Multiple-choice section

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

Question 1 [2.1]

D

 = 3 + 0.4 = 3.4

Question 2 [2.1]

A

0.37 =

Question 3 [2.2]

D

 = 5 ÷11

= 0.4545454545… = 

Question 4 [2.3]

C



Question 5 [2.4]

D

The water line is up 7 marks from the bottom of the jug which is 10 even marks tall. This means that the jug can be considered to be 70% full; or 30% empty.

Question 6 [2.5]

D



Question 7 [2.5]

C

5.28 × 100% = 528%

Question 8 [2.6]

B

35% = 35 ÷ 100 = 0.35

Question 9 [2.6]

B



Question 10 [2.7]

B

15 seconds out of 4 minutes is 15 seconds out of 240 seconds.



Question 11 [2.8]

B

30% of $480



Question 12 [2.9]

A

$1500 × 1.3 = $1950

Multiple-choice total marks: 12

Short answer section

Question 13 4 marks [2.1]

(a) 

(b) 6.045 = 604.5%

Question 14 6 marks [2.2]

|  |  |
| --- | --- |
| (a) Let *x* =   = 0.266 666 6…  100*x* = 26.666 666…  10*x* = 2.666 666…  100*x* – 10*x* = 26.666… – 2.666…  90*x* = 24  *x* =   *x* | (b) Let *x* =   = 0.434 343 43…  100*x* = 43.434 343… 100*x* – *x* = 43.4343 – 0.434 343  99*x* = 43 |

Question 15 6 marks [2.2]

(a) = 5 ÷ 13   
 = 0.384 615 384…   
 =; this is a recurring decimal.

(b)  = 29 ÷ 2   
 = 14.5; this is a terminating decimal.

(c) = 3.316 624 79…; this is an irrational number.

Question 16 6 marks [2.3]

|  |  |
| --- | --- |
| (a) , , , , | (b) -3.6, -2.8, -1.3, -1.2, 1.8 |

Question 17 6 marks [2.3]

|  |  |  |
| --- | --- | --- |
| (a) | (b) | (c) -2.652 – 5.2 = -7.852 |

Question 18 4 marks [2.5]

|  |  |
| --- | --- |
| (a) 9.02 × 100% = 902% | (b) 0.008 × 100% = 0.8% |

Question 19 4 marks [2.6]

(a) 38% = 38 ÷ 100 = 0.38

**(b)** 75.2% = 75.2 ÷ 100 = 0.752

Question 20 4 marks [2.6]

|  |  |
| --- | --- |
| (a) 315% | (b) 9.8% |

Question 21 4 marks [2.7]

(a) Profit = $19 200$16 000  
 = $3200

(b) Percentage profit =   
 =   
 = 20%

Question 22 4 marks [2.8]

|  |  |
| --- | --- |
| (a) 55% of 60 000 = 0.55 × 60 000   = 33 000 | **(b)** 60 000 – 33 000 = 27 000 |

Question 23 2 marks [2.9]

Increased by 8% = 100% + 8%

= 108%

= 1.08

Current value of shares = 1.08  $11 000

= $11 880

Question 24 4 marks [2.9]

|  |  |
| --- | --- |
| (a) 30% of $400 000 = 0.3 × $400 000   = $120 000 | (b) $400 000 – $120 000 = $280 000 |

Question 25 4 marks [2.10]

|  |  |
| --- | --- |
| (a) $40 × 1.5 = $60 | (b) $85 × 1.5 = $127.50 |

Short answer total marks: 58

Extended answer section

Question 26 7 marks [2.1]

(a) 3.6 × $6.99 = $25.164, which is rounded to $25.16.

(b) The amount paying by cash is $25.15.

(c) $100 ÷ 15 metres is approximately $6.67 per metre.

(d) Buying the material by the roll is cheaper at $6.67 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) 50 ÷ 6.99 = 7.153 m, which is about 715 cm.

Question 27 7 marks [2.2]

(a) First section:  = 1500 m  
Second section:  = 750 m  
Third section: = 600 m

(b) 3000  (1500 + 750 + 600) = 150 m

(c) (i) 

(ii) 

Question 28 4 marks [2.5]

(a) Spelling: 0.655 × 100 = 65.5%

(b) Writing: 0.625 × 100 = 62.5%

(c) 65.5% – 62.5% = 3%

Question 29 4 marks [2.8]

(a) Percentage of students that do not choose music lessons  
= 100% 55%  
= 45%

(b) 55% of 60 students = 55% 60  
 = 0.55 60  
 = 33

Question 30 7 marks [2.10]

(a) Cost of package after 8% discount = 0.92  $8500  
 = $7820

(b) Increase in cost of package = $8500 – $8000  
 = $500  
Percentage increase =   
 = 6.25%

(c) Cost expected next year = 1.06  $8500  
 = $9010

Extended answer total marks: 29

TOTAL test marks: 99