



General Certificate of Secondary Education

**Design and Technology
(Graphic Products)**

Full Course Higher Tier (3543/H)

Mark Scheme

2007 examination - June series

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1**Marketing & Product Analysis**

Tick/cross in boxes, then total row. Question total in box. 11 x 1 mark

Mobile Phones	Typical user/buyer (avoid repeat answers)	Aesthetic feature (avoid repeat answers) Look for pleasing, layout, comments.	Function symbol on box (one word answers OK)
Value Phone			(a) has texting facilities, accept SMS (b) has ring tones
Fashion Phone		e.g. flower printed on the casing, clean shape	(c) has built in camera (photography)
Smart Phone		e.g. contrasting colours of the casing, interesting layout keys	(d) downloads music from net (more than plays music) (e) has Bluetooth function
Disposable Phone	e.g. student (from specification), hiker, adventurer, camper etc	e.g. simple, clean layout, uncluttered, metallic finish	(f) direct to emergency services (g) has speaker (accept has alarm)

TOTAL 11 marks

2	Lighting Effects & CAD		
(a)	Light source		
Symbol copied and positioned so as to illuminate drawing Not used		1 mark 0 marks	1 mark
Rendering – high and low on features e.g. buttons, AQA and screen			
Very good relief shown, e.g. consistent good quality, highs & lows evident, same angle shadow.		2 marks	2 marks
Adequate relief, some details consistent		1 mark	
Relief not attempted		0 marks	
Very good rendering e.g. high quality, consistent – 3 tonal ranges		4 marks	4 marks
Good rendering e.g. tonal control, minimum range of colour, good pencil skills – with boundaries, even covering.		3 marks	
Satisfactory rendering e.g. attempt at some tonal control – not always successful.		2 marks	
An attempt, untidy, little evidence of care or skill.		1 mark	
Hatching, scribble, unworthy of reward, not attempted		0 marks	
If light source is inconsistent with shading, maximum = 2 marks			
(b)	CAD Icons		
Icon Number 2			
Meaning: e.g. good understanding based on ‘meaning’ - rotate		1 mark	1 mark
Incorrect, not attempted		0 marks	
Use: Rotate thro’ 90 degrees OR change orientation portrait to landscape (<i>be specific</i>).		2 marks	2 marks
Some understanding but less specific		1 mark	
Incorrect, not attempted		0 marks	
Icon Number 3			
Meaning: e.g. fast colouring of closed area, fill		1 mark	1 mark
Incorrect, not attempted		0 marks	
Use: Colour fill OR fountain fill into area or space		2 marks	2 marks
Some understanding but less specific		1 mark	
Incorrect, not attempted		0 marks	
(ii)	Print Command		
Good 2D representation of printer e.g. neat, clear.		2 marks	2 marks
Adequate representation – less precise, 3D drawing		1 mark	
Incorrect, not attempted		0 marks	
Use of ‘sketching space’ relating to printer		1 mark	1 mark
TOTAL			16 marks

3	Letter Styles		
(a)	One mark for each correct feature identified		4 marks
	Not appropriate, not attempted	<i>0 marks</i>	
	(i) Curve	<i>1 mark</i>	
	(ii) Bar	<i>1 mark</i>	
	(iii) Serif	<i>1 mark</i>	
	(iv) Stem	<i>1 mark</i>	
(b)	Letter style(s)		
(i)	Obvious use of grid lines	<i>1 mark</i>	1 mark
	Good quality letters, even, balanced	<i>2 marks</i>	2 marks
	Adequate letters, unfinished, including 'single lines' lettering	<i>1 mark</i>	
	Not attempted	<i>0 marks</i>	
	Good quality of line work of letters, e.g. clear sharp edges	<i>3 marks</i>	3 marks
	Satisfactory quality of line work of letters	<i>2 marks</i>	
	Poor or single line OR if less than 3 attempted	<i>1 mark</i>	
	Very untidy, not attempted	<i>0 marks</i>	
(ii)	Evaluation (in context of lettering on box)		
	Critical comment, relevant and reasoned statement	<i>3 marks</i>	3 marks
	Good attempt some relevant reasoning	<i>2 marks</i>	
	Superficial, not justified comment, unsupported statement e.g. eyecatching	<i>1 mark</i>	
	Not relevant, not attempted.	<i>0 marks</i>	
	TOTAL		13 marks

