Snow-Makers Reading Passage

Snow-Makers

A.Ski slopes had become an extremely profitable business with the growing popularity of skiing in the early to mid-twentieth century. However, ski resort owners were completely dependent on the weather: if it didn't snow, or didn't snow enough, they had to shut their businesses. Fortunately, snow can be produced whenever it's necessary through a gadget called the "snow gun." Such devices are now common in the great majority of ski resorts across the world, allowing many resorts to remain open for months, or even the whole year.

B.Snow originates from natural weather systems and arrives from water vapor in the atmosphere. The water vapor crystallizes into droplets, constructing clouds. If the temperature is sufficiently intense, the water droplets freeze into tiny ice crystals. More water particles then condense onto the crystal and unite with it to form a snowflake. As the snowflake grows heavier, it drops towards the Earth.

C.Although the snow gun works very differently from a natural weather system, it accomplishes exactly the same thing as the device basically works by merging water and air. Two multifarious hoses are attached to the gun. One leads from a water pumping station that pumps water up from a lake or reservoir, and the other leads from an air compressor. It atomizes the water whenever the consolidated air passes through the hose into the gun - that is, it disrupts the stream so that the water splits up into tiny droplets which are then bobbled out of the gun, and ice crystals will form if the outside temperature is below 0°C, which will make snowflakes in the same way as natural snow.

D.Snowmakers frequently refer to dry snow and wet snow. Dry snow contains relatively teensy water. And thus, it is extremely light and powdery. This type of snow is ideal for skiing because it is dry enough to prevent skis from becoming stuck in slush. One of the benefits of using a

snow-maker is that powdery snow can be produced to create a level surface on ski slopes. However, resort owners also use denser and wetter snow thatthat is denser and wetter on heavily traveled slopes. Many resorts build snow depth in this manner once or twice a year, and then apply a layer of dry snow to the trails regularlya a regular basis throughout the winter.

E.The wettability of snow depends on the outside temperature and humidity as well as the size of the water droplets released by the gun. Snowmakers must regulate the amounts of water and air in their snow guns to produce snow with the ideal consistency for the outdoor climate. Numerous ski slopes now do this using a centralized computer system linked to weather-reading stations located around the slope.

F.However, artificial snow has a significant influence on the ecosystem. It takes around 275,000 liters of water to cover a 60-by-60-meter stretch with snow. Most resorts obtain their water from one or more reservoirs in low-lying regions. The runoff water from the slopes returns to these reservoirs, allowing the resort to reuse the same water several times. However, huge air-compressing pumps require substantial energy, and the diesel engines that power them contribute to air pollution.

G.Due to the expense of generating snow, ski resorts must weigh the cost of running the machines against the benefits of prolonging the ski season, ensuring that they only manufacture snow when it is indispensable and when the investment will provide the greatest return. However, artificial snow has a variety of other applications. A coating of snow prevents much of the Earth's heat from escaping into space, so farmers frequently employ artificial snow to insulate winter crops. Snow-making devices have played a significant role in several film projects. Typically, it takes many months to film scenes that span only a few days. If the film is set in a snowy environment, the set designers must obtain the proper amount of snow for each day of filming by adding artificial snow or melting real snow. And another significant usage of artificial snow is in testing airplanes to verify that they can operate safely in harsh situations.

Questions

Questions 1-5

This reading passage has seven paragraphs, A-G.

Choose the correct heading for each paragraph from the list of headings below.

Write the correct number (i-x) in boxes 1-5 on your answer sheet.

Example   Answer

Paragraph A   v

Paragraph B   x

1.Paragraph C

2.Paragraph D

3.Paragraph E

4.Paragraph F

5.Paragraph G

List of headings

I.Considering environmental costs

II. Modifications to the snow gun's design

III. The requirements for different types of snow

IVLocal concern regarding environmental concerns

V.A problem and a remedy

VI. Applications outside of ski resorts

VII. Changing moist snow to dry snow

IX.A unique method for determining adjustments

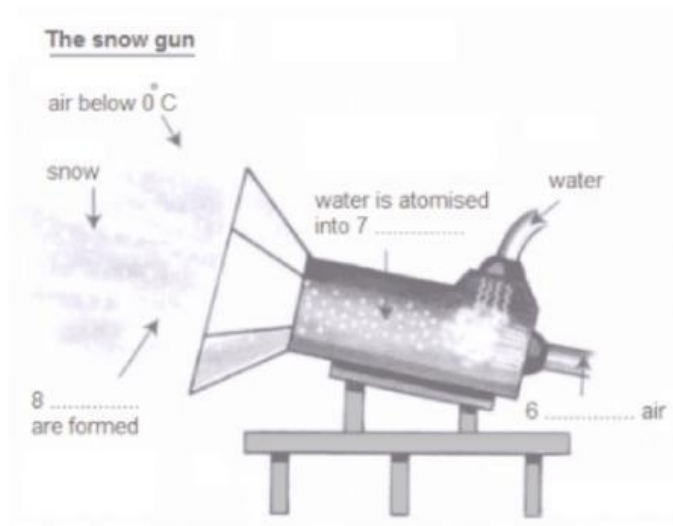**X.**The artificial procedure, natural substance

Creation of snow in nature

Questions 6-8

Label the diagram below.

Choose no more than two words from the passage for each answer.

Write your answers in boxes 6-8 on your answer sheet.

The snow gun

air below 0° C

snow

water is atomised into 7 ....

water

8 ....
are formed

6 .... air

Questions 9-13

Complete the sentences below.

For each answer, choose no more than three words from the passage.

Write your answers in boxes 9-13 on your answer sheet.

9. Dry snow is utilized to provide a level surface on slopes, whereas wet snow is used to boost

_____ on heavily traveled slopes.

10. Before calculating the required snow consistency, the atmospheric _____ must be measured.

11. Snowmaking technology requires a great deal of _____, which is detrimental to the environment.

12. Artificial snow is used as a sort of _____ for plants in cold climates.

13. Artificial snow can also be utilized for safety checks on _____.