Multiple choice section

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Question | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Answer | B | D | D | C | B | A | B | D | A | C |

Question 1 [5.1]

B

A = l × w

= 5 × 8

= 40 cm2

Question 2 [5.1]

D



= π × 102

= 314 m2

Question 3 [5.2]

D



Question 4 [5.3]

C

 cm3

Question 5 [5.4] [10A]

B

6

= 125.7

Question 6 [5.4] [10A]

A

 cm2

Question 7 [5.5] [10A]

B

 cm3

Question 8 [5.5] [10A]

D

 cm3

Question 9 [5.7] [10A]

A

2 kg = 2000 g  
g/cm3

Question 10 [5.7] [10A]

C

40 mL / 2 L  
= 20 mL/L

Multiple-choice total marks: 10

Short answer section

Question 11 2 marks [5.2, 5.3]

(a) The cross sectional area of a prism has the same value across its entire length.

(b) The surface area of a cube is the sum of the area of its six faces.

Question 12 3 marks [5.1]

(a) The shape is made up by combining two basic shapes; here a rectangle and a semi-circle.

(b) Arectangle  
= 8.6 × 10.2  
= 87.72  
Asemi-circle  
= (× 5.12 ) ÷ 2  
= 40.86   
A = 87.72 + 40.86  
= 128.6 cm2

Question 13 3 marks [5.1]

(a) A = 20 × 20  
= 400 cm2

(b) A = × 102   
= 314.16 cm2

(c) Shaded region  
= 400 – 314.16  
= 86 cm2

Question 14 3 marks [5.3]

(a) Three different faces.

(b)  cm2

Question 15 4 marks [5.5] [10A]

(a) A = 4 × 3 = 12 cm2

(b) V =  cm3

Question 16 3 marks [5.4] [10A]

Area of curved surface   
=  cm2

Question 17 3 marks [5.5] [10A]

cm3

Question 18 3 marks [5.2]

 cm2

Question 19 3 marks [5.6]

(a) v = u + at  
v – u = at  
a = 

(b) a =  = 4

Short answer total marks: 27

Extended answer section

Question 20 3 marks [5.2]

(a) rectangle

(b) C = 2 × π × r  
= 2 × π × 4 = 25.1327  
The dimensions are 5 cm × 25 cm.

(c) SA = 25 × 5  
= 125 cm2

Question 21 5 marks [5.3]

(a) V = L × W × H

= 10 × 3 × 2.3

= 69 m3

(b) V = L × W × H

= 10 × 3 × 2

= 60 m3

Capacity = 60 × 1000

= 60 000 L

(c) 

= 10 × 3 + 2 × 3 × 2.3 + 2 × 10 × 2.3

= 89.8 m2

Extended answer total marks: 8

TOTAL test marks: 45