

**1. Choose the correct answer. Write a letter (a–d) in each space.**

1. The car moves faster \_\_\_\_\_ your foot presses the accelerator pedal.  
a) that                      b) which                      c) than                      d) when
2. \_\_\_\_\_ the door opened, cold air entered the room.  
a) As                      b) From                      c) To                      d) For
3. When the piston \_\_\_\_\_ down the chamber, it pushes oil along the pipes.  
a) moved                      b) move                      c) moves                      d) moving
4. The worker pressed the button, \_\_\_\_\_ made the alarm sound.  
a) because                      b) which                      c) when                      d) to
5. The petrol flows into the fuel tank, \_\_\_\_\_ it is stored until it is needed.  
a) meanwhile                      b) where                      c) which                      d) as
6. The moving water turns the turbine, which \_\_\_\_\_ the electricity.  
a) is generated                      b) generating                      c) to generate                      d) generates

**2. Write a word from the box in each space.****linear / clockwise / reciprocating / oscillating**

7. The door opens when the key is turned \_\_\_\_\_.
8. The motion of a pendulum from side to side is \_\_\_\_\_.
9. The flow of water one way along a pipe is \_\_\_\_\_.
10. The two-way movement of a piston up and down is \_\_\_\_\_.

**3. Match parts of phrases about car engines. Write a letter (A–F) in each space.**

1. spark _____	A stroke
2. crank _____	B centre
3. intake _____	C plug
4. exhaust _____	D combustion
5. top dead _____	E shaft
6. internal _____	F valve

**4. Write a word from the box in each space.**

**turbine, shaft, hydraulic, buoy, chamber, evaporator**

- 17 The wave energy \_\_\_\_\_ moves on the surface of the sea.
- 18 A fluid (such as water or oil) is pushed under pressure along a \_\_\_\_\_ pipe.
- 19 The piston of the car engine moves up and down inside a sealed \_\_\_\_\_.
- 20 The \_\_\_\_\_ extracts heat from the air so cooler air can be blown into the building.
- 21 Sea water pushed through the pipes at high pressure makes the \_\_\_\_\_ rotate.
- 22 When a magnetic \_\_\_\_\_ moves inside a metal coil, it produces an electric current.

**5. Complete the sentences with the correct form of the word in brackets.**

1. The \_\_\_\_\_ of the shaft ensures smooth operation. (rotate)
2. This system improves energy \_\_\_\_\_ significantly. (efficient)
3. The gas undergoes rapid \_\_\_\_\_ during compression. (expand)
4. The process of \_\_\_\_\_ occurs inside the cylinder. (ignite)
5. The machine produces \_\_\_\_\_ motion. (oscillate)
6. Proper \_\_\_\_\_ reduces energy loss. (align)

**6. Choose the correct answer (a, b, c, d).**

Internal combustion engines rely **1** \_\_\_\_\_ the conversion of chemical energy **2** \_\_\_\_\_ mechanical energy. This process occurs **3** \_\_\_\_\_ a series of controlled explosions. The piston moves up and down **4** \_\_\_\_\_ the cylinder, while the crankshaft converts this motion **5** \_\_\_\_\_ rotary motion. Efficient operation depends **6** precise timing and correct alignment of components.

1. a) in      b) on      c) at      d) by
2. a) into    b) to      c) in      d) for
3. a) by      b) with    c) through d) from
4. a) on      b) at      c) in      d) over
5. a) to      b) into    c) for      d) with
6. a) from    b) of      c) on      d) in

## 7. Fill in the gaps with the correct word.

Wave power is a renewable energy source that utilizes the kinetic and potential energy of ocean waves. As waves move across the surface, they carry energy **1** \_\_\_\_\_ - long distances. This energy can be captured **2** \_\_\_\_\_ specialized devices. One common system is the oscillating water column, which uses air pressure changes to drive a turbine. The turbine converts mechanical energy **3** \_\_\_\_\_ electrical energy. However, efficiency is affected **4** \_\_\_\_\_ environmental factors such as wave height, speed, and direction. Engineers aim to optimize systems **5** \_\_\_\_\_ maximize output.

## 8. Choose the correct answer (a, b, c, d).

Wave energy has attracted increasing attention as a renewable power source. The first patent for a wave energy device **1** \_\_\_\_\_ in 1799 by Girard and son. Since then, hundreds of different designs **2** \_\_\_\_\_. Today, several commercial-scale projects **3** \_\_\_\_\_ around the world.

Currently, engineers **4** \_\_\_\_\_ a new oscillating water column system off the coast of Scotland. The device **5** \_\_\_\_\_ to withstand harsh ocean conditions. Last year, a smaller prototype **6** \_\_\_\_\_ in a controlled environment, and now real-sea trials **7** \_\_\_\_\_. If the trials prove successful, the first commercial array **8** \_\_\_\_\_ by 2030.

- |                      |                   |                        |                     |
|----------------------|-------------------|------------------------|---------------------|
| 1. a) filed          | b) was filed      | c) has filed           | d) is filed         |
| 2. a) have developed | b) were developed | c) have been developed | d) are developed    |
| 3. a) operate        | b) are operated   | c) have operated       | d) are operating    |
| 4. a) are testing    | b) are tested     | c) test                | d) have been tested |
| 5. a) designs        | b) was designed   | c) designed            | d) is designed      |
| 6. a) was tested     | b) has tested     | c) tested              | d) is tested        |
| 7. a) conduct        | b) are conducted  | c) have conducted      | d) were conducted   |
| 8. a) will build     | b) is built       | c) will be built       | d) builds           |