



**Home Economics
Leaving Certificate
Higher Level**

**Past Exam Questions on
Elective 1: Energy and Emissions**

Q1 Part (b) Section C 2013

- 1.(b) (i) Explain the underlying principle of one type of energy efficient lighting. (12)
- (ii) Give details of **three** contemporary developments in lighting technology. (18)

Q1 Part (a) Section C 2012

- 1.(a) ‘If each of us becomes aware of our own power when it comes to energy efficiency and use it properly, we can collectively make a big difference to ourselves, our pockets and to the environment.’ *(Sustainable Energy Authority of Ireland)*
- (i) Discuss **four** factors that should be considered when choosing a heating system for a new house. (16)
- (ii) Describe **one** type of central heating system suitable for a family home and include reference to:
- fuel/energy source
 - working principle to include methods of heat transfer
 - impact on the environment. (24)
- (iii) Explain, giving examples, how levels of thermal comfort in the home can be controlled. (10)

Q1 Part (b) Section C 2011

- 1.(b) Most energy used in the world is generated from non-renewable energy sources.
- (i) Discuss **one** non-renewable source of energy used in the home. Refer to:
- source
 - advantages/disadvantages
 - sustainability. (15)
- (ii) Describe **three** ways in which the design and construction of a house can help reduce energy consumption. (15)

Q1 Part (b) Section C 2009

- 1.(b) 'Higher fuel prices, lower incomes and poor energy efficiency will result in more and more people being unable to heat their homes.'

(Irish Independent 12th June 2008)

- (i) Homes can be heated by one or a combination of heating systems. Identify two heating options available and comment on the merits of each. (14)

- (ii) Recommend one method of insulation suitable for each of the following areas of the home:

- attic
- windows.

State the underlying principle of each method of insulation. (16)

Q1 Part (c) Section C 2008

- 1.(c) (i) In relation to household electricity supply describe each of the following:
- ring circuit
 - miniature circuit breakers (MCB's).
- (12)

- (ii) Identify three potential inefficient uses of electricity in the home and outline the improvement strategy you would recommend in each case. (18)

Q1 Part (c) Section C 2007

1. (c) "Sustainable energy refers to a way we can use and generate energy that is more efficient and less harmful to the environment".

Energy Master, Renewable Energy Solutions

- (i) Give details of one type of renewable energy that you would recommend when building a new house. Refer to:
- source
 - sustainability
 - efficiency / effectiveness.
- (18)

- (ii) Describe three different methods of reducing harmful emissions in the environment. (12)

Q1 Part (a) Section C 2006

1. (a) *Reduced fossil fuel supplies together with changing trends in modern housing developments, have led the consumer to investigate alternative methods of heating the home.*

(i) Identify three heating options available for the modern home. (9)

(ii) Explain the factors which should be considered when choosing a heating system for a family home. (20)

(iii) Set out details of one domestic central heating system you have studied. Include reference to:

(a) fuel/energy source

(b) heating principle

(c) efficiency and convenience. (21)