

GCE

Design and Technology

Unit **F524/02**: Product Design: Component 2

Advanced GCE

Mark Scheme for June 2016

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F524/02 Product Design; Mark scheme

Possible specification points could be:

Question 1

- I. The structure will be subjected to harsh weather on the seafront so it must be constructed so that it can withstand the rain, strong winds and sea spray it is likely to experience.
- II. The structure must offer shelter from harsh seafront conditions in the winter but open up to allow enjoyment of the sun and beach in the summertime.
- III. It should be possible to personalise the exterior of the structure (eg with paint) to maintain a traditional seafront aesthetic.
- IV. Must be possible to secure the building so that owners can leave belongings inside without risk of opportunist thefts.

Question 2

- I. The product must fold up or collapse to allow for easy storage in a typical garden shed.
- II. The product must put branches cleanly to avoid damage to the tree which might cause infection.
- III. The product must easily carried and lifted into position for use so that most gardeners can use it without too much exertion or strain.
- IV. The product must be adjustable so that it can cut branches from 0 to 2.5m so that this one implement is all that is needed to prune trees in most gardens.

Question 3

- I. To provide promote healthy eating the contents of the snack pot should contain at least two of the child's five a day of fruit and vegetables.
- II. All the items in the snack box should be suitable to stored chilled so that they can be pre-prepared and stored complete ready for sale.
- III. The snack box should have a shelf life of at least 48 hours so that the cafe can prepare them in advance and to avoid food wastage.
- IV. Must provide no more than a third of the daily energy requirement for a child to help to control the weight of children.

Question 4

- I. The product should provide a backdrop setting for a <named them> party as this would be popular with both genders.
- II. The backdrop should be freestanding and stable so that it could be used anywhere.
- III. The surface of the product must be wipe-clean because a children's party could become quite messy.
- IV. All imagery on the product should be age appropriate avoiding anything that could alarm or upset a small child.

Question 5

- I. The unit should be made from a material that is easy to clean because children are likely to make it dirty/mark it quite regularly.
- II. The unit should encourage children to keep their belongings organised to develop the habit of keeping their room tidy.
- III. The unit should be modular so that it can be configured in different ways to suit different room layouts.
- IV. The unit should have adjustable shelving and cupboard partitions to accommodate a wide variety of items.

Question 6.

- I. The product should keep the items being transported safe and dry whilst being used in wet and rough conditions.
- II. The product should protect the items being carried from damage from knocks and bangs which are likely in severe weather conditions.
- III. The product should be robust and durable because it will get wet and be knocked about whilst in use.
- IV. The product must be narrow enough to pass through standard gates and doorways to get supplies to most houses without unloading or lifting.

Question 7.

- I. The product should include a low battery alarm so that users are alerted to the need to replace them before they are exhausted.
- II. The product should operate automatically and continuously to ensure users are always protected.
- III. The product should be neutral in appearance so that it can fit into any style of decor or colour scheme.
- IV. Be able to stand on a horizontal surface or be wall mounted to best suit the needs of all users.

Question 8.

- I. To protect the child from sun the product must be made from a material that does not allow uv radiation to pass through it.
- II. The product should not affect the mobility of the child so they can behave normally whilst wearing it.
- III. The product should be easy to launder because it is likely to get dirty when the child is playing outside.
- IV. The product should be light, cool and comfortable so the child does not object to wearing it in hot weather.

Generic mark scheme is unchanged from 2015.

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