

Design & Technology (Graphic Products)

General Certificate of Secondary Education **GCSE 1955**

General Certificate of Secondary Education (Short Course) **GCSE 1055**

Mark Schemes for the Components

June 2008

1955/1055/MS/R/08

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General Certificate of Secondary Education (Short Course) Design & Technology Graphic Products (1055)

MARK SCHEMES FOR THE COMPONENTS

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1055/01, 1955/01 Paper 1 (Foundation)

Tolerance + or – 2mm on all questions.

- 1 (a) (i) Any rectangle drawn around the eye logo (1)
OR
 Rectangle correct within tolerance. (2) (2)
- Any circle drawn around the symbols (1)
OR
 Circle correct within tolerance. (2) (2) **[4]**
No marks for freehand in (a) (i)
- (ii) Word MENU printed in capital letters (1)
OR
 Word MENU printed in capital letters of a consistent size within tolerance. (2) (2) **[2]**
- (b) Left has been ticked (1) **[1]**
No mark if more than one box has been ticked
- (c) Key words to look for are tear, torn, ripped, separated, remove or similar (1) **[1]**
 Eg Easier to tear
 So it can be torn off
Do not accept one word answers
- (d) Correct answer 4 (1) **[1]**
- (e) Offset Lithography has been ticked (1) **[1]**
No mark if more than one box has been ticked

Total [10]

2	(a)	(i)	Two tones of shading used	(1)		
			OR			
			Three tones of shading used (marks could be awarded for shading box)	(2)	(2)	
			Graduated shading or highlighting used on curved corner.	(1)		[3]
		(ii)	Some attempt to represent see through plastic (on screen only)	(1)		
			OR			
			Good attempt to represent see through plastic (on screen only)	(2)	(2)	[2]
			Please refer to sample answers.			
	(b)		Method shows board going into a single slot that goes all the way across the box	(1)		
			OR			
			Method shows board with a step on each side so that it fits into a slot that does not go all the way across the box or the board has two or more tabs that fit into corresponding slots in the top of the box. Accept 2D drawings if appropriate detail is clearly communicated.	(2)	(2)	[2]
	(c)		Die cutting, stamping or press knives	(1)		[1]
	(d)		Same box or board could be used for other purposes			
			Easier to store or transport			
			Less likely to be damaged	(1)		
			Information board can be changed or updated. (1x2)	(1)		[2]
						Total [10]
3	(a)		Square	(1)		
			Semi circle	(1)		[2]
	(b)		Any accurate square drawn	(1)		
			OR			
			Square drawn within tolerance	(2)	(2)	
			Four semi circles added to square	(1)		
			OR			
			Four semi circles within tolerance	(2)	(2)	[4]
			No marks if freehand			
	(c)		Stage 3			
			Partially correct answer	(1)		
			OR			
			Correct answer	(2)	(2)	
			Stage 4			
			Partially correct answer	(1)		
			OR			
			Correct answer	(2)	(2)	[4]
			Please refer to sample answers			
						Total [10]

- 4 (a) Can see the product
Can see if anything is missing or damaged (1) [1]
- (b) Vacuum forming or vacuum moulding
Not just vacuum (1) [1]
- (c) (i) Box tool chosen (from quick shapes) (1)
Position corner and drag diagonally to required size (1)
Accept straight line tool and explanation of four lines being drawn
Circle tool chosen (from quick shapes) (1)
Centre located and drag cursor to get correct size (1) [4]
- (ii) Pointer tool chosen **and** moved over Eye logo (1)
Click cursor **and** drag or move logo (to required position) (1) [2]
- (iii) Text tool chosen (1)
Type text **and** move to correct position (1) [2]

Totally written answers can gain full marks if appropriate detail is clearly communicated.

Tick where each of the eight marks is awarded

Total [10]

- 5 (a) Do not have to wait for glue to dry
Not as messy as glue
No extra materials required
Takes up less space
Costs less to send
Less likely to be damaged
Cheaper for manufacturer to produce
Easier to assemble
Easier to transport (1)
Less work for manufacturer (1x2) (1) [2]
- (b) Fits into slot in base (sketch) (1)
Locks/fixes/secures side to base (notes) (1) [2]
- (c) Fits into slot on other part of back (sketch) (1)
Locks/fixes/secures two parts of back together (notes) (1) [2]
- (d) Same design of tray or label can be used for other purposes
Can be cheaper to produce
Can be more environmentally friendly (1)
Can be easier to recycle (1x2) (1) [2]
- (e) Part of front or side removed (sketch) (1)
Modification explained (notes) (1) [2]
No extra materials to be used

Total [10]

1055/02, 1955/02 Paper 2 (Higher)

