



## General Certificate of Secondary Education

# Design and Technology (Graphic Products) Foundation Tier 3553/F

## Mark Scheme

### *2006 examination – June series*

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

**Question 1 Signage**

Missing letters:	For each letter P O T completed, In same style (as given, be strict) Out of box/an attempt	<i>3 x 1 marks</i> <i>3 x 1 marks</i> <i>0 marks</i>	
Line Quality:	Sharp, ruler, neat Some untidiness, some off grid lines, double lines or overshoots, gaps, incomplete Very untidy, consistently not on grid, free hand, thick line	<i>2 marks</i> <i>1 mark</i> <i>0 marks</i>	
Spacing:	One grid space between all letters Not completed, other spacing, etc.	<i>1 mark</i> <i>0 marks</i>	<b>9 marks</b>

**Question 2 CAD/CAM**

(a)	Block diagram		
	Any CAM process		
	Images of given process – no ambiguity	<i>2 x 2 marks</i>	
	Recognisable images of given process	<i>1 mark</i>	
	Unrecognisable, very untidy, little/no understanding	<i>0 marks</i>	
	Quality, neat, clarity, good sketch/drawing (1 x 2)	<i>2 marks</i>	<b>6 marks</b>
	Copy of stage 1 – max 1 mark		
(b)	Quality Control		
	Reward appropriate method for e.g. gauge, position, flat.	<i>2 marks</i>	
	Some understanding	<i>1 mark</i>	
	Not appropriate, not attempted	<i>0 marks</i>	<b>2 marks</b>
(c)	Transfer tape, low sticky, easy to peel of vinyl, no damage, positioning, removes letters only, (keeps spacing and shape if relevant)		
	Good understanding, relevant to tape's adhesive	<i>2 marks</i>	
	Some understanding, some confusion	<i>1 mark</i>	
	Not related to adhesive, not attempted	<i>0 marks</i>	<b>2 marks</b>
			<b>10 marks</b>

### Question 3 Development & Presentation Drawing

Starting point is a resource

- (a) Development – must be in context of wind generated/promotional power
- (i) Initial Sketch (figure is a resource picture)
- |   |         |
|---|---------|
| Clearly related to given photo, elements obvious  | 2 marks |
| Some elements implied, not obvious, any confusion | 1 mark  |
| Photo not used, not attempted                     | 0 marks |
- If incorrect e.g. geothermic, child's windmill, give 0 marks, then mark as below*
- (ii) Development of initial idea - even if wrong theme in (i)
- |  |         |
|--|---------|
| Clear progression of idea                                      | 3 marks |
| Some progression, elements evident                             | 2 marks |
| Little progression, minimal changes                            | 1 mark  |
| No progression, initial idea repeated, new idea, not attempted | 0 marks |
- (iii) Final Modification – improvement of development sketch
- |   |         |
|---|---------|
| Valid changes e.g. layout, refinement of detail                 | 3 marks |
| Some minor changes that improve design                          | 2 marks |
| Little modifications, almost a copy of Dev. Sketch/Initial idea | 1 mark  |
| No modification, idea repeated, new idea, not attempted         | 0 marks |
- Quality of sketching
- |  |         |
|--|---------|
| Very good, clear, neat, sharp line, etc. | 2 marks |
| A fair attempt, lacks precision          | 1 mark  |
| Scribble / not attempted                 | 0 marks |
- Use of colour – any evidence
- |  |         |
|--|---------|
| Colour used through out e.g. swatches, rendering etc | 1 mark  |
| No colour used                                       | 0 marks |
- Notes – reward each
- |   |             |
|---|-------------|
| Critical, relevant, related to design       | 3 x 2 marks |
| Descriptive, some relevance implied, labels | 1 mark      |
| Not attempted                               | 0 marks     |
- 17 marks**

