Multiple choice section

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

Question 1 [5.1]

D

A = l × w

= 8 × 10

= 80 cm2

Question 2 [5.1]

B



= π × 52

= 78.53 m2

Question 3 [5.2]

C



= 2 ( 5 × 4 + 5 × 3 + 4 × 3 )

= 94 m2

Question 4 [5.3]

D

V = l × b × h

= 10 × 6 × 4

= 240 cm3

Question 5 [5.4] [10A]

A



= π × 6(6 + 4)

= 188.5 cm2

Question 6 [5.4] [10A]

B



= 4 × π × 52

= 314.16 mm2

Question 7 [5.5] [10A]

B



= 

= 94.24 cm3

Question 8 [5.5] [10A]

C



= 

= 2144.66 cm3

Question 9 [5.7] [10A]

A

Density =   
=  = 7 g/cm3

Question 10 [5.7] [10A]

C

160 mL / 10 L = 16 mL/L

Multiple-choice total marks: 10

Short answer section

Question 11 2 marks [5.2, 5.4]

(a) A three-dimensional shape whose cross sectional area decreases uniformly is a tapered solid.

(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 triangle.

(b) Arectangle = 8.2 × 10.6   
 = 86.92 cm2  
Atriangle = (8.2 × 6) ÷ 2  
 = 24.6 cm2  
Total = 86.92 + 21.6  
 = 111.5 cm2

Question 13 3 marks [5.1]

(a) A = 16 × 16  
= 256 cm2

(b) A = π × 82   
= 201.06 cm2

(c) Shaded region  
= 256 – 201.06  
= 54.94 cm2

Question 14 3 marks [5.3]

(a) Three different faces.

(b) TSA = 2 × (15 + 27 + 45)  
 = 174 cm2

Question 15 4 marks [5.5] [10A]

(a) A = 3 × 3 = 9 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]

r = 6 ÷ 2 = 3 cm, h = 12 cm



Question 19 3 marks [5.6]

(a) v = u + at  
v – u = at  
t =

(b) t =  = 6

Short answer total:\_\_\_\_\_\_\_\_\_/27

Extended answer section

Question 20 3 marks [5.2]

(a) rectangle

(b) C = 2 × π × r   
= 2 × π × 4  
= 25.13  
The dimensions are 5 cm × 25 cm.

(c) SA = 25 × 11  
= 275 cm2

Question 21 5 marks [5.3]

(a) V = L × W × H  
= 20 × 4 × 2.4  
= 192 m3

(b) V = L × W × H  
= 20 × 4 × 2  
= 160 m3  
Capacity = 160 × 1000  
= 160 000 L

(c)   
= 20 × 4 + 2 × 20 × 2.4 + 2 × 4 × 2.4)  
= 195.2 m2

Extended answer total:\_\_\_\_\_\_\_\_\_/8

TOTAL test results: \_\_\_ / 45