بسم الله الرحمن الرحيم

A.

Read the text below and answer the questions that follow.

Wind Power in the US

Prompted by the oil crises of the 1970s, a wind-power industry flourished briefly in the United States. But then world oil prices dropped, and funding for research into renewable energy was cut. By the mid 1980s US interest in wind energy as a large-scale source of energy had almost disappeared. The development of wind power at this time suffered not only from badly designed **equipment**, but also from poor long-term planning, economic projections that were too optimistic and the difficulty of finding suitable locations for the wind turbines.

Only now are technological advances beginning to offer hope that wind power will come to be accepted as a reliable and important source of electricity. There have been significant successes in California, in particular, where wind farms now have a capacity of 1500 megawatts, comparable to a large nuclear or fossil-fuelled power station, and produce 1.5 per cent of the state's electricity.

Nevertheless, in the U.S., the image of wind power is still distorted by early failures. One of the most persistent **criticisms** is that wind power is not a significant energy resource. Researchers at the Battelle Northwest Laboratory, however, estimate that today wind turbine technology could supply 20 per cent of the electrical power the country needs. As a local resource, wind power has even greater potential. Minnesota's energy commission calculates that a wind farm on one of the state's south western ridges could supply almost all that state's electricity. North Dakota alone has enough sites suitable for wind farms to supply more than a third of all electricity consumed in the continental US.

The prevailing notion that wind power is too costly results largely from early research which focused on turbines with huge blades that stood hundreds of meters tall. These machines were not designed for ease of production or maintenance, and they were **enormously** expensive. Because the major factors influencing the overall cost of wind power are the cost of the turbine and its supporting systems, including land, as well as operating and maintenance costs, it is hardly surprising that it was thought at the time that wind energy could not be supplied at a commercially competitive price. More recent developments such as those seen on California wind farms have dramatically changed the economic picture for wind energy. These systems, like installations in Hawaii and several European countries, have benefited from the economies

of scale that come through standardized manufacturing and purchasing. The result has been a dramatic drop in capital costs: the installed cost of new wind turbines stood at $1000 per kilowatt in 1993, down from about $4000 per kilowatt in 1980, and continues to fall.

Design improvements and more efficient maintenance programs for large numbers of turbines have reduced operating costs as well. The cost of electricity delivered by wind farm turbines has decreased from about 30 cents per kilowatt-hour to between 7 and 9 cents, which is generally less than the cost of electricity from **conventional** power stations. Reliability has also improved dramatically. The latest turbines run more than 95 per cent of the time, compared with around 60 per cent in the early 1980s.

Another misconception is that improved designs are needed to make wind power feasible. Out of the numerous wind turbine designs proposed or built by inventors or developers, the propeller-blade type, which is based on detailed analytical models as well as extensive experimental data, has emerged as predominant among the more than 20,000 machines now in commercial operation world-wide. Like the gas-driven turbines that power jet aircraft, these are sophisticated pieces of rotating machinery. They are already highly **efficient**, and there is no reason to believe that other configurations will produce major benefits. Like other ways of generating electricity, wind power does not leave the environment entirely unharmed. There are many potential problems, ranging from interference with telecommunications to impact on wildlife and natural habitats. But these effects must be balanced against those associated with other forms of electricity generation. Conventional power stations impose hidden costs on society, such as the control of air pollution, the management of nuclear waste and global warming.

As wind power has been ignored in the US over the past few years, expertise and commercial exploitation in the field have **shifted** to Europe. The European Union spends 10 times as much as the US government on research and development of wind energy. It estimates that at least 10 per cent of Europe's electrical power could be supplied by land-based wind-turbines using current technology. Indeed, according to the American Wind Energy Association, an independent organization based in Washington, Denmark, Britain, Spain and the Netherlands will each surpass the US in the generating capacity of wind turbines installed during the rest of the decade.

(Source: http://www.eduers.com/ielts/readingsample.htm)

Glossary

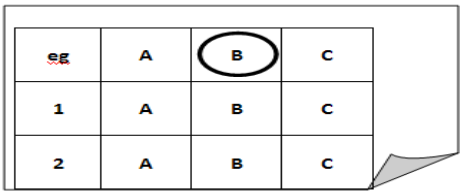
fossil fuel: coal, oil and natural gas
kilowatt: 1,000 watts; a watt is a unit of power
kilowatt-hour: one kilowatt for a period of one hour
megawatt: one million watts
wind farm: a group of wind turbines in one location producing a large amount of electricity
wind turbine: a machine which produces energy when the wind turns its blades

Section 1 (5 x 1 mark)

Directions: On your answer sheet, circle the letter for the best answer to each question.

Example: This article is mainly about:

a. How wind power is used in the world.
b. Use of wind power in the US.
c. Designs of wind turbines.



1. Which of the statements is true?
   a. Wind power has developed steadily since the 1970s.
   b. Cost was a big factor in preventing the development of wind power.
   c. Wind power can provide enough electricity for the United States.

2. What is the general view of wind energy in the United States?
   a. It will reduce global warming.
   b. Very positive.
   c. It can only provide small amounts of energy.

