

**MARK SCHEME for the October/November 2010 question paper
for the guidance of teachers**

7101 COMMERCIAL STUDIES

7101/02

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 must be read in conjunction with the question papers and the report on the examination.

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Page 2	Mark Scheme: Teachers' version	Syllabus	Paper
	GCE O LEVEL – October/November 2010	7101	02

1	(a) 255.5	3	M1 17.5 or 14 3/5 M1 14.6 × 17.5 oe
	(b) 44	3	M1 5 × 8 M1 +4
	(c) 33.3	3	M1 × 1 000 M1 /3 600
2	(a) 0.4 or $\frac{2}{5}$	3	B1 76 M1 67 – their 76 + 11 or 2
	(b) (i) 23.45	1	
	(ii) 23 450 000	2	M1 × 1 000 000
(c) 24	3	M (3/8(0)) × figs 64 A1 0.24 M1 $\sqrt{\quad}$ × 100 to answer or B1 640 M1 (3/8(0)) × 640	
3	(a) (i) $\frac{9}{40}$ cao	1	
	(ii) 22.5	2	M1 (i) × 100
	(b) 11	3	M1 60 × 75 M1 6.5 + “4 500” /1 000 (or M1 4 500 + 6 500) M1 ÷1 000)
(c) 0.8462 cao	2	M1 0.846(1538...)	
4	(a) 990	2	M1 960 × 198/192
	(b) 205	2	M1 1 025 × 192/960 or 1025 × (198/(a))
	(c) 6.77	4	M1 1 025 – 960 A1 65 M1 /960 (or M1 1 025/960 M1 ×100 M1 -100)
	(d) 1 120	6	M1 200 000 × ½ / 100 A1 1 000 M1 2.5 × 40 A1 100 M1 + 20
5	(a) (i) 28 cao	1	
	(ii) 29	2	M1 finding 13 th element
	(iii) 29.48	5	M1 ×f M1 \sum × f A1 737 M1 /25
(b) 56	4	M1 11 + 3 M1 / 25 M1 × 100	

Page 3	Mark Scheme: Teachers' version	Syllabus	Paper
	GCE O LEVEL – October/November 2010	7101	02

6	(a) 7 626	3	M1 $12\,300 \times 0.38$ M1 $12\,300 - "4\,674"$ (or M2 $12\,300 \times 0.62$)
	(b) 4 204.73	5	M1 $"7\,626" \times 0.82$ A1 6 253.32 M1 $\times 0.82$ (= 5 127.72) M1 $\times 0.82$ (or M3 $7\,626 \times 0.82^3$)
	(c) 1 140	4	M1 $9\,300 \times 1.2$ A1 11 160 M1 – from 12 300
7	(a) 76.40	4	M1 260×0.14 M1 12×25 M1 $"336.40" - 260$
	(b) 306.80	3	M1 $(260 \times 6 \times 3)/100$ A1 46.80
	(c) 10.30	2	M1 $"46.80" \times 0.22$
	(d) 156	3	M1 260×0.4 M1 $260 - "104"$ or SC1 104 (or M2 260×0.6)

Page 4	Mark Scheme: Teachers' version	Syllabus	Paper
	GCE O LEVEL – October/November 2010	7101	02

Section B

8	(a) 19 920	7	M1 85 600 - 19 200 A1 66 400 M1 "66 400" × 0.8 A1 53 120 M1 "53 120" / 80 M1 "664" × 30 oe
	(b) (i) 2 552	2	M1 63 800 × 4/100
	(ii) 125 000	3	M1 c × 4/100 = 5 000 M1 5 000 / 0.04
9	(a) 176 (nearest whole number)	5	M1 150 × 1.20 A1 180 M1 "180" × 0.98 A1 176.40 B1 √ correctly
	(b) 16 700 (3sf required)	7	M1 380 - 140 M1 "240" / 1.20 A1 200 M1 "200" - 2 M1 "198" × 84.1 (or M1 200 × 84.1 M1 subtract 2 × 84.1) A1 16 651.8 B1 √ to 3sf
10	(a) (i)	4	P3 all 6 plots correct (P2 for 4 or P1 for 2) C1 smooth curve through all their points
	(ii) 8 000 to 8 500	2	M1 projecting curve back to year 0 (but not 7 000)
	(iii) 12 700 to 12 900	1	
	(b) 29 439.59	5	M1 1.056 M1 25 000 × "1.056" (26 400) M1 × "1.056" (27 878.40) M1 × "1.056" or M4 25 000 (1.056) ³
11	(a) 52 www	6	M1 80 × 1.9 M1 "152" × 0.8 M1 "121.60" - 80 M1 "41.60" / 80 M1 "0.52" × 100
	(b) 50	6	M1 64.60 / 0.85 A1 76 M1 "76" / 0.8 A1 95 M1 "95" / 1.9