

MEBS6020 Sustainable Building Design

<http://me.hku.hk/bse/MEBS6020/>

Assignment 01: Fundamentals of Sustainable Building Design

1. (a) Explain the meaning of the following terms.
 - i) Ecological footprint
 - ii) Environmental sustainability
 - iii) Economic sustainability
 - iv) Social sustainability
 - v) Life cycle design

(5 marks)
- (b) Discuss the benefits of sustainable buildings and describe the aims of green building design.

(5 marks)
2. (a) Briefly describe and discuss the key areas that a green building specialist will provide advice to the client for a building project.

(5 marks)
- (b) District cooling system (DCS) is an example of total energy approach. Briefly explain the benefits of DCS and discuss the important factors for its successful implementation.

(5 marks)
3. (a) Discuss the four major areas of indoor environmental quality (IEQ). Briefly explain the four principles of indoor air quality (IAQ) design.

(5 marks)
- (b) Briefly explain the meaning of sustainable communities. Suggest one example in Hong Kong or other cities and discuss the key issues and factors affecting such a development.

(5 marks)
4. (a) Explain the meaning of transit-oriented development (TOD). Discuss the main characteristics of TOD in Hong Kong.

(5 marks)
- (b) Briefly explain the process of life cycle assessment (LCA) and discuss how it can be used to evaluate green and sustainable buildings.

(5 marks)