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**OXFORD CAMBRIDGE AND RSA EXAMINATIONS
ADVANCED SUBSIDIARY GCE**

F521/01

DESIGN AND TECHNOLOGY

Advanced Innovation Challenge

THURSDAY 7 MAY 2009: Morning

DURATION: 6 hours

SUITABLE FOR VISUALLY IMPAIRED CANDIDATES

Candidates answer on the question paper.

OCR SUPPLIED MATERIALS:

None

OTHER MATERIALS REQUIRED:

None

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

- Write your name in capital letters, your Centre Number and Candidate Number in the boxes on the first page.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Write your answer to each question in the space provided.
- 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

- The total number of marks for this paper is 60.
- At the end of the examination you must have:
 - selected ONE of the 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 workbook showing your modelling activities.
- **YOUR PRACTICAL ASSIGNMENT BOOKLET WILL BE COLLECTED AT THE END OF SESSION 1 AND 2 AND REISSUED WHEN YOU SIT SESSION 3 THE REFLECTION TEST.**

OUTDOOR FESTIVALS AND EVENTS

Your local council is organising an event to be held in an open space, such as a park, river bank, town square or beach. The event is designed to bring together young people and celebrate their achievements in music, fashion and the arts.

The local council have approached you as a designer to address ONE of the following Design Challenges. This will help to develop a range of INNOVATIVE products that will appeal to the young people they wish to attract.

DESIGN CHALLENGE ONE

The organisers want to use the event to raise awareness of Healthy Eating. They wish to develop a new creative range of food products that could be sold in a complete meal pack to cook on barbeques at the event.

- The food pack should meet current healthy eating guidelines.

DESIGN CHALLENGE TWO

The organisers plan to provide barbeques that can be hired or sold at the event.

- The barbeques must be able to be used safely and then easily stored when not in use.

DESIGN CHALLENGE THREE

The event will attract a large number of young people and their families. The organisers require temporary signage to direct visitors.

- It should be easily identifiable in both the day or night.

DESIGN CHALLENGE FOUR

At large events litter is a problem. The organisers require a method of litter collection that will encourage young people to keep the site litter free.

- The method should raise awareness of sustainability.

DESIGN CHALLENGE FIVE

The weather can be unpredictable. The organisers want a method of providing shelter in the event of extreme weather that would still allow people to watch the event.

- The method of protection must not obstruct vision at the event.

DESIGN CHALLENGE SIX

The organisers need a method of identification to distinguish different levels of event staff, performers and their guests, and members of the public.

- The method should be easily identifiable in both the day or night.

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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

**SECTIONS 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

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 ...

Photograph 1

Photograph 2

Photograph 3

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