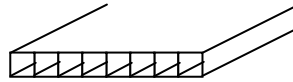
(b)	Presentation Drawing – one that can be taken to a client		
	Quality of line work		
	Very good, clear, neat, sharp line, etc.	<i>2 marks</i>	
	A fair attempt, lacks precision.	<i>1 mark</i>	
	Scribble/not attempted	<i>0 marks</i>	
	Colour rendering		
	Good quality, enhances drg, visual impact, e.g. good tonal control, very good block colouring	<i>3 marks</i>	
	Satisfactory, controlled use of media, some attempt at higher skills e.g. tone, block colour (good monochrome max.)	<i>2 marks</i>	
	Moderate quality, some enhancement	<i>1 mark</i>	
	Poor, no colour – line drawings only	<i>0 marks</i>	
	Layout		
	Good visual impact, effective use of space	<i>4 marks</i>	
	Satisfactory, sense of composition	<i>3 marks</i>	
	Adequate spacing, some imperfections	<i>2 marks</i>	
	An attempt but lacks clarity and/or poorly spaced, crowded	<i>1 mark</i>	
	Unrecognisable or not attempted	<i>0 marks</i>	<b>9 marks</b>
			<b>26 marks</b>

**Question 4 Printing Effects**

(a)	Reason appropriate to selected effect e.g. add quality, adds interest, visually impaired, noticeable, 3D effect.		
	Reasoning clear and logical, descriptive	<i>2 marks</i>	
	Reasoning evident but some confusion, misunderstanding	<i>1 mark</i>	
	Very superficial, one word, not attempted	<i>0 marks</i>	<b>2 marks</b>
(b)	Scratch & Sniff		
	Clear, neat, tidy and relevant sketches, well communicated	<i>3 marks</i>	
	Satisfactory, communicates concept adequately	<i>2 marks</i>	
	An attempt, some confusion but relevant	<i>1 mark</i>	
	Not ‘scratch & sniff’, not attempted.	<i>0 marks</i>	
	Notes or labels that help understanding	<i>1 mark</i>	
	Not ‘scratch and sniff’, not attempted or labels	<i>0 marks</i>	<b>4 marks</b>
			<b>6 marks</b>

**Question 5 Construction & B.S.**

- (a) Corrugated Plastic Sheet  
*Accept 2D or 3D sketch*



- |   |                |
|---|----------------|
| Clear sketch showing structure, e.g. good proportion          | <i>3 marks</i> |
| Structure evident, some errors e.g. loss of scale/proportion  | <i>2 marks</i> |
| An attempt, some confusion e.g. 'wavy' or 'squ' on both sides | <i>1 mark</i>  |
| Incorrect e.g. laminated foam board, not attempted            | <i>0 marks</i> |

- |  |                |                |
|--|----------------|----------------|
| Notes/labels that aid sketch, relevant to corrugated plastic | <i>1 mark</i>  |                |
| Not attempted, incorrect, very confused                      | <i>0 marks</i> | <b>4 marks</b> |

- (b) B.S.
- |  |               |
|--|---------------|
| Height on front view – correct dimension                 | <i>1 mark</i> |
| Length on plan – correct dimension                       | <i>1 mark</i> |
| Leader lines - consistently not touching outline         | <i>1 mark</i> |
| Arrow heads – all neat, touching leaders                 | <i>1 mark</i> |
| Dimension lines – all parallel, no gap, correct position | <i>1 mark</i> |
| Numbers – all correct dimension & orientation            | <i>1 mark</i> |

**6 marks**

**10 marks**

**Question 6 Representation of Materials**

- (a) **Wooden Base (end and side only required)**  
*NB could be printed card – long/end grain not essential*
- Good representation, shows flair *4 marks*  
 e.g. colour, grain
  - Satisfactory representation of wood, *3 marks*  
 e.g. recognisable, attempt at grain
  - Could be wood, grain evident, untidy *2 marks*  
 e.g. good mono-chrome, poor use of colour
  - An attempt, hardly represents wood *1 mark*  
 e.g. scribble, inappropriate use of colour, untidy
  - Not attempted, obviously wrong material shown *0 marks*      **4 marks**



