Multiple-choice section

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

Question 1 [2.1]

D



Question 2 [2.1]

A

0.85 =

Question 3 [2.2]

D

 = 3 ÷ 11

= 0.272 727 272 7…

= 

Question 4 [2.3]

C



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% empty.

Question 6 [2.5]

D



Question 7 [2.5]

C

2.85 × 100% = 285%

Question 8 [2.6]

B

55% = 55 ÷ 100

= 0.55

Question 9 [2.6]

C



Question 10 [2.7]

C

15 seconds out of 2 minutes is 15 seconds out of 120 seconds.



Question 11 [2.8]

B



Question 12 [2.9]

B

$1500 × 1.2 = $1800

Multiple-choice total marks: 12

Short answer section

Question 13 4 marks [2.1]

|  |  |
| --- | --- |
| (a) | (b) 6.035 × 100% = 603.5% |

Question 14 6 marks [2.2]

|  |  |
| --- | --- |
| (a) Let *x* =   = 0.566 666 6…  100*x* = 56.666 666…  10*x* = 5.666 666… 100*x* – 10*x* = 56.666… – 5.666…  90*x* = 51  *x* = | (b) Let *x* = 0.232 323…  100*x* = 23.2323…  100*x* – *x* = 23.2323… – 0.232 323…   99*x* = 23 |

Question 15 6 marks [2.2]

(a) = 7 ÷ 13 = 0.538 461 538 …. = ; this is a recurring decimal.

(b)  = 25 ÷ 2 = 12.5; this is a terminating decimal.

(c)  = 2.236 067 978 …; this is an irrational number

Question 16 6 marks [2.3]

(a) , , , , 

(b) -8.9, -3.6, -2.5, -1.2, -0.5

Question 17 6 marks [2.3]

(a)   


(b)   


(c) -2.142 – 5.2 = -7.342

Question 18 4 marks [2.5]

|  |  |
| --- | --- |
| (a) 9.06 × 100% = 906% | (b) 0.007 × 100% = 0.7% |

Question 19 4 marks [2.6]

|  |  |
| --- | --- |
| (a) 23% = 23 ÷ 100   = 0.23 | (b) 62.4% = 62.4 ÷ 100   = 0.624 |

Question 20 4 marks [2.6]

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

Question 21 4 marks [2.7]

|  |  |
| --- | --- |
| (a) Profit = $18 000$15 000  = $3000 | (b) Percentage profit =   =   = 20% |

Question 22 4 marks [2.8]

|  |  |
| --- | --- |
| (a) 55% of 36 000 = 0.55 × 36 000   = 19 800 | (b) 36 000 – 19 800 = 16 200 |

Question 23 2 marks [2.9]

Increased by 6% = 100% + 6%  
 = 106%  
 = 1.06

Current value of shares = 1.06  $8000

= $8480

Question 24 4 marks [2.9]

|  |  |
| --- | --- |
| (a) 30% of $600 000 = 0.3 × $600 000  = $180 000 | (b) $600 000 – $180 000 = $420 000 |

Question 25 4 marks [2.10]

|  |  |
| --- | --- |
| (a) $40 × 1.1 = $44 | (b) $85 × 1.1 = $93.50 |

Short answer total marks: 58

Extended answer section

Question 26 6 marks [2.1]

(a) 2.4 × $6.99 = $16.776, which is rounded to $16.78.

(b) The amount paying by cash is $16.80.

(c) $80 ÷ 15 metres is approximately $5.33 per metre.

(d) Buying the material by the roll is cheaper at $5.33 per metre compared to the original cost of $6.99 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.

(e) $60 ÷ $6.99 = 8.584 m, which is about 858 cm.

Question 27 7 marks [2.2]

(a) First section:  = 1000 m  
Second section:  = 500 m  
Third section: = 400 m

(b) 2000  (1000 + 500 + 400) = 100 m

(c) (i) 

(ii) 

Question 28 4 marks [2.5]

(a) Spelling: 0.755 × 100 = 75.5%

(b) Writing: 0.825 × 100 = 82.5%

(c) 82.5% – 75.5% = 7%

Question 29 4 marks [2.8]

(a) Percentage of students that do not choose music lessons  
= 100% 64%  
= 36%

(b) 64% of 50 students = 64% 50  
 = 0.64 50  
 = 32

Question 30 7 marks [2.10]

(a) Cost of package after 5% discount = 0.95  $6500  
 = $6175

(b) Increase in cost of package = $6500 – $6000  
 = $500

Percentage increase =   
 = 8.33%

(c) Cost expected next year = 1.05  $6500  
 = $6825

Extended answer total marks: 28

TOTAL test marks: 98