Energy Resources – 2022 June IGCSE 0625

1. June/2022/Paper_32/No.5

(a) Describe how a wind turbine generates electricity from energy in the wind.

.....

.....

..... [3]

(b) Apart from cost, state **two advantages** of generating electricity using wind turbines compared with using a power station that burns coal.

1. .....

2. .....

[2]

(c) Apart from cost, state **two disadvantages** of generating electricity using wind turbines compared with using a power station that burns coal.

1. .....

2. .....

[2]

[Total: 7]

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2. June/2022/Paper_33/No.4(a)

Fig. 4.1 shows parts of a coal-fired power station.

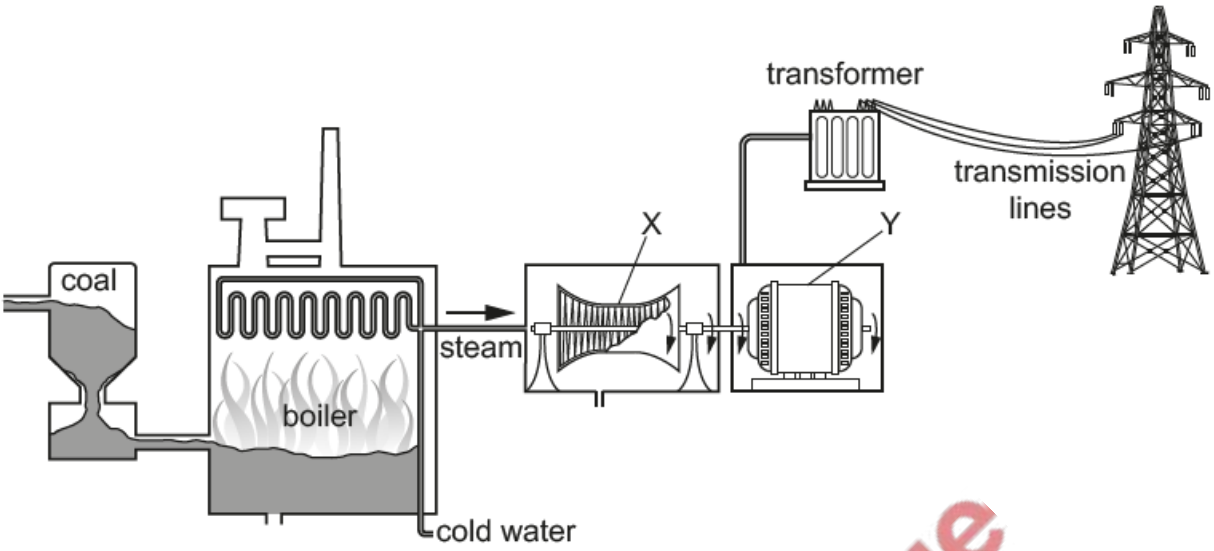

Fig. 4.1

(a) (i) State the names of the parts of the power station labelled X and Y.

X .....

Y .....

[2]

(ii) Describe **two** useful energy transfers in this power station.

1. .....

2. .....

[2]

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3. June/2022/Paper_41/No.2(a)

Fig. 2.1 shows water stored in a reservoir behind a hydroelectric dam.

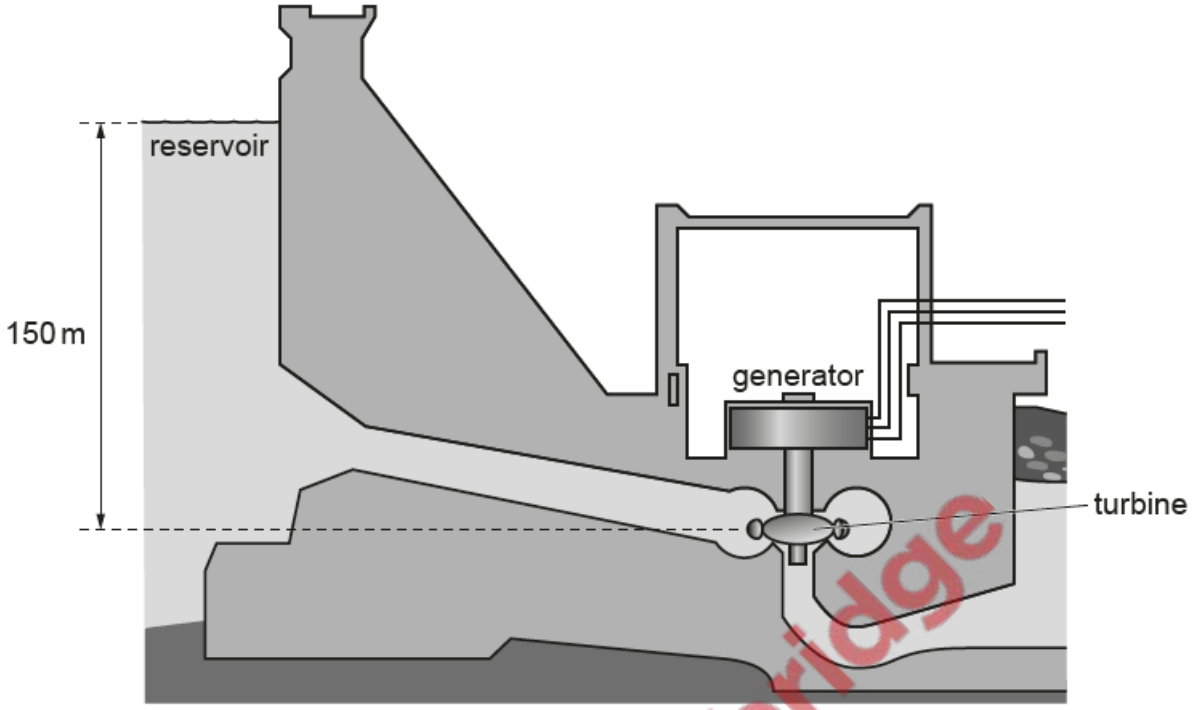

Fig. 2.1 (not to scale)

(a) State the form of the energy stored in the water in the reservoir that is used to generate electricity.

..... [1]

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4. June/2022/Paper_43/No.2

Water is held behind a dam in a hydroelectric power scheme.

(a) State the main form of energy stored in the water behind the dam.

..... [1]

(b) The water is released from the dam and falls a vertical height of 410 m at a rate of 480 kg/s.

(i) Calculate the rate at which energy is transferred by the falling water.

rate of energy transfer = ... [3]

(ii) The power scheme supplies a current of 270 A at a voltage of 6000 V.

Calculate the efficiency of the power scheme.

efficiency = ...% [3]

(c) Hydroelectric energy is a renewable form of energy.

(i) State **one** disadvantage of hydroelectric power schemes.

..... [1]

(ii) State **one** other renewable source of energy.

..... [1]

[Total: 9]

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