



National  
Qualifications  
2017

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**2017 Graphic Communication**  
**Higher**  
**Finalised Marking Instructions**

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## General marking principles for Higher Graphic Communication

*This information is provided to help you understand the general principles you must apply when marking candidate responses to questions in this paper. These principles must be read in conjunction with the detailed marking instructions, which identify the key features required in candidate responses.*

- (a) Marks for each candidate response must always be assigned in line with these general marking principles and the detailed marking instructions for this assessment.
- (b) Marking should always be positive. This means that, for each candidate response, marks are accumulated for the demonstration of relevant skills, knowledge and understanding: they are not deducted from a maximum on the basis of errors or omissions.
- (c) If a specific candidate response does not seem to be covered by either the principles or detailed marking instructions, and you are uncertain how to assess it, you must seek guidance from your Team Leader.
- (d) For each candidate response, the following provides an overview of the marking principles. Refer to the specific marking instructions for further guidance on how these principles should be applied.
  - (i) Questions that ask candidates to **describe**  
Candidates must provide a statement or structure of characteristics and/or features. This should be more than an outline or a list. Candidates may refer to, for instance, a concept, experiment, situation, or facts in the context of and appropriate to the question. Candidates will normally be required to make the same number of factual/appropriate points as are awarded in the question.
  - (ii) Questions that ask candidates to **explain**  
Candidates must generally relate cause and effect and/or make relationships between things clear. These will be related to the context of the question or a specific area within a question.
  - (iii) Questions that ask candidates to **compare**  
Candidates must generally demonstrate knowledge and understanding of the similarities and/or differences between, for instance, things, methods, or choices. These will be related to the context of the question or a specific area within a question.
- (e) Candidates can respond to any question using text, sketching, annotations or combinations where they prefer. No marks shall be awarded for the quality of sketching. Marking will relate only to the information being conveyed.

Question			Expected response	Max mark	Additional guidance
1.	(a)	(i)	<ul style="list-style-type: none"> <li>• Can generate production drawings and assembly information to assist manufacture</li> <li>• Can generate drawings with dimensions</li> <li>• 3D models can be directly used for manufacture</li> <li>• 3D models allow manufacturers to evaluate sizes or design features, colours and materials prior to manufacture</li> </ul>	2	Any two
		(ii)	Allows testing of: <ul style="list-style-type: none"> <li>• Moving parts</li> <li>• Strength of parts</li> <li>• How parts fit together</li> <li>• Weight/mass of parts and/or assemblies</li> <li>• Centre of mass</li> <li>• Strength of materials</li> </ul>	2	Any two
	(b)		Radial array	1	Do not accept circular array, circular pattern.
	(c)		<ul style="list-style-type: none"> <li>• Diameter/radius of profile from axis @ 40mm (1 mark)</li> <li>• Axis @ 320mm or 8 revolutions of profile (1 mark)</li> <li>• Feature as a helix (1 mark)</li> </ul>	3	
	(d)		<ul style="list-style-type: none"> <li>• Describe or sketch the profile and path (1 mark)</li> <li>• Extrude along a path/Sweep along a path (1 mark)</li> </ul>	2	
	(e)		<ul style="list-style-type: none"> <li>• Top down modelling ensures the component will fit the handlebar without having to specify any dimensions</li> <li>• The rubber handles will be modelled in situ and not need assembly constraints</li> <li>• Any change in the handle bars will dynamically change the handles</li> </ul>	2	Any two (must relate to the handlebars and rubber handle, no generic statements about what top down modelling is).

Question		Expected response	Max mark	Additional guidance
	(f)	<p><b>Revolve method</b></p> <ul style="list-style-type: none"> <li>The grip length dimensions 5,5 and 120mm (1 mark)</li> <li>Internal and external diameter of 20 and 28mm (1 mark)</li> <li>Diameter of hand-stop 52mm (1 mark)</li> <li>Grip dimensions 1x1mm square 5mm from top surface (1 mark)</li> <li>Linear array of grip profile 38 times, gap 2mm (1 mark)</li> <li>Revolve profile (1 mark)</li> </ul> <p><b>Extrusion method</b></p> <ul style="list-style-type: none"> <li>3 extrusions dia 28 up 5mm, dia 52 up 5mm and dia 28 up 120mm (1 mark)</li> <li>Extrude-subtract dia 20mm cylinder 130mm to create hollow feature (1 mark)</li> <li>Create 2D sketch on a workplane perpendicular and through centre axis of feature (1 mark)</li> <li>Create sketch of 1mm square 5mm from top surface (1 mark)</li> <li>Revolve-subtract sketch (1 mark)</li> <li>Linear array this feature 38 times, gap 2mm (1 mark)</li> </ul>	6	<p>Whilst array is the preferred method for creating the grip, candidates must not be penalised for CAD drawing the profile manually with correct constraints.</p> <p>If starting array from bottom, distance is 13mm from bottom face.</p> <p>If the candidate lofts the handle this mark is allocated for offset workplanes at the correct spacings and correct profile dimensions.</p> <p>If starting array from bottom, distance is 13mm from bottom face.</p>
	(g) (i)	Removed Section	1	
	(ii)	Revolved Section	1	

