

Section 1: Questions 1-11**The Air around Us**

One factor that affects our weather is the atmosphere. The transfer of heat or light waves of energy is called radiation. As the light energy travels through the atmosphere, some waves are deflected by water droplets or dust particles. This is why we often see a rainbow when the sun shines after a rain.

Much of the solar energy (30%) coming from the Sun is reflected by the air, the clouds and objects on Earth's surface. An additional 20 percent of the incoming solar radiation is absorbed by clouds, dust particles, water vapour, and other gases in the atmosphere. Thus, only 50 percent of the solar radiation coming from the Sun is absorbed by Earth and objects on it.

When solar energy strikes an object, the energy that is absorbed is changed from a short wavelength form (light energy) to a long wavelength form of energy. We cannot see the long wavelengths of energy given off by the object, but we feel the energy as heat. It is the heat energy radiating from Earth's surface that warms up the atmosphere.

In a desert, where the air is clear and dry, 90 percent of the solar radiation reaches Earth and is changed to heat energy. While the daytime temperatures may be extremely high, the nights get cold because as much as 90 percent of the heat passes back into space. The desert is covered by only a very thin blanket of the major heat-trapping gas- water vapour.

Where the air is humid, the daytime temperatures may be warm, but they do not reach the extreme highs recorded in the desert. The water vapour in the atmosphere acts as a curtain that reflects light energy. The land may receive only 40 percent of the incoming solar radiation. At night, the water vapour acts as a thick blanket that prevents the heat from escaping, so the nighttime temperatures remain warm.

Earth's atmosphere is like the glass in a greenhouse or car window. While the short wavelengths of light energy pass through the glass, most of the longer wavelengths of heat energy are trapped. Although the atmosphere does not trap heat in the same way a greenhouse does, the warming of the atmosphere is called the greenhouse effect. Planet Earth is a rather pleasant place to live because of the greenhouse effect that is created by its atmosphere.

Another important feature of the atmosphere is the cloud cover. Today, meteorologists are spending more time and energy on the study of clouds than on any other area of research. Clouds are airborne masses of water droplets or ice crystals. Smoke, whether from forest fires, chimneys, or automobiles, adds particles to the air. Winds pick up small particles of salt from the ocean or dust from exposed soil. All of these particles provide surfaces for the condensation of water vapour.

When moist air is pushed upward and is cooled, the water vapour begins to condense around these small particles. Water droplets or ice crystals will be formed, depending upon the temperature. The result of this process is the formation of clouds.

The features of Earth's surface and the movement of its winds determine where the moisture will fall. The amount of moisture that is returned to Earth each year can vary from less than one inch, that falls in the interior of the Sahara Desert, to as much as 50 feet, that falls on Mount Waialeale in Hawaii- the wettest spot on Earth.

Destruction of the tropical rainforest could affect weather over the entire planet. Transpiration from plants in the Amazon rainforest is an important source of water vapour for the formation of clouds. Clouds are an important factor in adjusting Earth's temperature. They may be an effective sunscreen that reflects significant amounts of light energy. They also are an effective blanket that traps heat energy.

If you change the chemistry of atmosphere; the climate may change. The amount of water vapour and other heat-trapping gases in the atmosphere helps to regulate the temperature of the planet.

Questions 1-8: Complete the sentences below with words taken from the passage. Write NO MORE THAN THREE WORDS for each answer.

1. The writer of the passage is trying to tell us how our weather is affected by the _____.
2. The percentage of the solar radiation finally taken by Earth is _____.
3. The name we give to the energy that warms up the atmosphere is _____.
4. In a desert, the daytime temperatures are high because most of the solar radiation is changed to _____.
5. In humid places, the water vapour during the daytime is compared to a _____.

than educating boys to lower family size. Education appears to affect family size in many ways. More educated women not only want fewer children than less educated ones, they are also more likely to marry and have children later, contributing to smaller family size.

Section C

Unfortunately, in many low-income countries, investment in education has not kept up with the rapidly increasing school-age population. Many developing countries cut social spending during the 1980s, putting more responsibility on families for financing education. Direct costs such as school fees, transportation, uniforms and books make it more difficult for poor families to educate all their children and parents in many countries give priority to sons.

Section D

Parents may see limited economic benefits in educating daughters. In many countries, girls are more likely than their brothers to be kept home to perform household chores, including caring for younger children. For these and other reasons, including early marriage and pregnancy, dropout rates for girls also tend to be higher than those for boys. In some cultures, parents are reluctant to allow their daughters to travel long distances to school, to be taught by male teachers and to enroll in schools without separate activities for girls.

Section E

Efforts to increase female enrolment levels must recognise the complex factors limiting educational opportunities for girls, as well as their continued enrolment once within the school system. Building more schools is often important to expand educational opportunities for girls. But especially in poor countries, more efficient use of existing resources for education could make possible the enrolment of more girls.

Section F

Hiring more female teachers and providing separate facilities for girls can help to overcome cultural barriers. In some countries, financial assistance such as scholarships for girls has also proved successful in encouraging parents to keep their daughters in school. Flexible school schedules can help to accommodate girls who have to work at home.

Section G

Providing access to good quality family planning services remains the most effective way to lower population growth rates in developing countries. Average family size and child death rates are lowest, however, in countries that combine strong family planning and health programmes with high levels of education for women.

