Multiple-choice section

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Question | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Answer | C | A | D | B | A | B | C | B | B | D | C | D |

Question 1 [2.1]

C

 = 2 + 1 ÷ 4

= 2 + 0.25

= 2.25

Question 2 [2.1]

A



Question 3 [2.2]

D



Question 4 [2.3]

B



Question 5 [2.4]

A

The water line is up 4 marks from the bottom of the jug which is 8 even marks tall. This means that the jug can be considered to be half empty; or 50% full.

Question 6 [2.5]

B



Question 7 [2.5]

C

2.4 × 100 = 240%

Question 8 [2.6]

B

65% = 65 ÷ 100   
 = 0.65

Question 9 [2.6]

B



Question 10 [2.7]

D

30 seconds out of 2 minutes is 30 seconds out of 120 seconds.



Question 11 [2.8]

C



Question 12 [2.9]

D

$100 × 1.1 = $110

Multiple-choice total marks: 12

Short answer section

Question 13 4 marks [2.1]

(a) , so 27 ÷ 4 = 6.75

(b) = 6.75, so 

Question 14 6 marks [2.2]

(a) = 7 ÷ 9   
 = 0.777 777 7… =; this is a recurring decimal.

(b)  = 1 ÷ 8   
 = 0.125; this is a terminating decimal.

(c)  = 2.828 427 125…; this is an irrational number.

Question 15 2 marks [2.2]

Let *x* = 0.555 55… [1]

10*x* = 5.555 55… [2]

[2] – [1] gives

10*x* – *x* = 5.555 55… – 0.555 55…

9*x* = 5

*x* = 

Question 16 6 marks [2.3]

(a) , , , , 

(b) -4.9, -3.5, -3.2, -1.5, 0.5

Question 17 6 marks [2.3]

(a) 

(b)   


(c) -2.14 – 5.21 = -7.35

Question 18 4 marks [2.5]

(a) 0.9 × 100% = 90% (b) 3.25 × 100% = 325%

Question 19 4 marks [2.6]

|  |  |
| --- | --- |
| (a) 43% = 43 ÷ 100   = 0.43 | (b) 78.5% = 78.5 ÷ 100   = 0.785 |

Question 20 4 marks [2.6]

|  |  |
| --- | --- |
| (a) | (b) |

Question 21 2 marks [2.7]

(150 ÷ 200) × 100% = 75%

Question 22 4 marks [2.6]

|  |  |
| --- | --- |
| (a) 14% =   = | (b) 60% =   = 0.6 |

Question 23 4 marks [2.7]

(a) Profit is $600 – $500 = $100

(b) Percentage profit is 

Question 24 4 marks [2.8]

|  |  |
| --- | --- |
| (a) 30% of 36 000 = 0.3 × 36 000   = 10 800 | (b) 36 000 –10 800 = 25 200 |

Question 25 2 marks [2.9]

1.2 × $800 000 = $960 000

Question 26 4 marks [2.9]

|  |  |
| --- | --- |
| (a) 40% of $500 000 = 0.4 × $500 000   = $200 000 | (b) $500 000 – $200 000 = $300 000 |

Question 27 4 marks [2.10]

(a) $80 × 1.6 = $128

(b) $120 × 1.6 = $192

Short answer total marks: 60

Extended answer section

Question 28 6 marks [2.1]

(a) 2 × $4.99 = $9.98

(b) The amount paying by cash is $10.

(c) $80 ÷ 18 metres is approximately $4.44 per metre.

(d) Buying the material by the roll is cheaper at $4.44 per metre, compared to the original cost of $4.99 per metre. Unless Lucinda can use most of the material in her project there might be a lot of wastage. If this so, it is cheaper to buy the exact amount.

Question 29 7 marks [2.2]

(a) First section:   
Second section:   
Third section: 

(b) 40 – (20 + 10 + 8) =2

(c) (i) 

(ii) 

Question 30 4 marks [2.5]

(a) Spelling: 0.7 × 100 = 70%

(b) Writing: 0.8 × 100 = 80%

(c) 80% – 70% = 10%

Question 31 2 marks [2.8]

(a) 100% – 35% = 65% do not have blond hair

(b) 35% of students are blond = 0.35 × 60   
 = 21 students are blond

Question 32 6 marks [2.10]

(a) Cost of pass after 10% discount = 0.9  $110   
 = $99

(b) Increase in cost of pass = $110  $100  
 = $10  
Percentage increase =   
 = 10%

(c) Cost expected next year = 1.05  $110  
 = $115.50

Extended answer total marks: 25

TOTAL test marks: 97