Question			Expected response	Max mark	Additional guidance
2.	(a)	(i)	<p>Explanations should make appropriate reference to:</p> <p><b>Graphic 1</b> User:</p> <ul style="list-style-type: none"> <li>• Potential buyer</li> <li>• Client</li> <li>• Investor</li> <li>• Interior Designer</li> <li>• Any other relevant answer</li> </ul> <p>Purpose:</p> <ul style="list-style-type: none"> <li>• Promotional type graphic</li> <li>• Show colour, textures, materials</li> <li>• Shows internal building layout</li> <li>• Has furniture in place</li> <li>• Any other relevant answer</li> </ul>	2	<p>One mark awarded for identification of a single user. (Award the mark if multiple users are identified but are similar e.g. Sales/Marketing or Public/Client)</p> <p>One mark awarded for purpose that is specific to the user.</p>
		(ii)	<p><b>Graphic 2</b> User:</p> <ul style="list-style-type: none"> <li>• Construction industry</li> <li>• Builder</li> <li>• Joiner</li> <li>• Planning department</li> <li>• Architect</li> <li>• Any other relevant answer</li> </ul> <p>Purpose:</p> <ul style="list-style-type: none"> <li>• Includes technical details that would allow construction</li> <li>• Contains dimensions</li> <li>• Shows building materials</li> <li>• Any other relevant answer</li> </ul>	2	<p>One mark awarded for identification of a single user. (Award the mark if multiple users are identified but are similar e.g. Construction Worker/Builder)</p> <p>One mark awarded for purpose that is specific to the user.</p>

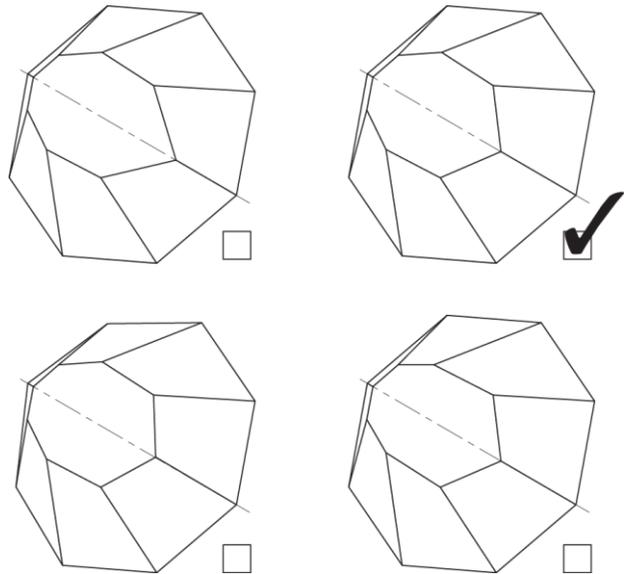
Question		Expected response	Max mark	Additional guidance
	(b) (i)	<p>Responses should include:</p> <ul style="list-style-type: none"> <li>• Ease of collaboration within company</li> <li>• Potentially available on demand anywhere</li> <li>• Many staff can collaborate simultaneously</li> <li>• Can be accessed remotely</li> <li>• Use with mobile devices</li> </ul>	2	Any two
	(ii)	<p>Responses should include:</p> <ul style="list-style-type: none"> <li>• Cloud could be hacked</li> <li>• intellectual property stolen</li> <li>• Digital rights management issues</li> <li>• Requires access to internet at all times</li> <li>• Cloud servers may fail</li> <li>• Virus infection of the system/software</li> </ul>	2	Any two

