Multiple-choice section

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

Question 1 [1.1]

B

= 63%

Question 2 [1.2]

C

0.8 × $3350 = $2680

0.9 × $2680 = $2412

Question 3 [1.3]

D

0.021 × ($380 000 + $675 000) = $22 155

$150 + $22 155 = $22 305

Question 4 [1.4]

A

$10 × 52 = $520

$52 500 – $520 – $185 = $51 795

Question 5 [1.5]

C

*r* =

=

= 0.058

= 5.8% p.a.

Question 6 [1.6]

D

fees = $4.00 + (5 × $0.30) + (5 × $0.40) + (2 × $1.50) + (6 × $0.70) + (1 × $0.30)

fees = $15.00

Question 7 [1.7]

C

5100 W = 5.1 kW

5.1 kW × 0.75 hours = 3.825 kWh per day

3.825 × 7 = 26.775 kWh per week

3.825 × 0.189 × 7 = $5.06

Question 8 [1.8]

D

9 months remaining in contract

$49 × 9 = $441

$441 + $250 = $691

Multiple-choice total marks: 8

Short answer section

Question 9 3 marks [1.1]

(a) 0.6 × 210 = $126

(b) 0.1025 × $50 = $5.13

(c) 0.124 × $1080 = $133.92

Question 10 2 marks [1.1]

$140 × 0.068 = $95.20

$95.20 × 1.18 = $112.34

Question 11 2 marks [1.2]

price before GST = $199 ÷ 1.1 = $180.91

price before mark-up: $180.91 ÷ 1.8 = $100.51

Question 12 3 marks [1.3]

Monday: 4 × 0.8 × 19.78 = 63.296

Wednesday: 3 × 0.8 × 19.78 + 1 × 0.8 × 19.78 × 1.1 = 64.8784

Friday: 4 × 0.8 × 19.78 + 3 × 0.8 × 19.78 × 1.1 = 115.5152

Saturday: 5 × 0.8 × 19.78 × 1.25 = 98.9

Sunday: 3 × 0.8 × 19.78 × 1.75 = 83.076

Total: 425.6656 = $425.67 (rounded to 2 decimal places)

Question 13 4 marks [1.4]

(a) income = $73 000

bracket = $37 001 – $80 000

tax = $3572 + 32.5c for each dollar over $37 000

73 000 – 37 000 = 36 000

tax = $3572 + 32.5c × 36 000

= $15 272

(b) income = $93 000

bracket = $80 001 – $180 000

tax = $17 547 + 37c for each dollar over $80 000

93 000 – 80 000 = 13 000

tax = $17 547 + 37c × 13 000

= $22 357

Question 14 3 marks [1.5]

*I* = *PrT*

*I* = $5000

*P* = $5000

*r* = 0.0612

*T* = ?

*T* = 

*T* = 

= 16.34 years

= 16 years 4 months

Question 15 3 marks [1.6]

(a) $600 – $150 = $450

$450 ÷ $30 = 15 weeks.

Yes, Dorothea can begin paving in 20 weeks.

(b) $30.00 ($30.00 divides evenly into $450.00)

Question 16 3 marks [1.7]

(a) 1.1 × $312.70 = $343.97

$343.97 – $68.20 = $275.77

(b) 15 569 = *V* × 48.23 × 1.001

*V* = 

*V* = 322.48 m3

Question 17 4 marks [1.7]

(a) current situation: 16 × 14 = 224 L per shower

224 × 365 = 81 760 L per year

new situation: 9 × 7 = 63 L per shower

63 × 365 = 22 995 L per year

saving: 81 760 L – 22 995 L

= 58 765 L

= 58.765 kL

(b) current yearly water bill: 81.76 kL × $1.29/kL

= $105.47

new water bill: 22.995 kL × $1.29/kL

= $29.66

saving: $105.47 – $29.66

= $75.81

Question 18 4 marks [1.8]

daily cost: 6(5 × $0.32+$0.26) + (18 × $0.24) = $15.48

31-day month: 31 × $15.48 = $479.88

Irene’s bill:

$479.88 – $450.00 = $29.88

total: $49.95 + $29.88 + $24.05 = $103.88

Short answer total marks: 31

Extended answer section

Question 19 7 marks [1.6]

(a) $50.00 + (12 × $4.80) = $107.60

(b) after $400 deposit, $4600 left to pay, plus $57.60 in monthly fees

$4600 + $57.60 = $4657.60

$4657.60 ÷ 12 = $388.13 per month

(c) minimum monthly repayment: 0.05 × $4650 = $230 + $4.80 (fee) = $234.80

(d) $234.80 × 12 = $2817.60

$4657.60 – $2817.60 = $1840 left owing

(e) *P* = $1840

*R* = 28% ÷ 365 ÷ 100 = 0.000 7671

*T* = 30 days

*I* = *PRT*

= 1840 × 0.000 7671 × 30

= $42.35

Question 20 8 marks [1.4]

(a) $84 000 – $80 000 = $4000

0.37 × $4000 = $1480

Tax = $17 547 + $1480

Tax = $19 027.00

(b) $4000

(c) $200 × 12 = $2400

$2400 + $2000 = $4400

taxable income = $84 000 – $4400

= $79 600

$79 600 – $37 000 = $42 600

$42 600 × 0.325 = $13 845

tax = $3572 + $13 845

tax = $17 417

(d) 0.015 × $79 600 = $1194

(e) net income = $(79 600 – 17 417 – 1194)

net income = $60 989

Extended answer total marks: 15

TOTAL test marks: 54