Questions 12-18: Choose the most suitable heading for each section from the list of headings below. There is an extra heading which you will not need.

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|------|--|
| I | How to get more girls into school |
| II | Responsibility for educating parents |
| III | Educational problems of girls |
| IV | Now parents must pay |
| V | Solving some other problems |
| VI | Family planning plus schooling |
| VII | Importance of female education |
| VIII | Educating girls means smaller families |

12. Section A _____

16. Section E _____

13. Section B _____

17. Section F _____

14. Section C _____

18. Section G _____

15. Section D _____

Questions 19-23: Do the following statements agree with the information given in the reading passage? Write:

TRUE **if the statement agrees with the information**

FALSE **if the statement contradicts the information**

NOT GIVEN **if there is no information on this**

19. The children of a more educated mother are likely to be more educated.

20. To control family size, it is as effective to educate boys as to educate girls.

21. More educated women tend to have just two children.
22. In many developing countries, families are made financially responsible for educating their children.
23. Parents may not think that it is economically beneficial to educate girls.

Questions 24-26: Answer the following questions. Write NO MORE THAN THREE WORDS taken from the passage.

24. What is high for girls due to early marriage and pregnancy?
25. What do people consider important to create more educational opportunities for girls?
26. What can help girls who cannot study in school due to work at home?

Section 3: Questions 27-40

Health Care: Helping the Sick

Candy Stripers

A candy striper works in a hospital or medical facility. They are called candy stripers because of their pink aprons. Candy stripers can work on either a volunteer or paid basis. Candy stripers help sick people feel more comfortable in hospitals. Their duties include delivering newspapers, flowers and mail to patients. Most candy stripers are students. They come to work after classes. Many elderly people also work as candy stripers.

Physical Therapists

Physical therapists help people regain physical mobility after an accident, illness or surgery. A physical therapist works closely with a patient's doctor to relieve pain and increase the mobility of the affected body part. To be a physical therapist you will need a master's degree in physical therapy. Then you must be certified by the state. Physical therapy is a rapidly growing field.

Emergency Medical Technicians

The emergency medical technician, or EMT, is the first level of trained life support a patient is likely to meet following a car accident or an emergency health situation. EMTs

are certified to take blood pressure and perform cardiopulmonary resuscitation. They can also give oxygen. Most community colleges offer the minimum requirement of 120 hours of study along with the proper certification. With enough further training, you can become a paramedic.

Paramedics

Paramedics do work similar to that of EMTs, but they are state certified to practice more advanced procedures and have more responsibilities. They can administer specific drugs and intravenous, or IV, solutions. Paramedics report for duty at hospitals. From there they are sent to emergency sites, often along with an EMT, who is second-in-command. To become a paramedic, you must first become an EMT. Then you continue your schooling for another eighteen months or two years. Starting salaries for paramedics range between \$25,000 and \$27,000 a year.

Medical Assistants

Medical assistants work under the direction of a doctor to assist in the examination and treatment of patients. They interview patients, measure vital signs such as pulse rate, temperature, blood pressure, weight, and height, and record information on patients' charts. They also prepare treatment rooms for examination of patients by draping patients with a covering, and positioning instruments and equipment. During the examination, medical assistants hand instruments and materials to a doctor as directed. After the examination, they clean and sterilise instruments.

Physicians

To become a physician, or medical doctor, you must complete a long course of training. Before applying for medical school, a student must first have a bachelor's degree from a four-year college. Then, a student must attend medical school, which takes four years to complete. Next, the doctor must complete an internship and a residency at a hospital. These are the doctor's first jobs when he or she works in a hospital learning from experienced doctors. These generally take another four years. After several more years of practice and training, doctors are eligible to take the board certification exams. Doctors can work in hospitals, private practice, medical groups, relief organisations or government agencies.

Questions 27-32: Look at the following list of required works numbered 27-32 and decide by whom the work should be done according to the duties mentioned in the passage. You can use the choices more than once. Write:

- A. if it should be done by Candy Stripers;**
- B. if it should be done by Physical Therapists;**
- C. if it should be done by Emergency Medical Technicians;**
- D. if it should be done by Paramedics;**
- E. if it should be done by Medical Assistants.**

- 27. interviewing patients
- 28. giving orders to EMT in emergency sites
- 29. delivering letters to patients
- 30. helping patients to move properly
- 31. taking blood pressure in emergency sites
- 32. recording information about patients

Questions 33-40: Do the following statements agree with the information given in the reading passage? Write:

- TRUE** **if the statement agrees with the information**
- FALSE** **if the statement contradicts the information**
- NOT GIVEN** **if there is no information on this**

- 33. Candy stripers working in hospitals are all paid.
- 34. Elderly people work more hours as candy stripers than students do.
- 35. You don't need to be certified to be a physical therapist if you have a master's degree.
- 36. An EMT needs more training to be a paramedic.
- 37. Paramedics often wait in the hospitals until EMTs take the patients back from emergency sites.
- 38. Medical assistants have to make sure that the instruments are in the right positions for examinations.
- 39. One must spend four years in a medical school to be a medical doctor.
- 40. Doctors working to complete an internship at a hospital are not paid well.