UNIT 12 Solids

CSEC Revision Test

1. Which of these nets can be folded to make a cube? (4 marks)

   ![Nets P, Q, R, S]

2. Draw an accurate net for the following two shapes:
   (a)  
   (b)  

   ![Shapes with dimensions]

   (4 marks)

3. The diagram below is the net of a small open box, with no top face.

   ![Net with dimensions]

   (a) Find the perimeter of the net. (2 marks)
   (b) Calculate the area of the net. (2 marks)
   (c) Add one more rectangle in a suitable position to change the diagram above to the net of a closed box. (2 marks)
   (d) Write down the length, width and height of the box (in any order). (2 marks)
   (e) Calculate the volume of the box. (2 marks)
4. The diagram shows a cuboid 4 cm by 2 cm by 1 cm.

On a copy of the following centimetre grid, complete a net of the cuboid.

Each square on grid represents 1 cm²

(3 marks)
5. A cuboid has sides of lengths 4 cm, 6 cm and 8 cm.

Make an accurate 3-D drawing of the cuboid on a grid like the one below.

Each square on grid represents 1 cm$^2$

(3 marks)
6. Here are the plan, front elevation and side elevation of a 3-D shape.

(a) Draw a sketch of the 3D shape. 

Here is a sketch of a different 3D shape.

The shape is a cylinder with a cone on top.

(b) Sketch the front elevation of this 3D shape. 

Diagram NOT accurately drawn.

TOTAL MARKS: 28
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ANSWERS

1. S (−1 for each error) B4 (4 marks)

2. (a)  

   (b)  

   B2 B2 (4 marks)

3. (a) perimeter = 4 + 9 + 2 + 5 + 6 + 14 = 40 cm M1 A1
(b) area = (4 × 14) + (2 × 5) = 66 M1 A1
(c)  

   (or equivalent) B2
(d) 2 cm, 4 cm, 5 cm B2
(e) volume = 2 × 4 × 5 = 40 cm³ M1 A1 (10 marks)

4. For example,

   (3 marks)
5. Each square on grid represents 1 cm\(^2\)

   B1  B1  B1       (3 marks)

6. (a) 

   B2

(b) 

   B2       (4 marks)

(TOTAL MARKS: 28)