1 Grocers often display fresh vegetables on the pavement outside their shop.

Design a unit to store and display eight different types of vegetable. The unit should be portable to allow the grocer to move the unit back into the shop at night.

(a) List four additional points about the function of such a unit that you consider to be important. [4]

(b) Show two different methods which could be used to make the unit portable. [4]

(c) Develop and sketch three ideas for the unit. [12]

(d) Evaluate your ideas and justify why you have chosen one idea to develop more fully. [8]

(e) Draw, using a method of your own choice, a full solution to the problem. Include construction details and important dimensions. [12]

(f) Suggest two suitable specific materials for your solution and give reasons for your choice. [4]

(g) Outline a method used to manufacture one part of your solution. [6]
A seed company wants to promote vegetable growing to young children. The items shown below are to be included in a vegetable growing starter kit.

Design a lightweight counter top display that will hold the individual items in the kit, to promote vegetable growing starter kits.

(a) List four additional points about the function of such a counter top display that you consider to be important. [4]

(b) Use sketches and notes to show two methods that can be used to attach items to card. [4]

(c) Develop and sketch three ideas for the counter top display. [12]

(d) Evaluate your ideas and justify why you have chosen one idea to develop more fully. [8]

(e) Draw, using a method of your own choice, a full solution to the problem. Include construction details and important dimensions. [12]

(f) Suggest two suitable specific materials for your solution and give reasons for your choice. [4]

(g) Outline a method used to manufacture one part of your solution. [6]
A manufacturer wishes to develop a hand or electrically operated machine that will peel an apple.

Design a machine that will peel an apple.

(a) List four additional points about the function of such a machine that you consider to be important. [4]

(b) Use sketches and notes to show two methods that could be used to convert rotary motion to linear motion. [4]

(c) Develop and sketch three ideas for the machine. [12]

(d) Evaluate your ideas and justify why you have chosen one idea to develop more fully. [8]

(e) Draw, using a method of your own choice, a full solution to the problem. Include construction details and important dimensions. [12]

(f) Suggest two suitable specific materials for your solution and give reasons for your choice. [4]

(g) Outline a method used to manufacture one part of your solution. [6]