- 1 (a) Can see the product (1) [1]
Can see if anything is missing or damaged
- (b) Vacuum forming or vacuum moulding (1) [1]
Not just vacuum
- (c) (i) Box tool chosen (from quick shapes) (1)
Position corner and drag diagonally to required size (1)
Accept straight line tool and explanation of four lines being drawn
Circle tool chosen (from quick shapes) (1)
Centre located and drag cursor to get correct size (1) [4]
- (ii) Pointer tool chosen **and** moved over Eye logo (1)
Click cursor **and** drag or move logo (to required position) (1) [2]
- (iii) Text tool chosen (1)
Type text **and** move to correct position (1) [2]

Totally written answers can gain full marks if appropriate detail is clearly communicated.

Tick where each of the eight marks is awarded

Total [10]

- 2 (a) Do not have to wait for glue to dry
Not as messy as glue
No extra materials required
Takes up less space
Costs less to send
Less likely to be damaged
Cheaper for manufacturer to produce
Easier to assemble
Easier to transport (1)
Less work for manufacturer (1x2) (1) [2]
- (b) Fits into slot in base (sketch) (1)
Locks/fixes/secures side to base (notes) (1) [2]
- (c) Fits into slot on other part of back (sketch) (1)
Locks/fixes/secures two parts of back together (notes) (1) [2]
- (d) Same design of tray or label can be used for other purposes
Can be cheaper to produce
Can be more environmentally friendly (1)
Can be easier to recycle (1x2) (1) [2]
- (e) Part of front or side removed (sketch) (1)
Modification explained (notes) (1) [2]
No extra materials to be used

Total [10]

3	<p>(a) Sign is joined to hook by one or two lines (representing string, thin wire, nylon thread etc) Not chain Method of attachment to sign shown eg holes in foamboard</p>	<p>(1) (1) [2]</p>
	<p>(b) Three layers shown (sketch) Foam centre identified (notes)</p>	<p>(1) (1) [2]</p>
	<p>(c) Lightweight material Smooth surface Easy to print on Easy to cut Rigid (1x2)</p>	<p>(1) (1) [2]</p>
	<p>(d) Some attempt at a construction (at least two circles or equivalent) OR Reasonable attempt at construction (at least two circles and two angled lines or equivalent) OR Correct construction Good quality curve within tolerance (mark for curve can be given without any evidence of construction)</p>	<p>(1) (2) (3) (3) (1) [4]</p>
		Total [10]
4	<p>(a) (i) Both heights correct to Sloping line (sloping line mark can be given if heights are wrong but lines slopes down from left to right)</p>	<p>(1) (1) [2]</p>
	<p>(ii) Correct width 3 horizontal lines correctly projected from end view or candidate solution to (a) (i) Size of slot correct within tolerance Position of slot correct within tolerance</p>	<p>(1) (1) (1) (1) [4]</p>
	<p>(b) Part of box opens Appropriate fold in flaps shown by arrows and or notes</p>	<p>(1) (1) [2]</p>
	<p>(c) Card thickness 250-1000 microns OR 0.25mm-1mm Cutting and creasing method - die cutting, stamping or press knives</p>	<p>(1) (1) [2]</p>
		Total [10]

- 5 (a) Appropriate size and shape of tray (1)
Appropriate layout of spaces (1) [2]
Please **tick** where marks have been awarded
- (b) Suitable one piece net shown (six surfaces) (1)
Appropriate window position so that largest accessory can be seen (1)
Box that can open and close (1) [3]
Please **tick** where marks have been awarded
- (c) Suitable net (6 joined surfaces of a size that will join together to form the box) (1)
All fold lines shown (different from cut lines) (1)
Appropriate fold in flaps shown (1)
(minimum of 3 - two large and one small) (1)
Appropriate glue tab(s) shown (1)
Window drawn in appropriate position and to an appropriate size (1) [5]
(flaps or tabs must not be seen through the window)

Total [10]

1955/03 Paper 3 (Foundation)

