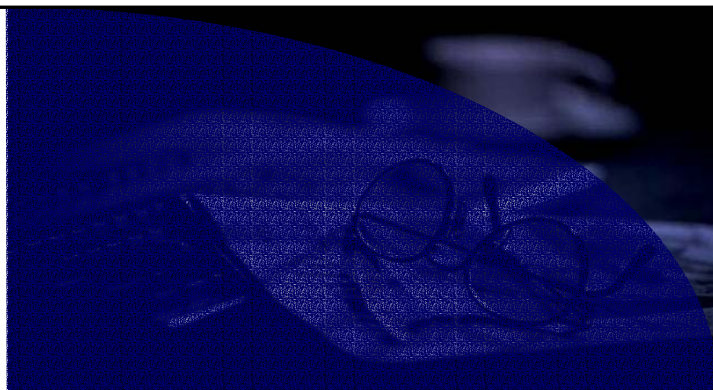


assessment for learning
year 7...mark scheme



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7I Energy resources...mark scheme

Assessment for learning...year 7 (level 3-6)

Question 1:

- (a) (i) liquid 1
*if more than one box is ticked award no mark
accept 'A' in the liquid box instead of a tick*
- petrol **or** oil **or** diesel 1
*accept a brand name
or paraffin **or** kerosene*
- (ii) gas 1
*if more than one box is ticked award no mark
accept 'B' in the gas box instead of a tick*
- gas **or** natural gas **or** calor 1
*accept a brand name
gas **or** butane **or** propane
do **not** accept 'hydrogen' **or** methane **or** camping
gaz*
- solid 1
*if more than one box is ticked award no mark
accept 'C' in the solid box instead of a tick*
- coal **or** coke **or** wood **or** charcoal 1
*accept a brand name **or** 'peat'*
- (b) any **two** from 2
- carbon dioxide
 - water *accept 'steam'*
 - smoke *accept 'soot'*
 - ash

- gases *accept 'fumes'*
 - sulphur dioxide *accept 'nitrogen oxides'*
 - carbon monoxide
- do not accept 'heat' or 'energy' or 'lead'*

[8]

Question 2:

- (a) any **two** from 2
- oil *accept 'petrol'*
 - gas
 - uranium **or** nuclear
- accept 'geothermal' or 'peat'*
- do not accept 'fossil fuel' or 'coal'*
- (b) can be grown **or** more trees can be planted 1
- accept 'can be replaced'*
- do not accept 'can be used again' or 'can be recycled'*
- (c) any **two** from 2
- wind
 - wave *do not accept 'water'*
 - tidal
 - solar *accept 'the Sun' or 'sunlight'*
 - biomass **or** a stated biomass, such as straw
- accept 'alcohol' do not accept 'wood'*
- accept 'hydroelectric'*
- accept 'geothermal' unless used as the answer to (a)*
- do not accept 'nuclear'*
- (d) any **one** from 1
- thermal *accept 'heat'*
 - radiant
 - light

[6]

Question 3:

- (a) **one mark is for storing energy by photosynthesis; the other mark is for the formation of oil from living things**
- living things use energy from the Sun to grow 1
- accept 'plants and animals store energy from the Sun'*
- oil is formed from the remains of living things 1
- accept 'oil is made of dead animals or plants'*

(b) (i) because it cannot be replaced once it is used **or** because it takes a long time to form 1
*do **not** accept 'you cannot use it over and over again' **or** 'it cannot be recycled'*

(ii) coal ✓ 1

natural gas ✓ 1

if more than two boxes are ticked, deduct one mark for each incorrectly ticked box

minimum mark zero

[5]

Question 4:

(a) any **two** from 2
• oil

*accept 'petrol' **or** 'diesel' **or** 'kerosene'*

- coal
- natural gas

*accept 'gas'
accept 'peat' **or** 'turf'*

(b) four **or** all of them 1

accept 'water behind dams, the wind, fossil fuels and wood'

[3]

Question 5:

(a) **The first marking point is for the transfer of energy from water to turbine.**
The second marking point is for the transfer of energy from turbine to generator.
The third marking point is for the transfer of energy away from the generator.

any **two** from 2

- potential energy in the water to kinetic energy in the turbine

*accept 'P.E. to K.E.'
accept 'transferred from the water to the turbine'
accept 'K.E. in the water to K.E. in the turbine'
accept 'P.E. in the water to K.E. in the water'*

- kinetic energy in the turbine to kinetic energy in the generator
accept 'transferred from the turbine to the generator'
- kinetic energy in the generator to electrical energy in the circuit
accept 'KE. to electrical energy'
accept 'from the generator to the circuit'
accept 'transferred from the generator by electricity'
accept 'KE. in the turbine to electrical energy in the circuit'
accept 'potential energy in the water to electrical energy in the circuit' for both marks
accept 'P.E. to electrical energy'
or 'from the water to the circuit' for one mark

- (b) any **one** from 1
- because the Moon's pull **or** gravity is always there
 - because the tides **or** the water cannot run out **or** be used up
accept 'because there are tides every day'
or 'because there is an endless supply'
- (c) • from wave energy **or** from the waves 1
- accept 'Ocean Thermal Energy Conversion' or 'OTEC'*
do not accept 'hydro-electric power'
- (d) it is easier to control or it can be turned on when it is needed 1
- accept 'the tides only give power at certain times' or 'you can build an oil-fired power station anywhere' or 'it is smaller'*
- any **one** from
- oil is non-renewable
accept 'oil will run out'
 - it causes pollution

*accept 'it gives out
greenhouse gases' or 'it can
cause oil spills'*

[6]