

**Friday 7 December 2012 – All day**

**AS GCE DESIGN AND TECHNOLOGY**

**F521/01** Advanced Innovation Challenge

**SESSION 1 AND 2 – PRACTICAL ASSIGNMENT**

Candidates answer on the Question Paper.

**OCR supplied materials:**

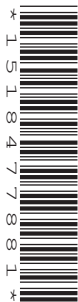
None

**Other materials required:**

- Modelling materials and equipment

**Duration:** 6 hours

**MODIFIED LANGUAGE**



Candidate forename		Candidate surname	
-----------------------	--	----------------------	--

Centre number						Candidate number				
---------------	--	--	--	--	--	------------------	--	--	--	--

### INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. All work should be completed on the workbook. **Additional paper will not be marked.**
- You will have a total of 6 hours to complete this part of the examination. There will normally be two 3 hour sessions.

### INFORMATION FOR CANDIDATES

- At the end of the examination you must have:
  - selected **one** of the design challenges detailed with this workbook;
  - completed the answer booklet showing your creative thinking and how your idea works;
  - produced a model/prototype to show the important features of your design;
  - have at least three photographs fixed in your answer booklet showing your modelling activities.
- The total number of marks for this paper is **60**.
- This document consists of **20** pages. Any blank pages are indicated.

**Your answer booklet will be collected at the end of session 1 and 2 and reissued when you sit session 3 the reflection test.**

For Examiner's Use	
Paper 1	
Paper 2	
Total	

## Retail environments

Many people visit retail environments regularly. They may do this to buy things they need such as food or clothing. For some people, visiting a retail environment is a social activity.

You have been asked as a designer to address **one** of the Design Challenges. This will help to develop a range of **innovative** products that will be suitable for use in retail environments.

### Design Challenge One

Large stores often provide shopping baskets and shopping trolleys for customer use. There is a need for a product that is suitable for small or large quantities of shopping.

- The product should take up the smallest possible space when it is not being used.

### Design Challenge Two

Many people eat hot fast food meals when out shopping. There is a need for a hot and healthy fast food meal that will appeal to all ages.

- The meal should make use of seasonal food.

### Design Challenge Three

Stores often need to provide bags for customers to carry shopping home. There is a need for an alternative product that can be provided as cheaply as possible.

- The product should encourage reuse and raise awareness of sustainability.

### Design Challenge Four

People often like to shop with family or friends. There is a need for a product that can provide relaxation in a retail environment for people waiting for family and friends.

- The product should be suitable for at least two people.

### Design Challenge Five

A large sports store wants a piece of sculpture to put in their entrance. They want the sculpture to create interest and promote products.

- The product should attract shoppers to purchase goods.

### Design Challenge Six

Litter from fast food packaging is often a problem in large retail environments. There is a need for a product that will encourage people to separate food waste from packaging waste.

- The product should raise awareness of sustainability.

**BLANK PAGE**

**PLEASE DO NOT WRITE ON THIS PAGE**

# Session 1

- 1 Explore your chosen Design Challenge. What are your first thoughts?

Use sketches and notes to communicate your thinking.

- 2 Which of your first thoughts offers greatest potential to be taken further? Why?

**5**

Additional space

**Boxes 3, 4 and 5 are on page 18 of this booklet**

- 6 Start designing. Use annotated sketches and/or models to show your ideas. You may wish to use annotated photographs to show modelling.

Ideas continued.

- 7 What do you think of your ideas so far and how has your job bag helped to inspire/direct your ideas? Use annotated sketches and/or annotated photographs to explain.

- 8 Which is your best idea? Justify your decision.



**9 Reflect and Record**

You will be asked to present your ideas (no more than 5 minutes).

Use this space to plan your presentation. Think about your brief, specification and key factors of your design.

**10 Feedback**

Record any suggestions made by other people. Identify further changes to your design that you could make in response to their suggestions.

**11 Developing your idea, improvements and modifications**

Use annotated sketches and/or annotated photographs to communicate your thoughts.

In your answer, include details of

- materials, components or ingredients
- how you could make your design
- sustainability issues

**12 Your Model**

List the component materials/ingredients you have chosen to make your prototype.

Component description	Material/Ingredient

Show how these components could be joined/combined together.

## 13 Action Plan for Session 2

## Session 2

### 14 Review

Record any new thoughts you have about your design. Use annotated sketches and/or notes.

### 15 Modelling – Test, develop and refine your design proposal.

#### Progress Report 1

Have you found any problems? What are the possible solutions?

**16 Continue Modelling. You have 40 minutes modelling time.**

**Progress Report 2**

Did your solutions work? Why?

Which areas of modelling have been most successful so far?

**17 Planning.** Plan what you will be doing/making during the final modelling activity.

## **18 Evaluation of Developed Design Proposal**

Describe the effectiveness of your developed design proposal and how it meets the needs of the original Design Challenge. Use sketches and notes to show how your design could be improved. Evaluate your final proposal against your specification. You may use annotated sketches and/or annotated photographs.



Evaluation Continued

### 3 Decision Time

Your Design Brief

I am going to design and model a ...

Photograph 1

### 4 Key Points:

Examine the contents of your job bag, remembering your design brief. Identify key points which will help you write your specification.

Photograph 2

### 5 Your Design Specification

To be successful my product must ...

Photograph 3

**BLANK PAGE**

**PLEASE DO NOT WRITE ON THIS PAGE**

**PLEASE DO NOT WRITE ON THIS PAGE**



**Copyright Information**

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website ([www.ocr.org.uk](http://www.ocr.org.uk)) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact the Copyright Team, First Floor, 9 Hills Road, Cambridge CB2 1GE.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.