

# System Design for Sustainability

## Week 2: Practice Questions

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August 5, 2023

1. How did DfS evolve over the decades?

- (a) Intervention in processes → Intervention after process-caused damages → Intervention in products and services → Intervention in consumption patterns.
- (b) Intervention after process-caused damages → Intervention in processes → Intervention in products and services → Intervention in consumption patterns.
- (c) Intervention in consumption patterns → Intervention in processes → Intervention after process-caused damages → Intervention in products and services.
- (d) Intervention in products and services → Intervention in processes → Intervention after process-caused damages → Intervention in consumption patterns.

2. The role of design in sustainability expanded in multiple ways over the decades.

Which of the following are the ways in which the role of design has expanded?

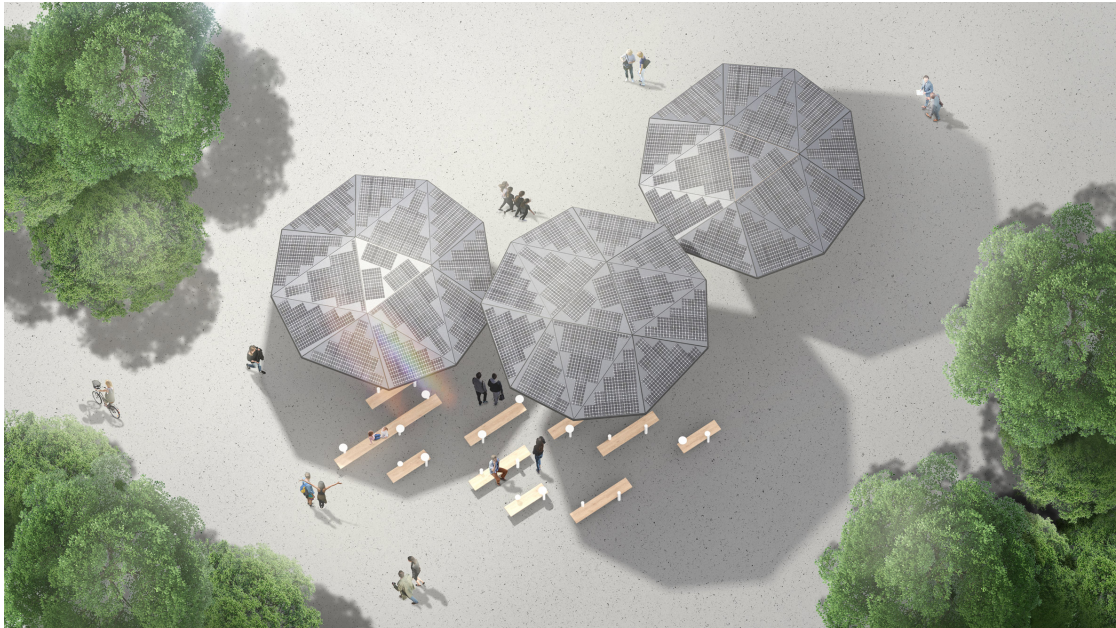
Check all correct answers.

- (a) From remedial actions to prevention.
- (b) An added socio-cultural dimension in the design thought process.
- (c) From an approach which looks at parts of the product cycle to the entire product lifecycle.
- (d) From altering materials to changing the production processes.

3. Which of the following is/are **not** examples of green design?

- (a) Adidas Parley shoes

- (b) Bamboo furniture
  - (c) Electric vehicles
  - (d) Denim bags made of used denim jeans
  - (e) Coffee cups made of coffee grounds
4. What are the key differences between green design and ecodesign?
- (a) Green design solves parts of the problem related to products whereas ecodesign looks at product design holistically.
  - (b) Green design promotes usage of more sustainable materials, whereas ecodesign does not.
  - (c) Green design allows for ways to recycle products, whereas ecodesign does not.
  - (d) None of the above.
5. Biomimicry design methodology can best be described by which of the following statements?
- (a) It imitates the way natural surroundings look
  - (b) It seeks answers in nature for solving modern problems of sustainability
  - (c) It studies the way nature functions to solve problems of sustainability
  - (d) It uses natural materials to make products more sustainable
6. Why is emotionally durable design considered to be a sustainable design methodology? Check all correct answers.
- (a) It makes consumers value the products more so they throw them out less frequently
  - (b) It informs the users of the sustainability issues with the products.
  - (c) It uses materials and methods that increase the longevity of the products.
  - (d) It enables personalization of products to increase the lifecycle of the product.
  - (e) It gives the user options to alter the product and make it more sustainable.
7. Please refer to the given diagram of a conceptual sketch of Ecacia:
- Solar-harvesting Acacia-like "tree". It is a structure that harvests solar energy while providing a public place to shelter during very hot weather. The design concept is based on a species of acacia tree in the Savannah. Which design methodology describes the approach to the design of Ecacia?



- (a) Green design
- (b) Product ecodesign
- (c) Product-service system design
- (d) Cradle-to-cradle design
- (e) Biomimicry design
- (f) Emotionally durable design