

**OXFORD CAMBRIDGE AND RSA EXAMINATIONS  
AS GCE**

**F521/01**

**DESIGN AND TECHNOLOGY**

**Advanced Innovation Challenge**

**Session 1 and 2 – PRACTICAL ASSIGNMENT**

**WEDNESDAY 8 MAY 2013: ALL DAY**

**DURATION: 6 hours  
plus your additional time allowance**

**MODIFIED ENLARGED**

<b>Candidate forename</b>		<b>Candidate surname</b>	
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<b>Centre number</b>						<b>Candidate number</b>				
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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.**
- **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.**

## **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**

**During sales times, long queues for changing facilities to try on clothes can be frustrating. There is a need for a product that will provide a temporary changing area within large stores.**

- **The product should take up minimal space when not in use.**

### **DESIGN CHALLENGE TWO**

**The recent trend for temporary ‘pop-up’ shops has created a need for a lightweight product that allows for display and sale of goods.**

- **The product should be able to be disassembled and reused at alternative venues.**

## **DESIGN CHALLENGE THREE**

**A new eco friendly store is opening in a number of locations. There is a need for a product that can be given away to every shopper on the first day of opening to create interest.**

- **The product should raise awareness of sustainability and eco design.**

## **DESIGN CHALLENGE FOUR**

**Many people eat snacks when out shopping. There is a need for a fruit or vegetable based product that will provide a healthy alternative fast food snack.**

- **The packaging will need to be minimal and allow for ease of recycling at a later stage.**

## **DESIGN CHALLENGE FIVE**

**Charity collections commonly take place in retail environments. There is a need for a product that will encourage people to make donations.**

- **The product should be interactive to create interest.**

## **DESIGN CHALLENGE SIX**

**Visiting retail environments such as shopping malls is often seen as a day out. There is a need for a product that encourages interaction between families or groups of friends.**

- **The product should provide a focal point that can help bring the community together.**

# 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.**

<b>Component description</b>	<b>Material/Ingredient</b>

**Show how these components could be joined/combined together.**

## **13 ACTION PLAN FOR SESSION 2**

## **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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