Cambridge International Examinations
Cambridge Ordinary Level

COMMERCIAL STUDIES **7101/21**

Paper 2 Arithmetic **October/November 2016**

MARK SCHEME

Maximum Mark: 100

Published

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 is publishing the mark schemes for the October/November 2016 series for most Cambridge IGCSE®, Cambridge International A and AS Level components and some Cambridge O Level components.

1	**(a)**	– 20.3	2	**M1** 6.9 – 27.2
	(b)	37.97	2	**B1** 37.971
	(c)	0.0141	2	**B1** 0.1409...or **B1** for rounding their > 4 fig ans to 3 sf
2	**(a)**	9680	3	**M1** 60500 × 5 **M1** × 3.2/100
	(b)	30470.89	4	**M1** 28900 × 1.78/100 (= 29414.42) **M1** 29414.42 × 1.78/100 (= 29937.99668) **M1** 29937.99668 × 1.78/100 or **M3** $28900(1 + 1.78/100)^3$
3	**(a)**	32p	2	Allow £0.32 **M1** 2080 ÷ 6500
	(b)	0.83	1	
	(c)	1726.40	2	**M1** 2080 × 0.83 allow 1726
4	**(a)**	12306.25	4	**M1** 9500 × 0.8 **A1** 7600 **M1** *their* 7600 × 0.97
	(b)	417.10	6	**M1** 38 × 8.60 (=326.80) **M1** 45 – 38 (=7) then either **M1** 8.60 × 1½ (=12.90) **M1** 1½ × 7 **M1** 7 × 12.90 (=90.30) **M1** "10.5" × 8.60 **M1** "326.80" + "90.30" **M1** "326.8" + "90.3"
5			5	**B1** Bars equal width **M1** Bars labelled correctly **M3** All heights correct (–1 eeoo)
6		45.5	8	Allow 45h.30min oe (not 45.3) **M1** 4 × 8.5 (=34) **M1** 1 × 5.5 for Thurs **M1** 1 × 4 **M1** 1 × 2 **A2** for 4 correct subtotals (–1 eeo) **M1** Adding their subtotals
7		27.5	7	**M1** 740 × 1.125 (=832.50) **M1** 15.50 × 5 (=77.50) **M1** "832.50" + "77.50" + 10 (=920) **M1** 1173 – *their* 920 **A1** 253 **M1** *their* 253 ÷ 920 × 100
8		68.50	5	**M1** 0.125 × 580 (=72.50) **M1** 12 × 48 (= 576) **M1** "72.50" + "576" (=648.50) **M1** "648.50" – 580
9	**(a)**	1146	3	**M1** 20000 ÷ 17.45 **A1** 1146.13 **B1** Rounding their value correct to nearest £
	(b)	272	4	**B1** 68 **M1** 0.75 × 68 (= 51) **M1** 68 + 4 × *their* 51 or **M1** 0.75 × 4 × 68 (=204) **M1** 68 + "204"

10 **(a)**	50 or $0.50	4	**M1** 16 + 10 + 1 (= 27) **M1** 135 ÷ 27 (= 5) **M1** 10 × 5
(b)	51.25 cents	3	**M2** 58 × 164/185.6 or **M1** 164 ÷ 185.6 **depM1** × 58
11 **(a)**	660	2	**M1** 0.3/100 × 220000
(b)	60	2	**M1** 0.12/100 × 50000
(c)	54.72	5	**M1** (a) + (b) (=720) **M1** *their* 720 × 0.95 (=684) **M1** "684" × 0.96 (=656.64) **M1** *their* 656.64 / 12
	Section B		
12 **(a)**	300	3	**M1** $83\frac{1}{3}$ ÷ 100 **M1** × 360
(b)	382500	3	**M1** 51000 ÷ $13\frac{1}{3}$ **M1** × 100
(c)	6	3	**M1** 0.015 ÷ 100 **M1** × 40000
(d)	22900	3	**M1** ∑ values (=137400) **M1** ÷ 6
13 **(a)**	16.5	5	**M1** 150 × 90 (=13500) **M1** 75000 +52000 + *their* 13500 (= 140500) **M1** 157000 – "140500" (= 16500) **M1** "16500" ÷ 1000
(b)	65000	2	**M1** 52000 ÷ 0.8
(c)	11.04	5	**M1** 896 ÷ 640 **A1** 1.4 **A1** 1hr 24 min **M1** 09.40 + 1.24
14 **(a)**	August	1	
(b)	77.27(27...) ft	6	**M1** Dec value 15.5 – 15.7 **M1** Jul value 8.7 – 8.9 **M1** "15.6" – "8.6" (=6.8) **M1** *their* 6.8 ÷ *their* 8.8 **M1** × 100
(c)	4032.60	5	**M1** 7.20 × 0.99 (=7.128) **M1** 13.20 × 1.01 (= 13.332) **M1** 13.332 – 7.128 (= 6.204) **M1** × 650
15 **(a)**	24620	4	**M1** 0.0525 **M1** × 88000 (=4620) **M1** + 20000
(b)	19220	8	**M1** 1800 × 12 (=21600) **M1** 21600 – 8500 (=13100) **M1** 3000 × 0.12 (=360) **M1** 13100 – 3000 (=10100) **M1** 10100 × 0.2 (=2020) **M1** 2020 + 360 (=2380) **M1** 21600 – 2380