

Design & Technology

Advanced GCE A2 H453

Advanced Subsidiary GCE AS H053

Mark Schemes for the Units

June 2009

HX53/MS/R/09

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Mark schemes should be read in conjunction with the published question papers and the Report on the Examination.

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F521 Advanced Innovation Challenge

NB The Summary Sheet for F521 is for teacher/candidate use only.
The unit is externally assessed by OCR.

Session 1

	Marks	
1.1 Initial thoughts, design brief and specification	9	
Clearly outlines initial thoughts in detail, responding with an open mind showing unexpected and/or challenging ways of thinking. Analyses problem in depth, responds in a way that allows scope for innovation. Identifies a user/market resulting in a clear design brief. Develops a detailed specification that identifies the key features of the product.	7 - 9	
Outlines initial thoughts in some detail, some creative thinking. Analyses some aspects of the problem. Identifies a user/market, resulting in a design brief. Develops an adequate specification that gives some basic requirements of the product.	4 - 6	
Outlines initial thoughts, these are predictable/non-creative. Analyses the problem at a superficial level that lacks depth. Some consideration of a user/market resulting in a design brief. Produces a basic or superficial specification that is vague/generic.	0 - 3	
1.2 Designing	12	
Presents a wide range of innovative/creative initial ideas, using high quality annotated sketching showing full details of construction/materials. Presents a wide range of evidence to show the sources of inspiration and influences on the designing. Presents a detailed and objective evaluation of ideas against the design specification and justifies all decisions. Reflects on their chosen design and responds to feedback from others, making further improvements if necessary.	9 - 12	
Presents a good range of innovative/creative ideas, using reasonable quality annotated sketching showing some detail of construction/materials. Presents an adequate range of evidence to show the sources of inspiration and influences on the designing. Presents an adequate and objective evaluation of ideas against the design specification and justifies most decisions. Some reflection on their chosen design and response to feedback from others.	5 - 8	
Presents only a limited range of innovative/creative ideas, using annotated sketching at a limited level with little detail of construction/materials. Little or no reference made to the design specification. Presents a limited range of evidence to show the sources of inspiration and influences on the designing. Presents only a limited and mainly subjective evaluation of ideas with little or no justification of decisions. Limited reflection on their design and little/if any response to feedback from others.	0 - 4	

1.3 Developing and planning	9	
Presents improvements, presents evidence of modelling, experiments, testing, making modifications to their design to define and refine it, thorough consideration of materials. components or ingredients and methods of manufacture. Produces a detailed action plan for making, to include a list of materials/ingredients/resources etc.	7 - 9	
Presents improvements, presents some evidence of modelling, experiments, testing, making modifications to their design, some consideration of materials. components or ingredients and methods of manufacture. Some consideration of sustainability issues. Produces a reasonable action plan for making, to include a list of materials/ingredients/resources etc.	4 - 6	
Presents limited improvements, and limited evidence of modelling, experiments, testing, and modifications to their design, little if any consideration of materials. components or ingredients and methods of manufacture. Limited understanding of sustainability issues and how this affects their design. Produces a simplistic action plan for making that shows limited awareness of materials/ingredients/ resources etc.	0 - 3	

Total

30	
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Session 2

2.1 Making	22	
Records and reflects on progress in detail at various stages. Selects and uses materials innovatively and creatively and further develops idea to define and refine it. Completes a product/model to a high standard. Demonstrates a range of making skills/ and or complexity.	17 - 22	
Records and reflects on progress at various stages. Selects and uses materials adeptly and makes further modifications to their design. Completes a product/model to a good standard, demonstrates accuracy of making skills. Model/product accurately reflects design.	9 - 16	
Records progress at various stages but limited detail and thought. Use of materials and processes is limited as are any further modifications to their design. Product/model is finished to a poor standard/or is incomplete. Limited range of making skills apparent.	0 - 8	

2.1 Evaluation	8	
Presents realistic and detailed modifications to their idea, using annotated sketches; improvements are creative. Produces a detailed evaluation of their product identifying strengths and weaknesses and shows good consideration of the users/market. Evaluates their design thoroughly against their product specification.	6 - 8	
Presents some realistic and detailed modifications to their idea, using annotated sketches. Produces a reasonable evaluation of their product identifying some strengths and weaknesses and shows good consideration of the users/market. Reasonable evaluation of their design against their product specification.	4 - 5	
Presents limited modifications to their idea, using basic annotated sketches. Produces a limited evaluation of their product identifying some strengths and weaknesses and shows limited consideration of the users/market. Some evidence of evaluation of their design against their product specification at a superficial level.	0 - 3	

Total

30	
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Mark Scheme

Two outline presentations to an expert/ panel will be presented, answers will be in the form of written material supported by annotated sketches. (10 Marks each). QWC is assessed in P and S

P	relevant points/issues raised	4 marks
S	supporting example and sketches	3 marks
QWC	quality of written communication	3 marks

QWC Level descriptors

3 Marks: Presents information and arguments in a clear and concise manner, using appropriate technical phrases and high quality written communication skills.

2 Marks: Presents information and arguments in a reasonably clear and concise manner, with limited use of technical phrases and reasonable written communication skills.

0 – 1 marks: Presents information and arguments in a manner that lacks a clear and concise approach, with little or no use of technical phrases and basic written communication skills.

- 1 Discussion may include:
 - the importance of visual impact to attract interest/sales
 - specific product use and the feasibility of the product
 - details of chosen materials and manufacturing techniques
 - aesthetics, colour and fashion trends
 - product comparisons
 - marketing/advertising techniques.

- 2 Discussion may include:
 - material selection, recyclable components/materials
 - environmental impact
 - obsolescence issues, recycling, energy used in production
 - life expectancy
 - disposal/recycling issues
 - implications – cost, meeting legislation
 - company image/customer perception

Grade Thresholds

Advanced GCE Design and Technology: Product Design (H453)
 Advanced Subsidiary GCE Design and Technology: Product Design (H053)
 June 2009 Assessment Series

Unit Threshold Marks

Unit		Maximum Mark	A	B	C	D	E	U
F521	Raw	80	62	56	50	45	40	0
	UMS	80	64	56	48	40	32	0
F522	Raw	120	97	87	77	67	57	0
	UMS	120	96	84	72	60	48	0

Specification Aggregation Results

Overall threshold marks in UMS (ie after conversion of raw marks to uniform marks)

	Maximum Mark	A	B	C	D	E	U
H053	200	160	140	120	100	80	0

The cumulative percentage of candidates awarded each grade was as follows:

	A	B	C	D	E	U	Total Number of Candidates
H053	11.2	30.3	51.1	71.2	86.00	100	2493

2493 candidates aggregated this series

For a description of how UMS marks are calculated see:

http://www.ocr.org.uk/learners/ums_results.html

Statistics are correct at the time of publication.

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