquid droplets of their moisture and grow continuously. The process can be very rapid, quickly creating sizable ice crystals, some of which **adhere** to each other to create a cluster of ice crystals or a snowflake. Simple flakes possess a variety of beautiful forms, usually hexagonal, though the symmetrical shapes reproduced in most microscope photography of snowflakes are not usually found in actual snowfalls. Typically, snowflakes in actual snowfall consists of broken fragments and clusters of adhering ice crystals.

For a snowfall to continue once **it** starts, there must be a constant inflow of moisture to supply the nuclei. This moisture is supplied by the passage of an airstream over a water surface and its subsequent lifting to higher regions of the atmosphere. The Pacific Ocean is the source of moisture for most snowfalls west of the Rocky Mountains, while the Gulf of Mexico and the Atlantic Ocean feed water vapor into the air currents over the central and eastern sections of the United States. Other geographical features also can be the source of moisture for some snowstorms. For example, areas adjacent to the Great Lakes experience their own unique lake-effect storms, employing a variation of the process on a local scale. In addition, mountainous section or rising terrain can **initiate** snowfalls by the geographical lifting of a moist airstream.

**Question 11: Which of the following questions does the author answer in the first paragraph?**

- A. Why are snowflakes hexagonal?
- B. What is the optimum temperature for snow?
- C. In which months does most snow fall?
- D. How are snowflakes formed?

**Question 12: The word "minute" in paragraph 1 is closest in meaning to \_\_\_\_.**

- A. tiny
- B. quick
- C. clear
- D. sharp

**Question 13: What is at the center of an ice crystal?**

- A. A small snowflake
- B. A nucleus
- C. A drop of water
- D. A hexagon

**Question 14: The word "adhere" in paragraph 1 is closest in meaning to \_\_\_\_\_.**

- A. belong
- B. relate
- C. stick
- D. speed

**Question 15: What is the main topic of the second paragraph?**

- A. How ice crystals form
- B. How moisture affects temperature
- C. What happens when ice crystals melt
- D. Where the moisture to supply the nuclei comes from

**Question 16: The word "it" in paragraph 2 refers to \_\_\_\_\_.**

- A. snowfall
- B. snowflake
- C. Cluster
- D. moisture

**Question 17: What is necessary for a snowfall to persist?**

- A. A decrease in the number of snowflakes
- B. Lowered vapor pressure in ice crystals
- C. A continuous infusion of moisture
- D. A change in the direction of the airstream

**Question 18: How do lake-effect snowstorms form?**

- A. Water temperature drop below freezing.
- B. Moisture rises from a lake into the airstream.
- C. Large quantities of wet air come off a nearby mountain.
- D. Millions of ice crystals form on the surface of a large lake.

**Question 19: The word "initiate" in paragraph 2 is closest in meaning to \_\_\_\_\_.**

- A. enhance
- B. alter
- C. increase
- D. begin

**Question 20: Which of the following could account for the lack of snowfall in a geographical location close to mountains and a major water source?**

- A. Ground temperatures below the freezing point
- B. Too much moisture in the air
- C. Too much wind off the mountains
- D. Atmospheric temperatures above the freezing point.



## MINI TEST 2

In 1969, a key milestone in space travel was reached when Neil Armstrong set foot on the moon. In 2001, another landmark event took place when the first civilian traveled into space as a paying tourist. As a teenager, Dennis Tito dreamed of visiting outer space. As a young man, he aspired to become an astronaut and earned a bachelor's and a master's degree in aerospace engineering. However, Tito did not have all the qualities necessary to become a professional astronaut; so instead, he went to work as a space engineer in one of NASA's laboratories for five years. Later, Tito set up his own financial investment company and, eventually, he became a multi - millionaire. Later in life, the ex - rocket engineer, still passionate about space travel, began looking into ways to make a trip into space.

