Questions 1-7:

Lighthouses occupy a special place in the history of modern Australia. They stand as monuments to the transformation of the nation from a colonial outpost to a prosperous society. For millions of people, lighthouses were the first sign of civilisation after a long sea voyage to a new home. For others, they are grim reminders of the sea's dangers. Modem technology has made many lighthouses redundant, but the buildings still evoke a special passion. They remind us of a time when ships ruled the world.

Lights for navigation have existed for more than 3,000 years. Their purpose has been to show ships where they are and to guide them into safe harbours or to warn them of rocks and reefs that could destroy them. Although preventing loss of life has always been a consideration, it is the preservation of ships and cargoes that has been the real driving force behind lighthouse construction.

Lighthouses evolved from a fire on a hilltop to towers engineered to withstand any force the sea could deliver, with beams of light that could be seen for 50km. They reached their zenith during the first half of the twentieth century but by the end of the same century their future had become uncertain. Today satellite navigation technology is taking the place of the lighthouse as the safe, economic and reliable way to navigate the oceans of the world.

The first primitive lights were fires in bronze baskets and were used along the Nile delta as early as 1000 BC. The oldest surviving lighthouse is the Tower of Hercules that stands on a hill on the north west coast of Spain. Built around 29 BC by the Romans, it served as a lighthouse until the fifth century AD when it was abandoned as the Romans left the area. It was relit by the Spanish in 1652 and has been in service ever since.

Italy's best-known lighthouse is in Genoa. Built during the 12th century, it was demolished in 1544 and rebuilt as a two-section brick tower. In 1449 one of the keepers was Antonio Columbus, uncle of the more famous Christopher. The light at Meloria, also in Italy and built in 1157, was the first rock or wave-washed lighthouse. Although it no longer exists, it was the forerunner to the many famous rock lighthouses of Brittany in France and of Great Britain.

The next challenge in lighthouse construction was to find a way to build towers in shallow waters on a sandy seabed. This was achieved with the development of pile lighthouses, made from either wood or iron with the piles being driven into the seabed. The first tower of this type was built in 1841 at the mouth of London's Thames River. But it was the USA which became the largest user of this type of lighthouse.

Accurate marine charts are now available for literally the whole of the earth's watery surface. These charts have also been computerised and in conjunction with GPS[1] can display the exact position of a ship on the screen. When connected to the controls

Complete the sentences below with words taken from the reading passage. Use **NO MORE THAN THREE WORDS** for each answer.

1. For people at sea, lighthouses are a welcome sight but also remind them of _____.

2. The real reason for constructing lighthouses is to protect _____.

3. These days lighthouses are being replaced by _____.

4. The oldest lighthouse still in operation is in _____.

5. One of the former keepers of the lighthouse in Genoa was _____.

6. The pile lighthouse was developed for construction on _____.
_____

7. Today's navigational systems rely on GPS and _____.

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of the ship it even allows the ship to be sailed on automatic pilot over any predetermined course in any kind of weather. The future is here.	

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