



National  
Qualifications  
2018

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## **2018 Graphic Communication**

### **National 5**

## **Finalised Marking Instructions**

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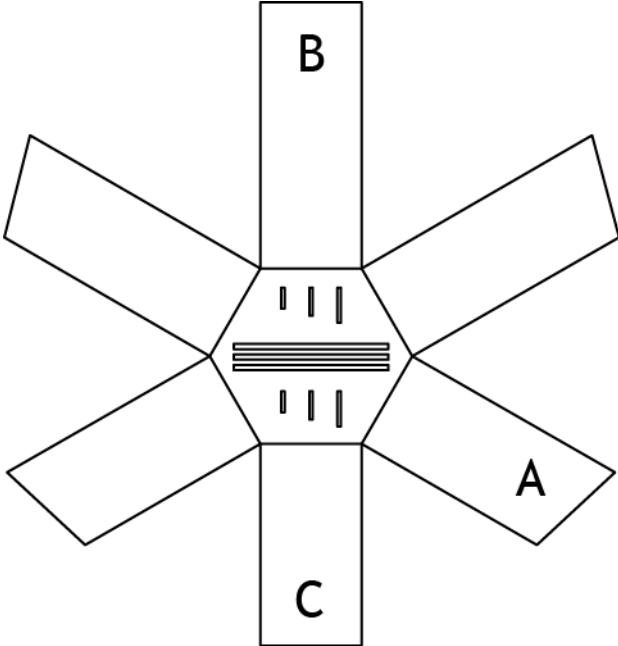
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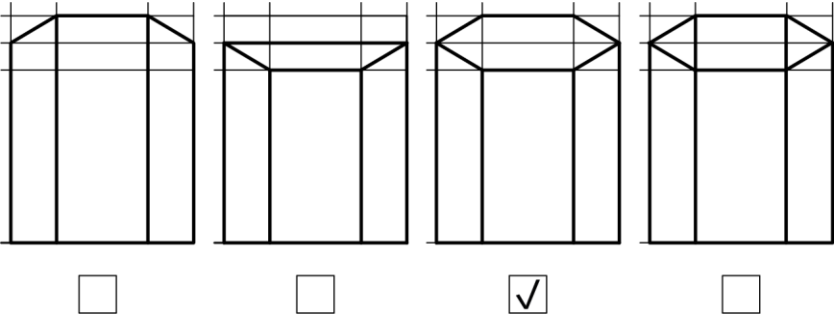
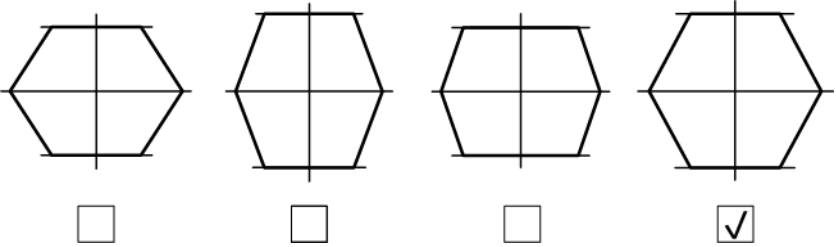
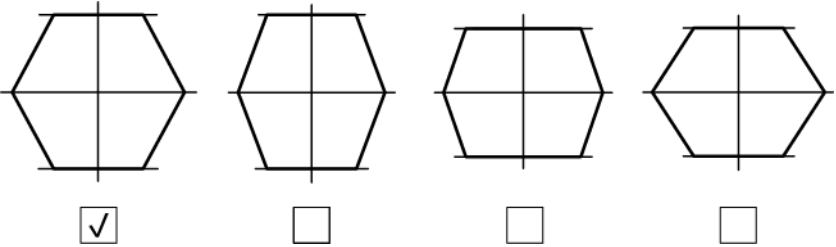