4	Development of Ideas		
(a)	Images (do not accept lettering on its own):		
(i)	Three or more different discrete images on theme	3 marks	3 marks
	Two discrete images, may include some development	2 marks	
	One image.	1 mark	
	Incorrect theme. Not attempted	0 marks	
(ii)	Colour - <i>swatches, labels, full colour</i>		
	Colour indicated through designs	2 marks	2 marks
	Some features indicated	1 mark	
	Not attempted or minimum use	0 marks	
(iii)	Notes		
	Critical, relevant, related to design – why?	3 marks	3 marks
	Descriptive, some relevance implied	2 marks	
	An attempted, some relevance to ideas or labels only	1 mark	
	Confused, unclear, not attempted.	0 marks	
(b)	Image		
(i)	Recognisable image transferred from (a)	1 mark	1 mark
	New image, not attempted	0 marks	
(ii)	Development		
	Clear evidence of development – progression evident	4 marks	4 marks
	Some development but limited stages/images, incremental	3 marks	
	Development implied, not obvious or single sketch including changes	2 marks	
	One idea, no development or discrete ideas	1 mark	
	Confused, unclear, not attempted.	0 marks	
(iii)	Evaluation		
	Critical, relevant, related to design – why?	3 marks	3 marks
	Descriptive, some relevance implied	2 marks	
	An attempted, some relevance to ideas, or labelling only	1 mark	
	Confused, unclear, not attempted.	0 marks	
	TOTAL		16 marks

5 Lay out & Presentation Drawing

(a) Specification:			
	All three specification points or boxed areas/features applied to all boxes (3 x 1 mark)	3 marks	3 marks
	Not attempted	0 marks	
	Block 'areas' used. Must use all 3 layout areas. Must have 3 given features from specification.	1 mark	3 marks
	Labels to identify features	1 mark	
	Neatness of sketching e.g. clear, well communicated	1 mark	
(b) Line quality:			
(i)	Very good, clear, consistently neat, sharp line etc.	2 marks	2 marks
	A fair attempt, lacks precision	1 mark	
	Very blunt / scribble / not attempted	0 mark	
(ii) Colour rendering:			
	Good quality, enhances drawing, visual impact, e.g. good tonal control, very good block colouring. Satisfactory, controlled use of media, e.g. some attempt at higher skills - tone, good block colour (good monochrome max.)	4 marks	4 marks
	Adequate, block colour, some imperfections	3 marks	
	Poor, an attempt, basic colour skills, very untidy	2 marks	
	No colour – line drawings only	1 marks	
		0 marks	
(iii) Layout on box lid:			
	Good visual impact, e.g. effective use of space, 'margins', using full specification.	3 marks	3 marks
	Satisfactory, some sense of composition, or incomplete	2 marks	
	Adequate spacing, some imperfections e.g. crowded, 'unbalanced', 1 specification feature only.	1 mark	
	Very poor, no sense of composition, or not attempted	0 mark	
(c) Feature of candidate's design identified		1 mark	1 mark
	Reasoned explanation for change clearly given	2 marks	2 marks
	Simple statement, not explained, superficial	1 mark	
	Incorrect, comment on given box, not attempted	0 marks	
		TOTAL	18 marks

6	BS conventions and printing effects		
(a)	Label plan (top view)	<i>1 mark</i>	1 mark
(i)	Incorrect, not attempted	<i>0 marks</i>	
(ii)	End view		5 marks
	Correct position – along side front elev. – solid line	<i>1 mark</i>	
	Correct size (60 x 20)	<i>1 mark</i>	
	Correct cut out, alignment and size (40 x 15) – even if orientation is incorrect	<i>1 mark</i>	
	Correct hidden detail lines (broken line)	<i>1 mark</i>	
	Neat drawing, use of straight edge, neat lines	<i>1 mark</i>	
(iii)	B.S.		4 marks
	All leader lines - consistently not touching outline	<i>1 mark</i>	
	All arrow heads – all neat, touching leaders	<i>1 mark</i>	
	Both dimension lines – parallel, no gap	<i>1 mark</i>	
	Dimensions - both correct sizes and orientation	<i>1 mark</i>	
(iv)	Scale ONLY CORRECT ANSWER 1:2	<i>1 mark</i>	1 mark
(b)	Varnishing		
(i)	U.V. – Ultra Violet	<i>1 mark</i>	1 mark
	Incorrect or not attempted	<i>0 mark</i>	
(ii)	Spot Varnishing		
	e.g. partial varnishing, highlighting, quality, attractive	<i>3 marks</i>	3 marks
	Partial understanding, no reasoning	<i>2 marks</i>	
	An attempted, some basic understanding	<i>1 mark</i>	
	Incorrect, not relevant, not attempted	<i>0 marks</i>	
	TOTAL		15 marks

