Cambridge Assessment International Education
Cambridge International General Certificate of Secondary Education

DESIGN AND TECHNOLOGY **0445/22**

Paper 2 Graphic Products **May/June 2018**

MARK SCHEME

Maximum Mark: 50

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the May/June 2018 series for most Cambridge IGCSE™, Cambridge International A and AS Level and Cambridge Pre-U components, and some Cambridge O Level components.

Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

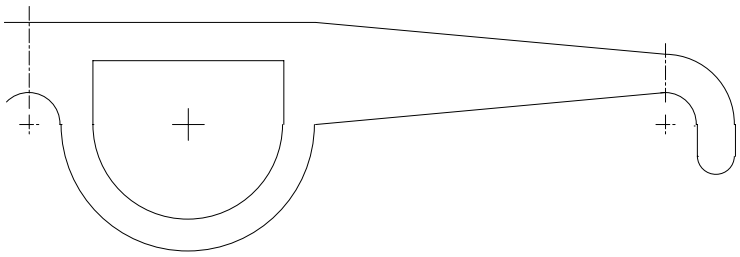
GENERIC MARKING PRINCIPLE 5:

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

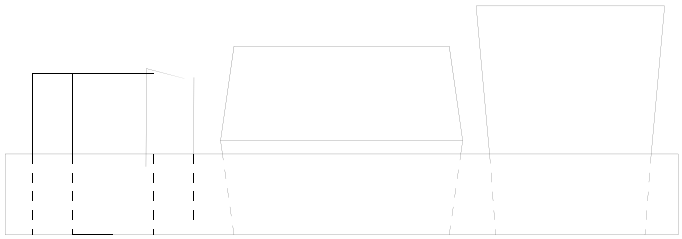
GENERIC MARKING PRINCIPLE 6:

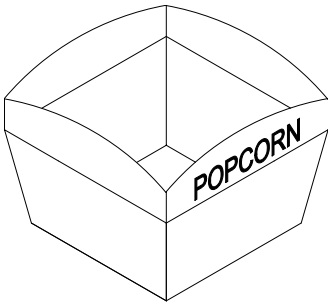
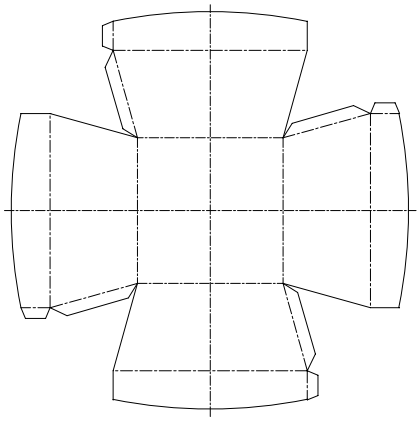
Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

Section A

Question	Answer	Marks
A1(a)	Dimension A = 297 mm (1) Dimension B = 210 mm (1) Dimension C = 99 mm (1)	**3**
A1(b)	Major axis 80/82 mm (1) Minor axis 48/50 mm (1) Some construction (1) clear construction (1) Six or fewer points plotted (1) or seven or more points plotted (1) Ellipse profile correct to overlay (1)	**7**
A2(a)	Any **two** from the following: Eyes – Distance apart Distance from front of face to ears Nose width across bridge Size of ears Width of head	**2**
A2(b)	 1 Quarter circle nose piece R10 (1) 2 Half circle bottom outer rim R40 (1) 3 Half circle bottom inner rim R30 (1) 4 Top part of inner rim 60 × 20 (1) 5 Horizontal top edge **90 mm** from CL (1) 6 Outer quarter circle R22 around ear (1) 7 Inner quarter circle R10 around ear (1) 8 Sloping top line of side arm to cand soln (1) 9 Sloping bottom line of side arm to cand soln (1) 10 Half circle R6 bottom of ear piece (1) 11 Two vertical lines 10 mm (1)	**11**
A3	A method shown that allows ***some adjustment*** (1) ***Method 'locks'*** size and does not use adhesive (1)	**2**

SECTION B

Question	Answer	Marks
B4(a)(i)	Outline 250 wide (1) × 120 high (1)	**2**
B4(a)(ii)	<u>Half hexagons</u> Centre Rectangle 50 × 60 (1) + (1) Any two half hexagons (1) + (1) Construction of Hexagons (1) + (1) Shape to O/L Lower (1) + Top (1)	**8**
B4(a)(iii)	Square shape 90 × 90 (1) + (1)	**2**
B4(a)(iv)	Circle R30 on centre lines (1)	**1**
B4(b)	 Fries packet correct height 60 mm (1) Any two vertical inner lines of fries packet (1) Width 30 to O/L (1) Top flat edge of fries packet 60 (1) Horizontal top line of burger box correct height 70 mm (1) Horizontal top line of burger box correct length 80 mm and position (1) Two sloping side lines join corners (1) Top edge of cup correct diameter 70 mm (1) Bottom edge of cup correct diameter 54 mm (1) On centre line given (1) Height of cup to O/L 85 (1) All lines below tray level hidden detail (1)	**12**

Question	Answer	Marks
B5(a)	 A Right horizontal bottom edge (1) B Right side sloping back corner to cand soln (1) C Front middle vertical edge (1) D Left horizontal bottom edge (1) E Left side sloping back corner (1) F Middle edge horizontal (1) G Left vertical edge (1) H Left inner middle edge (1) J Right inner middle edge (1) K Vertical middle inner edges (1) L Two inner bottom edges to corner (1) M Three arcs sketched touching 2 ends and mid points (3)	**14**
B5(b)	 A Two horizontal lines 45 mm above/below base sides (1) B Two vertical lines 45 mm to left/right of base sides (1) C Any four trapeziums (1) D Four trapeziums to size or O/L (1) E Two horizontal top section lines 15 mm added to two sides (1) F Two vertical top section lines 15 mm added to two sides (1) G Mid points of each arc marked (1) All arcs meet corners and mid points (1) Four arcs drawn (1) Four arcs R110 (1) All fold lines shown to convention (dot/dash/chain) (1)	**11**