Practice Question Set For GCSE
**Subject : Physics**
**Paper-1 Topic: GCSE Triple Science_ENERGY (Low Demand Questions)**

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**Name of the Student**:_____
**Max. Marks : 18 Marks** **Time : 18 Minutes**

Mark Schemes

## Q1.

(a) grid

*accept any unambiguous indication*

**1**

(b) (i) A (only)

**1**

(ii) D (only)

**1**

(c) less than

**1**

**[4]**

## Q2.

(a) (i) correct data point identified (4, 0.96)

**1**

(ii) a decrease in

**1**

(b) (i) no / less atmospheric pollution

*accept specific examples eg no $CO_2$ / greenhouse gases produced*
*accept no harmful gases / fumes*
*accept reduced pollution from transportation (of coal)*
*accept does not contribute to global warming*
*it / they refers to solar cells*
*do **not** accept no / less pollution*
*does not harm the environment is insufficient*
*it is a renewable energy source is insufficient*

**1**

(ii) 8

*allow **1** mark for showing correct method ie* $\frac{7600}{950}$ *provided that no subsequent step is shown*

**2**

(iii) increase

**1**

(iv) ***these marks can score even if (b)(iii) is wrong***

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less / no electricity generated
*accept energy for electricity*
*accept reduced power / voltage output*

**1**

(because) lower light intensity (hitting solar panel / cell)
**or**
so decreases money paid / gained (from selling electricity)
*allow less light / sun (hitting solar panel / cell)*

**1**

**[8]**

## Q3.

(a) (i) any **one** from:

- produces no (air / atmospheric) pollution
  *accept named pollutant eg $CO_2$*
  *accept no harmful gases*
  *accept produces no emissions*
  *accept does not add to global warming*
  *environmentally friendly is insufficient*
- energy (source) is free
  *accept no fuel costs*
  *accept the wind / it is free*

**1**

(ii) any **one** from:

- waves
- tides
- falling water
  *accept hydroelectric*
  *do **not** accept water (flow)*
- solar
  *accept Sun / sunlight*
  *accept solar panels / cells*
- geothermal
- biofuel / biomass
  *accept a named biofuel*

**1**

(b) (i) 3000 (kilowatts)
*accept 3 megawatts / MW*
*accept 3 000 000 watts / W*

**1**

(ii) (average) wind speed below 6 m/s
*answers giving a wind speed greater than 3 but less than 6 m/s gain both marks*

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*allow **1** mark for calculating the output as 500 kW (maximum)*
*and*
*allow **1** mark for wind speed too low or wind not strong enough*
*do **not** accept wind above 25 m/s*
*do **not** accept the turbines are frozen*

**2**

(iii) A small amount of nuclear fuel generates a large amount of electricity.
*both required*

Nuclear power stations do not depend on the weather to generate electricity.

**1**

**[6]**

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