

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

PART 4 Questions 31–40

Complete the notes below.

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

The Eucalyptus Tree in Australia

Importance

- it provides **31** and food for a wide range of species
- its leaves provide **32** which is used to make a disinfectant

Reasons for present decline in number

A) Diseases

(i) 'Mundulla Yellows'

- Cause – lime used for making **33** was absorbed
- trees were unable to take in necessary iron through their roots

(ii) 'Bell-miner Associated Die-back'

- Cause – **34** feed on eucalyptus leaves
- they secrete a substance containing sugar
- bell-miner birds are attracted by this and keep away other species

B) Bushfires

William Jackson's theory:

- high-frequency bushfires have impact on vegetation, resulting in the growth of **35**
- mid-frequency bushfires result in the growth of eucalyptus forests, because they:
 - make more **36** available to the trees
 - maintain the quality of the **37**
- low-frequency bushfires result in the growth of **38** '..... rainforest', which is:
 - a **39** ecosystem
 - an ideal environment for the **40** of the bell-miner