In the early 1990s, the Soviet Space Agency was offering tickets for a visit to the Mir space station to anyone who could afford it. Tito jumped at the chance for this once-in-a-lifetime experience. Due to political and economic changes in the former Soviet Union, however, Tito's trip was postponed and later, Mir was decommissioned. In 2001, Tito's dream was finally came true when he paid a rumored \$20 million and took off aboard a SOYUZ rocket to deliver supplies to the International Space Station, a joint venture between the space agencies of Japan, Canada, Europe, Russia, and the U.S.

In preparation for the trip, Tito trained at the Gagarin Cosmonauts Training Center at Star City in Russia. There, he underwent eight months of physical fitness training, weightless simulations, and a variety of other exercises to prepare him for space travel. Although the Russians believed that Tito was adequately prepared for the trip, NASA thought otherwise. Dennis Tito had to sign an agreement with international space officials taking financial responsibility for any equipment he damaged or broke on his trip. He was also barred from entering any part of the space station owned by the U.S. unless escorted.

Although Tito made history and paved the way for the future of space tourism, factors such as cost, and the amount of training required, stand in the way of space vacations becoming an option for most people in the near future. In spite of this, Japanese and North American market data shows that there is definite public interest in space travel. In a 1993 survey of 3,030 Japanese, 80 percent of those under the age of forty said they would like to visit space at least once. Seventy percent of this group would pay up to three month's salary for the trip. In 1995, 1,020 households in North America were surveyed and of those, 60 percent were interested were under forty years of age. Just over 45 percent said they

would pay three month's salary, around 18 percent said they would pay six month's salary, and nearly 11 percent would pay a year's salary. Two - thirds of those who want to visit space would like to do so several times. Since the nature of this type of travel makes it hazardous to humans, it would have to be restricted to those who are physically fit and able to take responsibility for the risks involved.

**Question 11: According to the passage, what was the main event in 1969?**

- A. Scientists planned to travel to space.
- B. People started to concern space travel.
- C. The dream of space travel became true.
- D. Neil Armstrong was ready for heading to the moon.

**Question 12: When did Dennis Tito dream of becoming an astronaut?**

- A. When he was at kindergarten.
- B. When he was at primary school.
- C. When he was at his teen.
- D. When he was at university.

**Question 13: Dennis Tito made the first trip as a space tourist**

- A. in the late 60s.
- B. in the early 90s.
- C. this century.
- D. In the late 50s.

**Question 14: Which of the following is NOT true about Dennis Tito?**

- A. He has an advanced degree in aerospace engineering.
- B. He is now an astronaut for NASA.
- C. He eventually became a very wealthy man.
- D. He used to dream of travelling to outer space.

**Question 15: Tito's first trip into space was with \_\_\_\_\_.**

- A. the Russian/the International Space Station/
- B. the Americans/SOYUZ
- C. members of the former Soviet Union/the Mir space station
- D. the Japanese agency

**Question 16: Which of the following describes NASA's feelings about Tito's trip into space?**

- A. extremely proud
- B. somewhat eager
- C. very concerned
- D. disappointed

**Question 17: According to Japanese survey, which of the following is true?**

- A. Eighty percent of all those interviewed would be interested in travelling to space.
- B. Some people would pay a quarter of their annual salary to visit space.
- C. Only people under the age of forty are interested in space travel.
- D. Seventy percent of Japanese would pay three quarters of their annual salary to visit space.

**Question 18: According to a North American survey on space travel, which is true?**

- A. Seventy-five percent of those surveyed would be interested in travelling to space.
- B. Most people would pay a year's salary to visit space as a tourist.
- C. Most of the people interested in space travel were under the age of forty.
- D. Nearly sixty percent of those surveyed were interested in a vacation in space travel.

**Question 19: According to the passage who did not believe that Tito was trained well enough for the trip to space?**

- A. Russian Training Center.
- B. Japanese Training Center.
- C. European Training Center.
- D. NASA.

**Question 20: Which of the following would probably prevent you from becoming a space tourist in the near future?**

- A. health
- B. wealth
- C. youth
- D. age