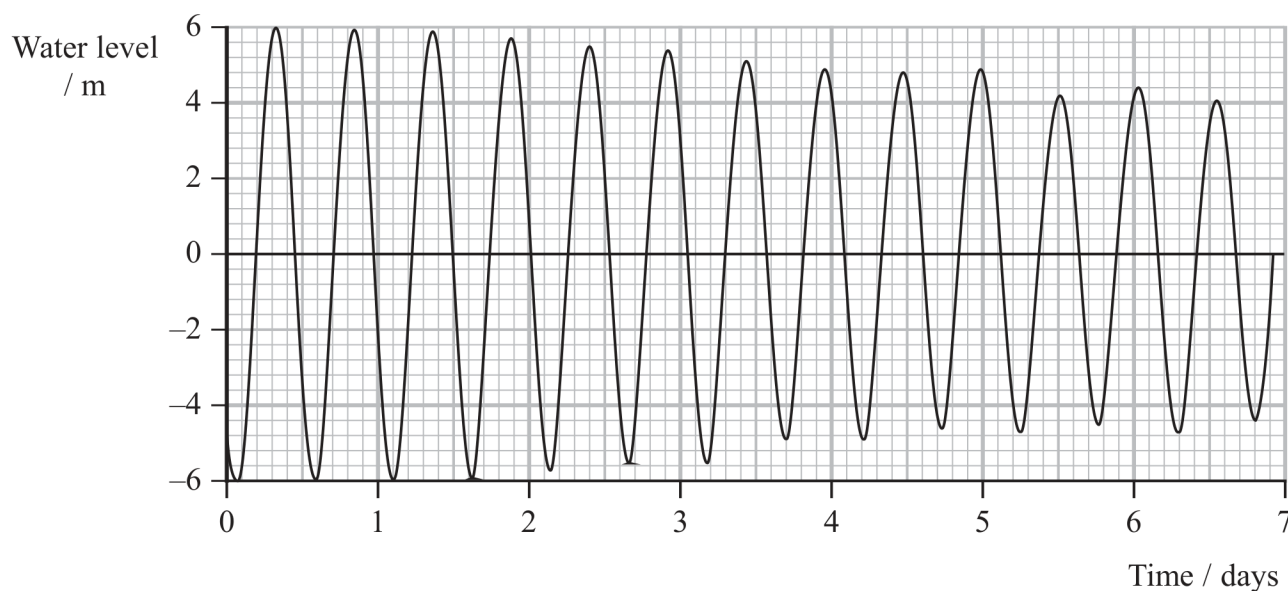14 Due to the gravitational attraction of the Moon, the water level of the oceans rises and falls producing tides.

The Bay of Fundy in Canada has one of the highest tides in the world.

The graph shows how the water level in one location in the Bay of Fundy varied with time over a 7-day period.

(a) Determine the period T of the water level, in hours.

(3)

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$T =$ .... hours

(b) Due to the shape of the Bay of Fundy, the natural period of oscillation of water in the bay is between 12 and 13 hours.

Explain why unusually high tides are observed in the bay.

(3)

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(Total for Question 14 = 6 marks)