- (b) **Clear Plastic**  
 Good representation of material, shows flair *4 marks*

	e.g. good transparent effect, reflective lines, colour Satisfactory representation of material e.g. recognisable, attempted at transparency /reflections Could be clear plastic, but untidy	<i>3 marks</i>  <i>2 marks</i>
or 	e.g. good mono-chrome, poor use of colour lines An attempt, hardly represents a transparent material e.g. scribble, inappropriate use of colour Not attempted, obviously wrong material shown	<i>1 mark</i>  <i>0 marks</i> <b>4 marks</b>

**8 marks**

### Question 7 Materials and Industrial Practices

*Reponses must relate to safety e.g. not environmental issues*

(a)	(i)	Clear reasons, logical statement	<i>2 marks</i>			
		e.g. soft, will not harm, non-toxic, hygienic				
		Simple statement, no reasoning	<i>1 mark</i>			
		e.g. is flexible, confusing				
		One word answers or not related to safety	<i>0 marks</i>	2 marks		
(b)	(ii)	Material: e.g. card, thin board, stiff paper etc	<i>1 mark</i>			
		Property: e.g. availability, easy to form, environmental decorated by child, inexpensive, etc.	<i>2 marks</i>			
		Some understanding, less clear	<i>1 mark</i>			
		Incorrect, one word answer e.g. cheap, not attempted	<i>0 marks</i>	3 marks		
(c)	(i)	Scale of Production				
		e.g. one off, batch, continuous	<i>1 mark</i>			
		Incorrect, not attempted	<i>0 marks</i>	1 mark		
	(ii)	<i>Must be a graphic product</i>				
Reward if product matches scale of production		<i>1 mark</i>				
Incorrect, not attempted		<i>0 marks</i>	1 mark			
(d)	(i)	Grid				
		7 or more sails	<i>3 marks</i>			
		6 sails	<i>2 marks</i>			
		5 or less sails	<i>1 mark</i>			
		Neatness	<i>1 mark</i>	4 mark		
(d)	(ii)	Max. Number				
		number of sails cut (including given sail)	<i>1 mark</i>			
		Incorrect, not attempted	<i>0 marks</i>	1 mark		
		(d)	(i)	Reference to care of the environment, environmentally friendly		
				Good understanding, clear, concise explanation	<i>2 marks</i>	
An understanding, not explained	<i>1 mark</i>					
Confused, one word, not attempted	<i>0 marks</i>			2 marks		
(d)	(ii)	Reference to pollution, non-biodegradable, litter, use of resources etc				
		Good, reasoned explanation	<i>3 marks</i>			
		Satisfactory, but less detailed	<i>2 marks</i>			
		An attempt, generalisation	<i>1 mark</i>			
		Incorrect, not attempted	<i>0 marks</i>	3 marks		

**17 marks**

**Question 8 Evaluations**

(a)	Air Mail	Features from list Symbol e.g. 2D, plane, arrow, flight Block colour (blue) Simple letter-style	<i>3 x 1 mark</i>	<b>3 marks</b>
(b)	New design	Using all <b>three</b> specification points Effectiveness of the new sticker as an air mail stamp Effective Confusing Copy or poor attempt  Quality Neat, well drawn, good quality and colour Satisfactory, clear and recognisable, some imperfections Untidy, near scribble, confused, or not attempted	<i>1 mark</i> <i>2 marks</i> <i>1 mark</i> <i>0 marks</i>  <i>2 marks</i> <i>1 mark</i> <i>0 marks</i>	<b>5 marks</b>
(c)	Evaluation	<i>For each feature</i> Critical evaluation, relevant comment of feature Superficial, self - congratulatory Comment not from (a), one word, not attempted	<i>3 x 2 marks</i> <i>1 mark</i> <i>0 marks</i>	<b>6 marks</b>
				<b>14 marks</b>

**Paper Total 100 Marks**