

## SECTION 4 Questions 31–40

Complete the notes below.

Write **ONE WORD ONLY** for each answer.

### Marine renewable energy (ocean energy)

#### Introduction

More energy required because of growth in population and 31 .....

What's needed:

- renewable energy sources
- methods that won't create pollution

#### Wave energy

Advantage: waves provide a 32 ..... source of renewable energy

Electricity can be generated using offshore or onshore systems

Onshore systems may use a reservoir

Problems:

- waves can move in any 33 .....
- movement of sand, etc. on the 34 ..... of the ocean may be affected

#### Tidal energy

Tides are more 35 ..... than waves

Planned tidal lagoon in Wales:

- will be created in a 36 ..... at Swansea
- breakwater (dam) containing 16 turbines
- rising tide forces water through turbines, generating electricity
- stored water is released through 37 ..... , driving the turbines in the reverse direction

Advantages:

- not dependent on weather
- no 38 ..... is required to make it work
- likely to create a number of 39 .....

Problem:

- may harm fish and birds, e.g. by affecting 40 ..... and building up silt

#### Ocean thermal energy conversion

Uses a difference in temperature between the surface and lower levels

Water brought to the surface in a pipe