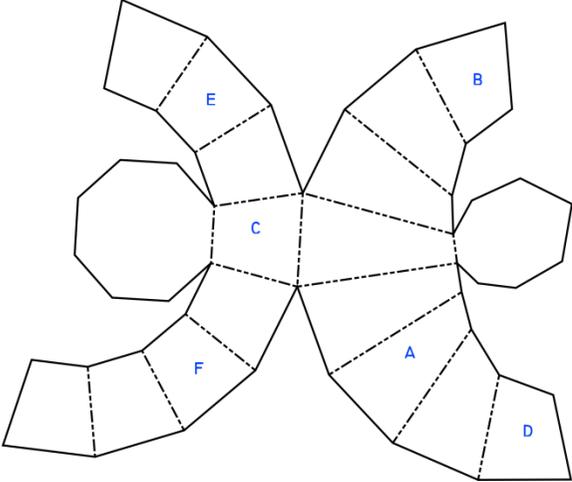
Question			Expected response	Max mark	Additional guidance
3.	(a)	(i)	<ul style="list-style-type: none"> <li>Using lines above and below the pull quote</li> <li>Making the pull quote a different colour from the body text</li> <li>Centre justification of the text</li> <li>Placing the pull quote out with the grid structure</li> <li>Using a different typeface or font</li> </ul>	1	
		(ii)	Adding a drop cap	1	
		(iii)	<ul style="list-style-type: none"> <li>Making it the largest item in the layout</li> <li>It is a cropped image</li> <li>It is a close-up image</li> </ul>	1	
	(b)		<ul style="list-style-type: none"> <li>It creates a less busy looking (calming) layout</li> <li>It creates harmony in the layout</li> <li>No single colour dominates the layout</li> <li>Advancing, warm colours relates to the article</li> <li>Limited colours in the layout makes the large graphic stand out</li> </ul>	2	Any two
	(c)		<ul style="list-style-type: none"> <li>To create contrast between the typefaces</li> <li>To create visual interest</li> </ul>	1	
	(d)		<ul style="list-style-type: none"> <li>It is a light, elegant font and will appeal to the target audience</li> <li>It is a more formal or traditional style that reflects the theme of the article</li> </ul>	1	Accept feminine font
	(e)		<ul style="list-style-type: none"> <li>Repetition of circular shape</li> <li>Colour matching creates rhythm</li> <li>Use of bullet points</li> </ul>	1	
	(f)		<ul style="list-style-type: none"> <li>Background texture</li> </ul>	1	
	(g)		<ul style="list-style-type: none"> <li>Circles decrease in value (increasing the tint/saturation of the colour)</li> <li>Images have low value creating contrast with the background</li> </ul>	1	Accept change of tint or shade, or light and dark.

Question			Expected response	Max mark	Additional guidance
4.	(a)	(i)	<b>Feature:</b> Drop cap	1	Candidates can give any four of the answers in any order.  Marks should only be awarded if reason is answered under the correct feature.
		(iv)	<b>Reasons:</b> <ul style="list-style-type: none"> <li>The drop cap draws the reader's eye to the beginning of the main body text</li> <li>The colour red helps create unity with other similar colours in the layout, tying various elements together in a subtle way</li> <li>The colour red creates strong visual contrast with the white background.</li> </ul> <p><b>OR</b></p> <b>Feature:</b> Column rule or Gutter	2	
			<b>Reasons:</b> <ul style="list-style-type: none"> <li>The column rule makes the main body text easier to read as it separates both columns clearly</li> <li>The designer has also adjusted the gutter width to accommodate the column rule and improve legibility</li> <li>Vertical column rule creates contrast with horizontal red rule</li> </ul>	1	
				2	

Question	Expected response	Max mark	Additional guidance
	<p><b>OR</b></p> <p><b>Feature:</b> Sub heading or emboldened text</p> <p><b>Reasons:</b></p> <ul style="list-style-type: none"> <li>• The sub-heading allows the reader to get a brief overview of the article without having to read though the main body text</li> <li>• The bold typeface draws the reader’s eye to the subheading</li> <li>• The bold typeface contrasts with the body text below</li> </ul> <p><b>OR</b></p> <p><b>Feature:</b> Pull quote or Text box (with colour fill)</p> <p><b>Reasons:</b> Pull quote</p> <ul style="list-style-type: none"> <li>• Gives the reader a quick preview of the content of the article</li> <li>• Catches the reader’s eye</li> <li>• Creates depth by layering over image and flash-bar</li> <li>• Unity created with red flash bar behind caption with other red elements on the layout</li> </ul> <p><b>OR</b></p> <p><b>Feature:</b> Text box re-size (White)</p> <p><b>Reasons:</b> Text box re-size</p> <ul style="list-style-type: none"> <li>• Creates a larger area for text and allows space for the insertion of a pull quote</li> <li>• Also gives a bigger backdrop for the player graphic</li> </ul>	<p>1</p> <p>2</p> <p>1</p> <p>2</p> <p>1</p> <p>2</p>	

Question		Expected response	Max mark	Additional guidance
	(b) (i)	An image that contains a large number of pixels per unit area.	1	Accept high quality image.
	(ii)	Accept format types Bitmap (BMP), Jpeg (JPG), Portable Network Graphic (PNG) or Tagged Image File Format (TIFF).	1	If candidates give multiple answers they <b>must</b> all be correct for the mark.
	(c)	<ul style="list-style-type: none"> <li>• Watermarking is a means of protecting the intellectual property of the company</li> <li>• It can also act as an advertisement for the company as it contains their logo and brand identity (it can potentially lead to future business)</li> <li>• To stop others from selling or passing off the images as their own</li> <li>• Prevents use of image without payment being made</li> </ul>	2	Any two

Question		Expected response	Max mark	Additional guidance
5.	(a)		1	

Question	Expected response	Max mark	Additional guidance
(b)		6	