Tolerance on drawing is +/- 2mm

- 1 (a) Name two shapes: semi circle (no credit for 'half circle') (1)
 triangle (1) **[2]**
- (b) 45 degree line from centre of circle (1)
 6mm gap from semi-circle to base of triangle (1)
 Size of triangle (1) **[3]**
 Do not accept freehand drawings for question 1 (b)
- (c) (i) One reason for difference in survey results linked to modern communication ie texting. Do not accept answers relating to age or age difference unless qualified. (1)
 (ii) Tick fourth font style (no mark for ticking 2 or more answers) (1)
 (iii) Suitable reason for choice of font ie modern appearance, clear or easy to read, others are old fashioned. (1) **[3]**
- (d) The words 'Sun 4 Us' are added to the logo (in any style). (1)
 'Sun 4 Us' in one of the given styles. (1) **[2]**
- TOTAL [10]**
- 2 (a) Silhouette drawn of at least one triangle within the square – must be 2D. (1)
 3 or 4 pyramids shown – must be 2D. (1)
 Proportions of pyramids (at least one large, one medium and one small) – could be 3D. (1)
 Use of positive and negative areas or different thickness outlines. (1) **[4]**
 Freehand drawing – award first 2 marks only in question 2(a).
- (b) (i) Any arrow with thickness. (1)
 Well proportioned symmetrical arrow. (1) **[2]**
 No marks for freehand drawing in question 2 (b) (i).
- (ii) A method named (notes). (1)
 Use of method shown (sketches) (1) **[2]**
 Arrow must be detachable. No marks for methods such as double sided tape, bluetak or glue.
- (c) (i) Tick Screen Printing (no mark for ticking 2 or more answers) (1)
 (ii) Tick Batch Production (no mark for ticking 2 or more answers) (1) **[2]**
- TOTAL [10]**

3	(a) Centres 60mm apart	(1)	
	50mm diameter circle	(1)	
	Both circles the same size (not necessarily 50mm)	(1)	
	Radius 40mm curve touching the two circles	(1)	
	Evidence of construction for centre of one radius 40mm curve	(1)	
	Second curve to match first	(1)	[6]
	No marks for freehand curves/circles for question 3(a)		
	(b) Suitable form of reinforcement to the existing hole (notes) eg eyelet, tape or thicker card	(1)	
	Method of reinforcement communicated (sketch)	(1)	[2]
	(c) 'RECYCLED' or 'RE-USED'. 'USED' cannot be accepted as an answer.	(1)	
	'ENVIRONMENTALLY', 'EARTH' or 'PLANET'	(1)	[2]
			TOTAL [10]
4	(a) Base completed	(1)	
	3 triangles drawn in a suitable position to make the net	(1)	
	All three triangles correct size	(1)	
	4 glue tabs in workable position	(1)	
	Money slot in an appropriate position and orientation (top third of any triangle)	(1)	[5]
	(b) 2 answers from: Can reduce waste/save material, experiment with or modify positions of net, saves labour costs/time, can tessellate nets		
	Not just easier/quicker or cheaper	2 x (1)	[2]
	(c) Stages in process:		
	1. Access the picture ie download the picture to the PC or print the photo	(1)	
	2. Modify image to size and/or shape required (on PC or manually cut to shape)	(1)	
	3. Paste onto Net	(1)	[3]
			TOTAL [10]

5	(a) Knowledge of proportions of A2/A5 paper (could be sketches or notes)	(1)
	Suitable arrangement (2 rows of 4 sheets).	(1) [2]
	(b) Correct number of A5 leaflets – 8 leaflets.	(1) [1]
	(c) 500 microns too thick for a flyer	(1) [1]
	(d) Suitable weight of paper ie 80-120	(1) [1]
	(e) Drawing of outer rectangle (not square)	(1)
	Correct layout of stands (2 columns of 4)	(1)
	Position of SUN 4 US stand clearly shown (far left hand-side of left hand column on 2 nd row from bottom).	(1)
	Quickest route identified from entry/exit point (from centre down and across)	(1)
	Route identified using stylised arrows (regardless of route taken)	(1) [5]
	For 3D solutions last 2 marks only can be achieved. Accept answers that show entrance at bottom or side of plan Accept accurate free hand solutions	
		TOTAL [10]

1955/04 Paper 4 (Higher)

1	(a)	Base completed	(1)	
		3 triangles drawn in a suitable position to make the net	(1)	
		All three triangles correct size	(1)	
		4 glue tabs in a workable position	(1)	
		Money slot in an appropriate position and orientation (top third of any triangle)	(1)	[5]
	(b)	2 answers from: Can reduce waste/save material, experiment with or modify positions of net, saves labour costs/time, can tessellate nets		
		Not just easier/quicker or cheaper	(2 x1)	[2]
	(c)	Stages in process:		
		1. Access the picture ie download the picture to the PC or print the photo	(1)	
		2. Modify image to size and/or shape required (on PC or manually cut to shape)	(1)	
		3. Paste onto Net	(1)	[3]
				TOTAL [10]
2	(a)	Knowledge of proportions of A2/A5 paper (could be sketches or notes)	(1)	
		Suitable arrangement (2 rows of 4 sheets)	(1)	[2]
	(b)	Correct number of A5 leaflets – 8 leaflets	(1)	[1]
	(c)	500 microns too thick for a flyer	(1)	[1]
	(d)	Suitable weight of paper ie 80-120	(1)	[1]
	(e)	Drawing of outer rectangle (not square)	(1)	
		Correct layout of stands (2 columns of 4)	(1)	
		Position of SUN 4 US stand clearly shown (far left hand-side of left hand column on 2 nd row from bottom).	(1)	
		Quickest route identified from entry/exit point (from centre down and across)	(1)	
		Route identified using stylised arrows (regardless of route taken)	(1)	[5]
				TOTAL [10]