3. Which of these factors has not contributed to the reduced cost of wind energy?
   a. State subsidies.
   b. More efficient maintenance.
   c. Improved designs.

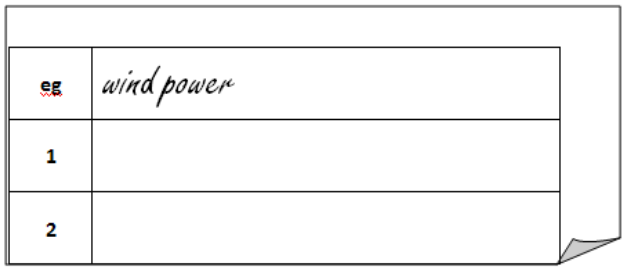
4. Wind turbine designs are _____.
   a. expected to improve in the future.
   b. already very good.
   c. not very good yet.

5. Wind energy is more developed in the _____ than the USA.
   a. Asia.
   b. Europe.
   c. Gulf.

Section 2 (5 x 1 mark)

Directions: On your answer sheet, fill in the blanks in the following summary using words from the box below (There are more words or phrases than you will need to fill the gaps.)

e.g.



success	**rise**	**recognition**	**~~wind power~~**	**growth**
production costs	**decline**	**failure**	**operating costs**	**fall**

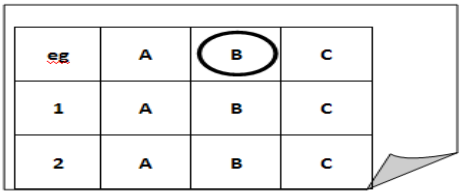
The failure during the late 1970s and early 1980s of an attempt to establish a widespread _____(e.g.)_____ industry in the United States resulted largely from the _____(1)_____ in oil prices during this period. The industry is now experiencing a steady ____(2)_____ due to improvements in technology and an increased awareness of the potential in the power of wind. The wind turbines that are now being made, based partly on the ____(3)_____ of wide-ranging research in Europe, are easier to manufacture and maintain than their predecessors. This has led wind-turbine makers to be able to standardize and thus minimize ____(4)_____ There has been growing ____(5)_____ of the importance of wind power as an energy source.

Section 3 (5 x 1 mark)

Directions: For each of the following questions, circle the answer on your answer sheet that is closest in meaning to the underlined words found in the passage.

Example: equipment (line 6)

a. things produced in a particular factory
b. tools or machines needed to do a particular job
c. the process of making tools or other things



1. **criticisms** (line 19)

   a. remarks that say what you think is bad about someone or something
   b. remarks that say what you think is good about someone or something
   c. remarks that say you are not worried about someone or something

2. **enormously** (line 28)

   a. not too much
   b. a little
   c. very much

3. **conventional** (line 46)

   a. usual
   b. new
   c. creative

4. **efficient** (line 57)

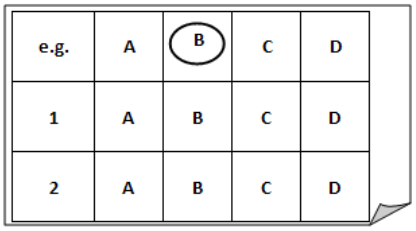
   a. not using time, money, energy etc in the best way
   b. not enough to do everything that needs doing
   c. work well without wasting time, money, or energy

5. **shifted** (line 65)

   a. examined information, documents etc carefully
   b. moved from one place or position to another
   c. to move something or someone upwards into the air

Section 4 (10 x 1 mark) (The words are taken from vocabulary for weeks 2 - 3)

Directions: For each of the following questions, circle the answer on your answer sheet that is closest in meaning to the underlined words in each sentence.



Example: Government advertising was everywhere but business ads were **non-existent.**

a) all in one place b) nowhere c) a small amount d) not important

1. He is a very **competent** teacher.
   a. skilled and knowledgeable b. inexperienced and rude
   c. happy and easy-going d. tired and unmotivated

2. Reem is a **vain** girl who thinks only about her looks.
   a. pretty b. proud
   c. intelligent d. sincere

3. Some prisoners escaped from prison by **disguising** themselves as cleaning ladies.
   a. climbing over something b. hiding behind someone
   c. changing one's appearance d. getting a particular job

4. The phone rang, but she **ignored** it.
   a. did something eagerly b. held something tightly
   c. did not pay any attention d. did not hold very tightly

5. He says the most **outrageous** things.
   a. nice b. shocking
   c. interesting d. wonderful

6. Like his father, Adam chose a **career** in the Army.
   a. job b. wife
   c. friend d. messenger

7. Huda is polite but **aloof**.
   a. friendly
   b. angry
   c. helpful
   d. distant

8. I wish I could **rid** myself of unwanted worries.
   a. relieve
   b. bring
   c. help
   d. demand

9. He was well-liked by his **colleagues**.
   a. people you play with
   b. people you work with
   c. people you are related to
   d. people you don't like

10. The hostages are being held in **harsh** conditions.
    a. easy and helpful
    b. bright and sunny
    c. difficult and cruel
    d. quiet and gentle

Download Quiz 1 Answer Key to check your answers ☺