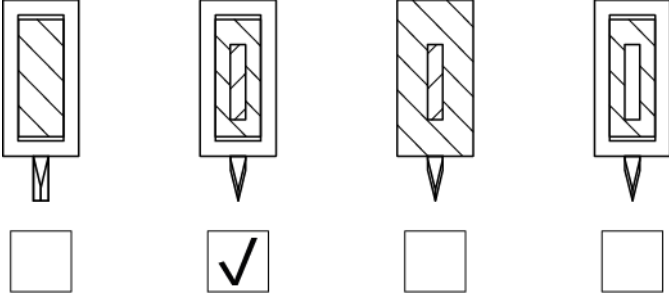
## General marking principles for National 5 Graphic Communication

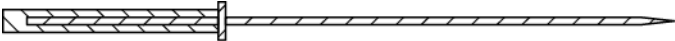
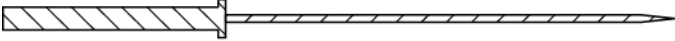
*This information is provided to help you understand the general principles you must apply when marking candidate responses to questions in this Paper. These principles must be read in conjunction with the detailed marking instructions, which identify the key features required in candidate responses.*

- (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.

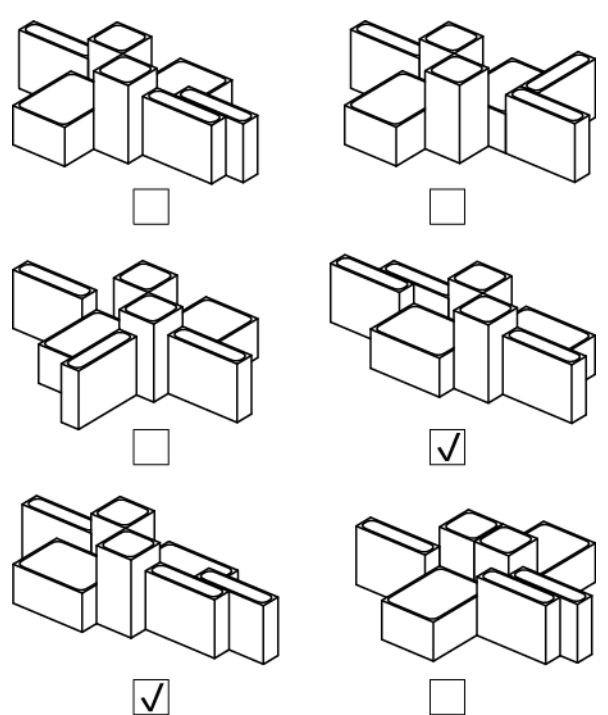
| Question |     |  | Expected response                                                                                                                                                                                                                                                                                     | Max mark | Additional guidance |
|----------|-----|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------------|
| 1.       | (a) |  | Any two from: <ul style="list-style-type: none"> <li>• easier to modify</li> <li>• can be used for illustrative purposes</li> <li>• can be easily used for testing and/or simulation</li> <li>• speed of production</li> <li>• can be electronically shared</li> <li>• saves on materials.</li> </ul> | 2        |                     |
|          | (b) |  | Across Flats only                                                                                                                                                                                                                                                                                     | 1        |                     |
|          | (c) |  |                                                                                                                                                                                                                    | 3        |                     |

| Question |     |  | Expected response                                                                    | Max mark | Additional guidance |
|----------|-----|--|--------------------------------------------------------------------------------------|----------|---------------------|
| 1.       | (d) |  |    | 1        |                     |
|          | (e) |  |    | 1        |                     |
|          | (f) |  |  | 1        |                     |

| Question |     |      | Expected response                                                                                                               | Max mark | Additional guidance |
|----------|-----|------|---------------------------------------------------------------------------------------------------------------------------------|----------|---------------------|
| 1.       | (g) | (i)  | 6                                                                                                                               | 1        |                     |
|          |     | (ii) | 4                                                                                                                               | 1        |                     |
|          | (h) |      | Any relevant answer which details a reduction of waste materials due to layout.<br><br><b>OR</b><br><br>Environmental concerns. | 1        |                     |
|          | (i) | (i)  |                                               | 1        |                     |

