

**Friday 9 December 2011 – 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**



Candidate forename		Candidate surname	
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Centre number						Candidate number				
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**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 paper;
  - 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 **22** 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	
<b>Total</b>	

## Annual events

Annual events can vary in scale from major national occasions to smaller community or charity events. They can have many positive effects on the local area and can be used to raise awareness, celebrate success and bring communities together.

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 at annual events.

### Design Challenge One

The organisers of a sporting event wish to raise awareness of the benefits of a healthy lifestyle. There is a need for a product to promote these benefits at the event.

- The product should reflect the spirit of the event.

### Design Challenge Two

An outdoor venue hosting an event has limited seating and areas for picnics. The organisers plan to provide a product that can be used by families.

- The product should enable seating and eating during the event.

### Design Challenge Three

A council is organising a music and fashion show to promote local talent. There is a need for a promotional product that can be sent out prior to the event, encouraging people to attend and participate.

- The product should be interactive to create interest.

### Design Challenge Four

The organisers of a local event wish to exhibit art work, fashion and sculpture. There is a need for a system to display this work.

- The system should be able to be stored easily after the event.

**Design Challenge Five**

Many events involve live performances attended by a large audience. A system or product is needed to allow the performance to be seen by all.

- The system or product must be suitable for a range of performances and venues.

**Design Challenge Six**

The weather can be unpredictable. The organisers of a large outdoor event wish to provide a protective product to be worn in the event of extreme weather.

- The product should reflect the spirit of the event.

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# 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

**Boxes 3, 4 and 5 are at the end of this booklet on the fold-out page**

- 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.

**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**

## 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**

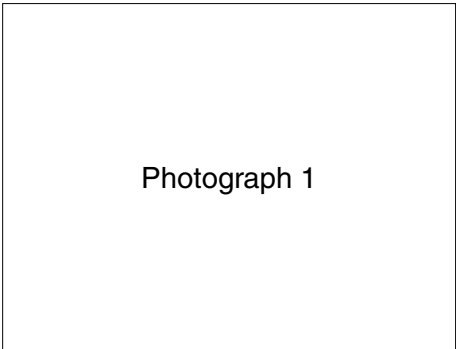
Describe the effectiveness of your developed design proposal and how it meets the needs of the original Design Challenge. Evaluate your final proposal against your specification, you may use annotated sketches and/or annotated photographs.

Evaluation Continued

**3 Decision Time**

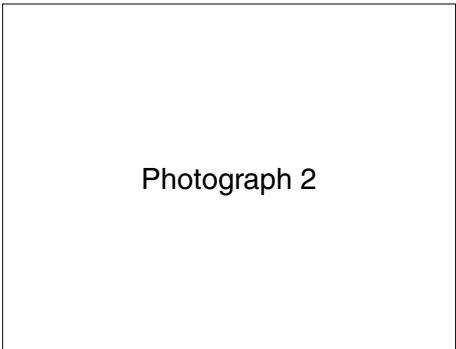
Your Design Brief

I am going to design and model a ...



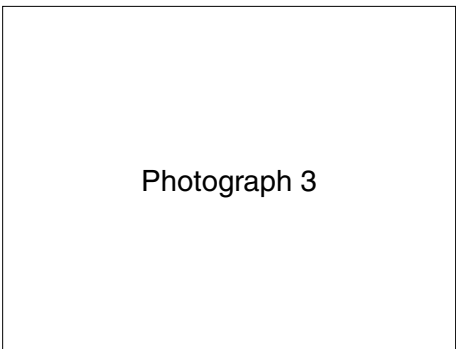
**4 Key Points:**

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 ...



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