7 Materials and Components**(a) Fastening**

Will it work? e.g. velcro, magnets, 'pins & twine'?

Good understanding of problem/solution evident

*2 marks***2 marks**

Some relevant understanding, minor errors

1 mark

Drawing quality

Good visual communication, easy to understand e.g. alignment, representation of parts and materials

*3 marks***3 marks**

Satisfactory visual communication, method can be understood, minor errors

2 marks

An attempt, some errors, confused, unclear

1 mark

Notes:

Clear, detailed, including labels

*1 mark***1 mark****(b) Materials**

For each correct answer, care not to double reward e.g. bio-gradable as useful property.

*(1 x 9 marks)***9 marks**

Material	Manufacturing Process	Bio-degradable	Source	Useful Property
White Board				
PVC	e.g. vacuum forming		e.g. oil	
Expanded Polystyrene		No		e.g. good shock absorption
Pulp Paper		Yes	Wood (rags)	e.g. cheaper than plastics
Vegetable Protein Board			e.g. Veg matter	e.g. uses by-products

TOTAL**15 marks**

8

Cultural, Social & Environmental(a) **Signs** – with reference to batteries

Meaning:

Do not put in household rubbish, bin, wheelie*2 marks***2 marks**

Some understanding, not explicit, generalisation e.g. do not throw away

1 mark

Incorrect, confused, not attempted

0 marks

Reason:

Good understanding e.g. contamination of earth, poisons, danger in land fill etc

*2 marks***2 marks**

Some understanding e.g. a danger

1 mark

Incorrect, confused, not attempted

0 marks

Meaning:

Do not burn, **do not** put in fire, do not incinerate*2 marks***2 marks**

Some understanding, not explicit, generalisation, away from fire

1 mark

Incorrect, confused, not attempted

0 marks

Reason:

Good understanding e.g. danger, poison, contamination of air

*2 marks***2 marks**

Some understanding e.g. a danger

1 mark

Incorrect, confused, not attempted

0 marks(b) EC Flower logo (for full marks two clear factors must be identified, OR one identified **and** a correct justification given.

(i) EC symbol

*2, 1, 0 marks***2 marks**

Factors

- stars
- e sign

Reasoning

- stars on EC flag,
- e representing Europe.

(ii) Flower

*2, 1, 0 marks***2 marks**

Factors

- sign for environment, growth, health

Reasoning

- Blue reasoning: on EC flag, sky.
- Green reasoning: environment, growth.

(iii) Colours

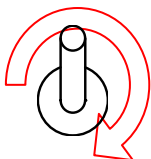
*2, 1, 0 marks***2 marks**

Blue

Reasoning - on EC flag, sky.

Green

Reasoning - environment, growth

(c)	'Wind up symbol'		
	Use of Designing Space – related to symbol	<i>1 mark</i>	1 mark
e.g.			
	Is meaning clear and well communicated e.g. crank, turn,	<i>3 marks</i>	3 marks
	Some understanding, generally communicates idea	<i>2 marks</i>	
	An attempt related to question	<i>1 mark</i>	
	Incorrect, confused, not attempted	<i>0 marks</i>	
	Style:		
	2 – Dimensional	<i>1 mark</i>	1 mark
	Block coloured (incl white)	<i>1 mark</i>	1 mark
	e.g. single line arrows = 0 marks		
	Word-less, no text, no instructions	<i>1 mark</i>	1 mark
	TOTAL		21 marks