| Question |     |      | Expected response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Max mark | Additional guidance |
|----------|-----|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------------|
| 1.       | (i) | (ii) | <div><input type="checkbox"/></div> <div><input type="checkbox"/></div> <div><input checked="" type="checkbox"/></div> <div><input type="checkbox"/></div> | 1        |                     |

| Question |     |      | Expected response                                                                                                                                                                                                                        | Max mark | Additional guidance     |
|----------|-----|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------|
| 2.       | (a) |      | <ul style="list-style-type: none"> <li>• Use of depth</li> <li>• Progressive colour scheme (cool to warm)</li> <li>• Decreasing size of each stage</li> <li>• Left to right progression</li> <li>• All sections are connected</li> </ul> | 3        |                         |
|          | (b) |      | <ul style="list-style-type: none"> <li>• Reduction of paper</li> <li>• Reduction of ink used</li> <li>• Distribution of recipe books</li> <li>• Pollution</li> </ul>                                                                     | 2        |                         |
|          | (c) |      | Bar graph/chart                                                                                                                                                                                                                          | 1        |                         |
|          | (d) |      | <ul style="list-style-type: none"> <li>• Progression of colours</li> <li>• Length of bars</li> </ul>                                                                                                                                     | 1        |                         |
|          | (e) | (i)  | Table                                                                                                                                                                                                                                    | 1        |                         |
|          |     | (ii) | Variety of different types of information to be conveyed.                                                                                                                                                                                | 1        | Follow on rule applies. |
|          | (f) | (i)  | Pie Chart                                                                                                                                                                                                                                | 1        |                         |
|          |     | (ii) | <ul style="list-style-type: none"> <li>• Shows percentages</li> <li>• Proportions of a whole</li> </ul>                                                                                                                                  | 1        | Follow on rule applies. |

| Question |     |  | Expected response                                                                                                                                                                                                                                                                                                                                                       | Max mark | Additional guidance |
|----------|-----|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------------|
| 3.       | (a) |  | <p>One mark for each of the following:</p> <ul style="list-style-type: none"> <li>• initial profile 300x400mm</li> <li>• extrude 200mm</li> <li>• sketch on top surface 360x260mm</li> <li>• subtract 35mm</li> <li>• fillet all (8) edges of the subtracted section r35</li> <li>• shell 3mm removing bottom surface.</li> </ul>                                       | 6        |                     |
|          | (b) |  |  <p>The image shows six isometric views of a mechanical part, arranged in a 3x2 grid. Each view has a small square checkbox below it. The part is a 3D assembly of rectangular blocks. The correct answers are marked with checkmarks in the middle-right and bottom-left views.</p> | 2        |                     |

| Question |     |       | Expected response                                                                                                                                                                                                                                                                                               | Max mark | Additional guidance                                                                                      |
|----------|-----|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------------------------------------------------------------------------------------------|
| 3.       | (c) |       | <ul style="list-style-type: none"> <li>No depth to produce</li> <li>No multiple components to assemble</li> <li>Fewer steps required</li> </ul>                                                                                                                                                                 | 1        |                                                                                                          |
|          | (d) |       | <ul style="list-style-type: none"> <li>Model can be manipulated to be viewed 360 degrees</li> <li>More realistic</li> <li>Depth is visible</li> <li>Imported into an environment</li> <li>Lighting effects can be applied to 3D models</li> <li>Can enable CAD/CAM</li> <li>Simulation and animation</li> </ul> | 2        | Do not accept responses related to colours/textures.                                                     |
|          | (e) |       | (i) Rectangle<br>(ii) Fillet<br>(iii) Rotate<br>(iv) Circle<br>(v) Line<br>(vi) Copy                                                                                                                                                                                                                            | 6        | Accept 'Line'.<br><br>Also accept 'mirror'.<br>Do not accept 'Duplicate'.<br>Also accept 'linear array'. |
|          | (f) | (i)   | Centre lines                                                                                                                                                                                                                                                                                                    | 1        | Accept any reference to 'centre'.                                                                        |
|          |     | (ii)  | Visible edges and outlines                                                                                                                                                                                                                                                                                      | 1        | Accept references to 'visibility'.                                                                       |
|          |     | (iii) | Cutting plane                                                                                                                                                                                                                                                                                                   | 1        |                                                                                                          |
|          | (g) |       | Drawing would be twice real world size.                                                                                                                                                                                                                                                                         | 1        |                                                                                                          |