3	(a) (i)	View of card from back with part of front showing	(1)	
		Triangle shown in correct orientation above card	(1)	
		Triangular cut-out shown	(1)	
		4 thicknesses of card shown	(1)	[4]
	(ii)	Die cutter lines clearly identified - could be V cut (1 mark) outside cut (1 mark) or centre creased (1 mark)	(2x1)	[2]
	(b)	Any 2 answers from: Easier to bend No need for shiny finish on back of card/can be applied to one side Cheaper process/materials than laminating (not just 'cheaper')	(2x1)	[2]
	(c)	Knowledge of embossing (a raised or depressed surface) Sketches or notes can be used	(1)	
		Application to card eg making letters or pyramid stand out Must be a sketch	(1)	[2]
				TOTAL [10]
4	(a)	Sun circle R50mm regardless of position	(1)	
		Position of 3 rays – two 45 degree lines from centre of the sun	(1)	
		Drawing of best ray regardless of position	(1)	
		Centre line of two semi-circles from centre of the sun (50mm either side)	(1)	
		Offset distance 35mm below centre of the sun	(1)	
		2 x R50mm semi circles drawn touching	(1)	
		1 x R60mm semi circles drawn	(1)	
		1 x R40mm semi circle drawn and touching R60mm semi circle	(1)	[8]
	(b)	MATERIAL ie foamboard, corrugated card, corriflute, Foamex	(1)	
		PRINTING METHOD digital printing, screen printing, NOT offset litho, inkjet or laser. Not self-adhesive vinyl.	(1)	[2]
				TOTAL [10]

5	(a)	INPUT and output correctly labelled (motor and sun)	(1)	
		Direction of motion correctly added (minimum 2 arrows)	(1)	[2]
	(b)	Effect of two pulleys is to have different speeds	(1)	[1]
	(c)	(i)		
		Sun moves up or down (more than just arrows shown)	(1)	
		Movement of sun is restricted side to side	(1)	
		Mechanism converts rotary to linear motion	(1)	
		Motor will drive the mechanism (belt or chain)	(1)	
		Mechanism works in principle	(1)	
		Mechanism as drawn clearly operates	(1)	[6]
	(ii)	Motion of sun is RECIPROCATING	(1)	[1]
				TOTAL 10

Grade Thresholds

General Certificate of Secondary Education
 Design & Technology Graphic Products (Specification Code 1955)
 June 2008 Examination Series

Component Threshold Marks

Component	Max Mark	A*	A	B	C	D	E	F	G
01 (Foundation Tier)	50	N/A	N/A	N/A	30	25	21	17	13
02 (Higher Tier)	50	N/A	32	27	23	18	N/A	N/A	N/A
03 (Foundation Tier)	50	N/A	N/A	N/A	33	29	25	21	17
04 (Higher Tier)	50	N/A	35	31	28	22	N/A	N/A	N/A
05 (Coursework)	105	N/A	85	73	61	49	38	27	16

Specification Options

Foundation Tier

	Max Mark	A*	A	B	C	D	E	F	G
Overall Threshold Marks	175	N/A	N/A	N/A	102	86	70	54	38
Percentage in Grade		N/A	N/A	N/A	25.2	24.5	20.9	14.2	8.7
Cumulative Percentage in Grade		N/A	N/A	N/A	25.2	49.8	70.6	84.8	93.5

The total entry for the examination was 6635

Higher Tier

	Max Mark	A*	A	B	C	D	E	F	G
Overall Threshold Marks	175	144	128	112	97	77	67	N/A	N/A
Percentage in Grade		9.3	21.1	29.6	22.6	12.8	2.2	N/A	N/A
Cumulative Percentage in Grade		9.3	30.5	60.1	82.7	95.4	97.6	N/A	N/A

The total entry for the examination was 9399

Overall

	A*	A	B	C	D	E	F	G
Percentage in Grade	5.5	12.4	17.4	23.7	17.6	9.9	5.9	3.6
Cumulative Percentage in Grade	5.5	17.9	35.3	59.0	76.6	86.5	92.3	95.9

The total entry for the examination was 16034

Statistics are correct at the time of publication.

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