

**OXFORD CAMBRIDGE AND RSA EXAMINATIONS
AS GCE**

F521/01

DESIGN AND TECHNOLOGY

Advanced Innovation Challenge

Session 1 and 2 – PRACTICAL ASSIGNMENT

Friday 7 December 2012: All day

DURATION: 6 hours

plus your additional time allowance

MODIFIED ENLARGED 18pt

Candidate forename		Candidate surname	
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Centre number						Candidate number				
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Candidates answer on the Question Paper.

OCR SUPPLIED MATERIALS:

None

OTHER MATERIALS REQUIRED:

Modelling materials and equipment

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

- **Write your name, centre number and candidate number in the boxes on the first page. 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.

**YOUR ANSWER BOOKLET WILL BE COLLECTED AT THE
END OF SESSION 1 AND 2 AND REISSUED WHEN YOU
SIT SESSION 3 THE REFLECTION TEST.**

RETAIL ENVIRONMENTS

Many people visit retail environments regularly. This can be to purchase necessities such as food or clothing; for some people this is a social activity.

You have been approached 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 both baskets and 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 minimal space when not in use.**

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 be appealing to all ages.

- **The meal should make use of seasonal produce.**

DESIGN CHALLENGE THREE

There are many occasions when stores need to provide bags for carrying shopping home. There is a need for an alternative product that can be provided at minimal cost.

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

DESIGN CHALLENGE FOUR

People often like to shop in groups. 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 a minimum of two people.**

DESIGN CHALLENGE FIVE

A large sports store wants to install a sculpture in their entrance. They wish the piece 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 venues. There is a need for a product that will encourage separation of food waste and packaging

- **The product should raise awareness of sustainability.**

Session 1

- 1 **Explore the chosen Design Challenge. What are your initial thoughts?**

Use sketches and notes to communicate your thinking.

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

Additional space

3 DECISION TIME

Your Design Brief

I am going to design and model a ...

4 KEY POINTS:

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

5 YOUR DESIGN SPECIFICATION

To be successful my product must ...

Photograph 1

Photograph 2

Photograph 3

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

Ideas continued.

- 7 What do you think of your ideas so far, 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 what you will say. Think about your brief, specification and key factors of your design.

10 FEEDBACK

Record any suggestions made by others. Identify further modifications that you could make in response to this feedback.

11 DEVELOPING YOUR IDEA, IMPROVEMENTS AND MODIFICATIONS

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

Include details of materials, components or ingredients; methods of manufacture and issues relating to sustainability in your answer.

12 YOUR MODEL

List the 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

14 REVIEW

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

15 MODELLING – Test, develop and refine your design proposal.

PROGRESS REPORT 1

Problems you have come up against so far. 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

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