| Question |     |  | Expected response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Max mark | Additional guidance                                                                                                                                                                                                                                                                 |
|----------|-----|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.       | (a) |  | Oblique                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1        |                                                                                                                                                                                                                                                                                     |
|          | (b) |  | Responses should include: <ul style="list-style-type: none"> <li>• Plan wrong orientation</li> <li>• cutting plane</li> <li>• radius of circle</li> <li>• hatching running same direction on neighbouring parts</li> <li>• depth of 55mm on wrong side of dimension line</li> <li>• label on 'sectional end elevation'</li> <li>• centre line missing on end elevation</li> <li>• inconsistent arrowheads.</li> </ul>                                                                                                                                                                                                                                                          | 5        |                                                                                                                                                                                                                                                                                     |
|          | (c) |  | <p><b><u>Revolve with hole approach</u></b></p> <ul style="list-style-type: none"> <li>• 2D sketch of profile with correct dimensions 1 mark</li> <li>• Correct offset and identification of Centre axis 1 mark</li> <li>• Revolve 360 degrees 1 mark</li> </ul> <p><b><u>Revolve without hole approach</u></b></p> <ul style="list-style-type: none"> <li>• 2D sketch of profile with correct dimensions 1 mark</li> <li>• Revolve 360 degrees (axis must be obvious) 1 mark</li> <li>• Removal of hole 1 mark               <ul style="list-style-type: none"> <li>○ Profile Ø8</li> <li>○ Subtract 3mm</li> <li>○ Profile Ø4</li> <li>○ Subtract all</li> </ul> </li> </ul> | 3        | <p><b><u>Extrusion approach</u></b></p> <p>Profile Ø16 1 mark for 4 stages</p> <p>Extrude 6mm</p> <p>Profile Ø12</p> <p>Extrude 7mm</p><br><p>Chamfer 2mm 1 mark for chamfer</p><br><p>Profile Ø8 1 mark for 4 stages</p> <p>Subtract 3mm</p> <p>Profile Ø4</p> <p>Subtract all</p> |
|          | (d) |  | Any response should cover the topic areas below: <ul style="list-style-type: none"> <li>• shipping impact</li> <li>• pollution</li> <li>• printing materials</li> <li>• immediacy of access</li> <li>• reaching wider audience</li> <li>• allows easy access for others to modify</li> <li>• open source format allows others to manufacture it.</li> </ul>                                                                                                                                                                                                                                                                                                                    | 2        |                                                                                                                                                                                                                                                                                     |

| Question |     |      | Expected response                                                                                                                                                                    | Max mark | Additional guidance          |
|----------|-----|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------|
| 4.       | (e) |      | <ul style="list-style-type: none"> <li>• Common language</li> <li>• Aids comprehension</li> <li>• Multiple people working on same project</li> </ul>                                 | 2        |                              |
|          | (f) | (i)  | <ul style="list-style-type: none"> <li>• To show internal details</li> <li>• Distinguishes how different parts of a product fit together</li> </ul>                                  | 1        | Do not accept 'show inside'. |
|          |     | (ii) | <ul style="list-style-type: none"> <li>• Indicate how a product with multiple parts goes together</li> <li>• Show the product with all components in the correct position</li> </ul> | 1        |                              |

