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

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

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CAMBRIDGE
International Examinations

Section A				
1	(a) (i)	20 – (5 – 4)	1	**AG**
	(ii)	6 + 3 × (2 + 7)	1	
	(b) (i)	0.455	2	**M1** 0.4545 … or **B1** ft their last value in the working to the answer space corrected to 3sf
	(ii)	138	2	**M1** (17¼ ÷ 100) × 800 or 0.1725 × 800
	(iii)	6.86	2	**M1** 6.857 … or **B1** ft as in (i) but to nearest cent
2	(a)	$\frac{12}{5}$ cao	2	**M1** Correct equivalent fraction **AG**
	(b)	7.5	3	**M1** 8.60 – 8 oe **M1** "0.6"/8 (oe) × 100 or **M1** 8.6/8 × 100 (= 107.5) **M1** "107.5" – 100
	(c)	2.5	4	**M1** 88 000 – 80 000 (= 8000) **M1** ÷ 4 (= 2000) **M1** ÷ 80 000 × 100 or **M1** (80 000 × 4 × r)/100 **M1** = 8000 **M1** r = …. × 100 ÷ (80000 × 4) oe
3	(a)	49200	2	**M1** 60000 × 0.82
	(b)	74216	4	**M1** 60500 ÷ 0.805 (= 75155. 279) **M1** "75155" … × 0.9875 **A1** 74215.8 … **B1** ft as in Q1 but to nearest euro or **M1** 60500 × 0.9875 (=59743.75) **M1** "59743.75" / 0.805
4	(a)	7¼	1	
	(b)	Bars labelled correctly Bars same width Heights all correct	1 1 3	– 1 eeoo
5		67464	5	**M1** 60 000 × 1.035 (= 62 100) **M2** *their* 62 100 × $(1.028)^3$ (= 67 463.8 …) or **M1** 1.028^k where k ≠ 3 If done in stages **M2** for 62 100 × 1.028 (= 63 838.80) ×1.028 (= 65 626.28 …) × 1.028 or **M1** for any other number of years **A1** 67 463.n … (n ⩾ 5) **B1** ft as in Q1 but to nearest **AG**

6	**(a)**	624	3	**M1** 6500 × 0.12 (= 780) **M1** × 0.8 or **M1** 6500 × 0.8 (= 5200) **M1** "5200" × 0.12 or **M1** 0.8 × 12/100 (= 0.096) **M1** × 6500
	(b)	8000	4	**B1** 102.25 **M1** ÷102.25 **M1** ÷ 0 **AG**
7		1339.50	5	**M1** 0.32/100 × 350000 (= 1120) **B1** (contents) 290 **M1** "1120" + "290" (= 1410) **M1** *their* 1410 × 0.95 or **M2** 1120 × 0.95 + 290 × 0.95 or **M1** either term
8	**(a)**	484 cao	3	**M1** 21.8 × 1000 (= 21 800) **M1** figs 218 ÷ 45 (= 484.44) or **M1** 45 ÷ 1000 (= 0.045) **M1** 21.8 ÷ figs 45 (= 484.44)
	(b)	88	2	**M1** (a) / 550 × 100 or 21 780 / 24750 × 100 **AG**
9	**(a)**	38	3	**M2** ∑ hours / 6 or **M1** ∑ hours (= 228)
	(b)	346.50	5	**M1** 35 × 8.80 (=308) **M1** 1.25 × 8.80 (= 11) **M1** their (11 × 3½) (= 38.50) **M1** their 308 + their 38.50 or **M1** 38.5 × 8.80 (= 338.80) **M1** 0.25 × 8.80 (= 2.20) **M1** 3.5 × 2.20 (= 7.70) **M1** their 338.80 + their 7.70
	(c)	7.5	3	**M1** 24 200 – 21 500 (= 2700) dep **M1** their 2700 ÷ 36 000 ×100 on subtraction
10	**(a)**	$606.06	3	**M1** 0.74 × 840 (= 621.60) **M1** 0.975 × their 621.60 or **M1** 0.975 × 840 (= 819) **M1** for "819" × 0.74
	(b)	22.10	5	**M1** 740 – their (a) **M1** ÷ their (a) **M1** × 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** × 8050 or **M1** 8050/7 = (1150) **M1** 1150 × 4 **AG**
	(b)	14 950	3	**M1** (a)/2 **M1** adding their 3 values or **M1** 8050/7 **M1** × 13 or **M1** (a)/4 **M1** × 13

Section B			
12 (a) (i)	24 000	1	
(ii)	25	3	**M1** rise/run **M1** × 100
(b) (i)	4 h 45 m	2	**M1** 380/80 (= 4.75)
(ii)	12:20 (pm)	2	**M1** 0735 + *their* 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/ their $4\frac{5}{12}$
13 (a)	3200	3	Accept 3100 – 3300 **B1** 4800 (accept 4700 – 4900) **M1** 8000 – *their* 4800
(b)	42.9	4	**B1** 5600 (accept 5500 – 5700) **M1** 8000 – *their* 5600 (= 2400) **M1** *their* 2400/*their*5600 × 100
(c)	1343.75	2	**M1** 172/160 × 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** × 26 **A1** 3.32 … or **M1** 26/360 **M1** × 46 **B1** ft as in Q1 (b)(i) to 2sf
(c) (i)	79.2	3	**M1** 22/100 **M1** × 360
(ii)	2.31	3	**M1** 0.22 × 30 (=6.6) **M1** 0.35 × *their* 6.6 or **M1** 0.35 × 30 (= 10.5) **M1** "10.5" × 0.22 or **M1** 0.35 × 0.22 (= 0.077) **M1** "0.077" × 30

15 (a)	6300	6	**M1** 24500 – 3500 (= 21 000) **M1** *their* 21000 × 0.8 (=16 800) **M1** ∑ shareholdings (= 2240) **M1** 840/ (their 2240) **M1** × "16 800"
(b)	18 750	4	**B1** 21 000 **M1** *their* 21 000 ÷ 112 **M1** × 100
(c)	530	2	**M1** or arranging values in order 400 450 530 530 580 640 660