

CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge Ordinary Level

MARK SCHEME for the October/November 2015 series

7101 COMMERCIAL STUDIES

7101/22

Paper 2 (Arithmetic), maximum raw mark 100

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Section A			
1	(a) (i)	20 – (5 – 4)	1
	(ii)	$6 + 3 \times (2 + 7)$	1
	(b) (i)	0.455	2
	(ii)	138	2
	(iii)	6.86	2
AG M1 0.4545 ... or B1 ft their last value in the working to the answer space corrected to 3sf M1 $(17\frac{1}{4} \div 100) \times 800$ or 0.1725×800 M1 6.857 ... or B1 ft as in (i) but to nearest cent			
2	(a)	$\frac{12}{5}$ cao	2
	(b)	7.5	3
	(c)	2.5	4
AG M1 Correct equivalent fraction M1 8.60 – 8 oe M1 “0.6”/8 (oe) $\times 100$ or M1 $8.6/8 \times 100 (= 107.5)$ M1 “107.5” – 100 M1 $88\,000 - 80\,000 (= 8000)$ M1 $\div 4 (= 2000)$ M1 $\div 80\,000 \times 100$ or M1 $(80\,000 \times 4 \times r)/100$ M1 = 8000 M1 $r = \dots \times 100 \div (80000 \times 4)$ oe			
3	(a)	49200	2
	(b)	74216	4
M1 60000×0.82 M1 $60500 \div 0.805 (= 75155.279)$ M1 “75155” ... $\times 0.9875$ A1 74215.8 ... B1 ft as in Q1 but to nearest euro or M1 $60500 \times 0.9875 (= 59743.75)$ M1 “59743.75” / 0.805			
4	(a)	$7\frac{1}{4}$	1
	(b)	Bars labelled correctly Bars same width Heights all correct	1 1 3
– 1 eooo			
5		67464	5
M1 $60\,000 \times 1.035 (= 62\,100)$ M2 <i>their</i> $62\,100 \times (1.028)^3 (= 67\,463.8 \dots)$ or M1 1.028^k where $k \neq 3$ If done in stages M2 for $62\,100 \times 1.028 (= 63\,838.80) \times 1.028 (= 65\,626.28 \dots) \times 1.028$ or M1 for any other number of years A1 67 463.n ... ($n \geq 5$) B1 ft as in Q1 but to nearest			
AG			

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6	(a)	624	3	M1 $6500 \times 0.12 (= 780)$ M1 $\times 0.8$ or M1 $6500 \times 0.8 (= 5200)$ M1 “5200” $\times 0.12$ or M1 $0.8 \times 12/100 (= 0.096)$ M1 $\times 6500$
	(b)	8000	4	B1 102.25 M1 $\div 102.25$ M1 $\div 0$ AG
7		1339.50	5	M1 $0.32/100 \times 350000 (= 1120)$ B1 (contents) 290 M1 “1120” + “290” $(= 1410)$ M1 <i>their</i> 1410×0.95 or M2 $1120 \times 0.95 + 290 \times 0.95$ or M1 either term
8	(a)	484 cao	3	M1 $21.8 \times 1000 (= 21800)$ M1 figs $218 \div 45 (= 484.44)$ or M1 $45 \div 1000 (= 0.045)$ M1 $21.8 \div \text{figs } 45 (= 484.44)$
	(b)	88	2	M1 (a) / 550 $\times 100$ or $21780 / 24750 \times 100$ AG
9	(a)	38	3	M2 $\Sigma \text{ hours} / 6$ or M1 $\Sigma \text{ hours} (= 228)$
	(b)	346.50	5	M1 $35 \times 8.80 (= 308)$ M1 $1.25 \times 8.80 (= 11)$ M1 <i>their</i> $(11 \times 3\frac{1}{2}) (= 38.50)$ M1 <i>their</i> $308 + \text{their } 38.50$ or M1 $38.5 \times 8.80 (= 338.80)$ M1 $0.25 \times 8.80 (= 2.20)$ M1 $3.5 \times 2.20 (= 7.70)$ M1 <i>their</i> $338.80 + \text{their } 7.70$
	(c)	7.5	3	M1 $24200 - 21500 (= 2700)$ dep M1 <i>their</i> $2700 \div 36000 \times 100$ on subtraction
10	(a)	\$606.06	3	M1 $0.74 \times 840 (= 621.60)$ M1 $0.975 \times \text{their } 621.60$ or M1 $0.975 \times 840 (= 819)$ M1 for “819” $\times 0.74$
	(b)	22.10	5	M1 $740 - \text{their (a)}$ M1 $\div \text{their (a)}$ M1 $\times 100 (= 22.100(1....))$ A1 22.1001 ... B1 ft as in Q1 (i) but correct to 2dp
11	(a)	4600	3	M1 $4/7$ M1 $\times 8050$ or M1 $8050/7 = (1150)$ M1 1150×4 AG
	(b)	14950	3	M1 (a)/2 M1 adding their 3 values or M1 $8050/7$ M1 $\times 13$ or M1 (a)/4 M1 $\times 13$

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Section B			
12 (a) (i)	24 000	1	
(ii)	25	3	M1 rise/run M1 $\times 100$
(b) (i)	4 h 45 m	2	M1 380/80 (= 4.75)
(ii)	12:20 (pm)	2	M1 0735 + <i>their</i> 4 hrs 45 mins not 12.20 am
(iii)	60	4	M1 19.10 – 14.45 (= 4 hr 25 min) M1 converting their 4 h 25 m into hours M1 265/ <i>their</i> $4\frac{5}{12}$
13 (a)	3200	3	Accept 3100 – 3300 B1 4800 (accept 4700 – 4900) M1 8000 – <i>their</i> 4800
(b)	42.9	4	B1 5600 (accept 5500 – 5700) M1 8000 – <i>their</i> 5600 (= 2400) M1 <i>their</i> 2400/ <i>their</i> 5600 $\times 100$
(c)	1343.75	2	M1 172/160 $\times 1250$
(d)	45¼ or 45.25	3	B1 8, 8, 4, 7½, 9¼, 8½ or in hours and minutes M1 adding their 6 times AG
14 (a)	–4bn or 4bn deficit oe words	2	M1 26 – 30 or SC1 for 4 billion
(b)	3.3	4	M1 46/360 M1 $\times 26$ A1 3.32 ... or M1 26/360 M1 $\times 46$ B1 ft as in Q1 (b)(i) to 2sf
(c) (i)	79.2	3	M1 22/100 M1 $\times 360$
(ii)	2.31	3	M1 0.22 $\times 30$ (=6.6) M1 0.35 $\times$ <i>their</i> 6.6 or M1 0.35 $\times 30$ (= 10.5) M1 “10.5” $\times 0.22$ or M1 0.35 $\times 0.22$ (= 0.077) M1 “0.077” $\times 30$

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15 (a)	6300	6	M1 $24500 - 3500 (= 21\,000)$ M1 <i>their</i> $21\,000 \times 0.8 (=16\,800)$ M1 Σ shareholdings $(= 2240)$ M1 $840/$ (their 2240) M1 $\times$ "16 800"
(b)	18 750	4	B1 21 000 M1 <i>their</i> $21\,000 \div 112$ M1 $\times 100$
(c)	530	2	M1 or arranging values in order 400 450 530 530 580 640 660