| Question |     |       | Expected response                                                                                                                                                                                                                                                                    | Max mark | Additional guidance                                                          |
|----------|-----|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------|
| 5.       | (a) | (i)   | Any two from: <ul style="list-style-type: none"> <li>• layering of lines to create depth</li> <li>• lines run parallel with website drawing attention</li> <li>• physical connection between title and large logo</li> <li>• leads eye across the page.</li> </ul>                   | 2        |                                                                              |
|          |     | (ii)  | Any two from: <ul style="list-style-type: none"> <li>• contrasting colours</li> <li>• large/bold title dominates page</li> <li>• quartered circles dominate due to scale</li> <li>• use of partially transparent box to fade out background and make title more dominant.</li> </ul> | 2        |                                                                              |
|          |     | (iii) | Any two from: <ul style="list-style-type: none"> <li>• harmonising colours in background</li> <li>• contrasting brand and website</li> <li>• receding colours in background.</li> </ul>                                                                                              | 2        |                                                                              |
|          |     | (iv)  | Any two from: <ul style="list-style-type: none"> <li>• colour</li> <li>• line</li> <li>• shape</li> <li>• typeface</li> <li>• alignment</li> <li>• positioning of elements.</li> </ul>                                                                                               | 2        | Any response must make reference to the relationship between separate items. |

| Question |     |  | Expected response                                                                                                                                                                                                                                                             | Max mark | Additional guidance                        |
|----------|-----|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------|
| 5.       | (b) |  | <p>Any two from:</p> <ul style="list-style-type: none"> <li>• more complex images can be produced</li> <li>• larger range of colours</li> <li>• easy to replace/renew</li> <li>• faster application process</li> <li>• accuracy of print</li> <li>• repeatability.</li> </ul> | 2        | Do not accept any response regarding cost. |

| Question |     |       | Expected response                                                                                                                                                                        | Max mark | Additional guidance                                      |
|----------|-----|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------------------------------------------|
| 6.       | (a) | (i)   | Any one from: <ul style="list-style-type: none"> <li>• use reverse text</li> <li>• change colour to make more visible.</li> </ul>                                                        | 1        |                                                          |
|          |     | (ii)  | Any one from: <ul style="list-style-type: none"> <li>• increase number of columns</li> <li>• use column rule</li> <li>• introduction of a gutter.</li> </ul>                             | 1        | Do not accept 'make font bigger'.                        |
|          |     | (iii) | <ul style="list-style-type: none"> <li>• Crop image</li> </ul>                                                                                                                           | 1        |                                                          |
|          |     | (iv)  | Any one from: <ul style="list-style-type: none"> <li>• increase the size of left hand margin</li> <li>• resize text box.</li> </ul>                                                      | 1        | Do not accept only 'move text (box)'.                    |
|          | (b) |       | Any two from: <ul style="list-style-type: none"> <li>• clean looking</li> <li>• modern</li> <li>• easy to read</li> <li>• sans serif font reflects the style of the building.</li> </ul> | 2        | Do not accept references to 'informal' or 'less formal'. |

| Question |     |  | Expected response                                                                                                                                                                                                                                                                                                                                      | Max mark | Additional guidance |
|----------|-----|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------------|
| 6.       | (c) |  | Any one from: <ul style="list-style-type: none"> <li>• use corners/corner handles (use of shift and/or ctrl accepted)</li> <li>• scale.</li> </ul>                                                                                                                                                                                                     | 1        |                     |
|          | (d) |  | Any two from: <ul style="list-style-type: none"> <li>• aids alignment</li> <li>• aids accuracy</li> <li>• aids structure</li> <li>• description of being moveable</li> <li>• visibility can be turned on/off</li> <li>• elements can be snapped to them</li> <li>• can be bespoke to individual layouts or multiple layouts (master pages).</li> </ul> | 2        |                     |

[END OF MARKING INSTRUCTIONS]