

- 1. The first step in a new engineering design is to:**
  - A identify competitors' products
  - B carry out functional modelling
  - C write detailed specifications of the final product
  - D understand the problem.
  
- 2. The engineering design process is iterative. This means:**
  - A a design is evaluated and steps are repeated to improve the design. Eventually a satisfactory design is obtained.
  - B steps are carried out in a well-defined sequence
  - C not all designs will lead to products being made
  - D eventually all designs are out of date and products become obsolete.
  
- 3. In which of the following would ergonomics be an important design consideration**
  - A microprocessor
  - B electric toothbrush
  - C car engine management system
  - D motorway bridge over a river.
  
- 4. Which of the following job titles is given to someone whose main role is to work on the appearance of a product?**
  - A industrial designer
  - B aesthetics engineer
  - C product engineer
  - D graphics designer.
  
- 5. At what stage in an engineering design are aesthetics normally first considered?**
  - A at the identification of the problem
  - B when solutions to a problem are being generated
  - C after a prototype has been made and tested
  - D after the design has been finalised.

**6. Reverse engineering is:**

- A refining a product by analysing its weaknesses and improving its performance
- B starting out with the final specifications of a product and working backwards until the initial design is obtained
- C applying technology that was previously thought obsolete to make new products
- D analysing how a product was made with the intention of producing duplicates or improved versions.

**7. From an engineering design perspective, DFA stands for:**

- A Design for Appearance
- B Design for Assembly
- C Design for All
- D Designated Final Assembly.

**8. For which of the following products would DFMaint NOT be a priority?**

- A microprocessor in a computer
- B washing machine
- C gas turbine aircraft engine
- D offshore wind turbine.