

COMMERCIAL ARITHMETIC MARKING SCHEME

a) DISCOUNTS, PROFIT AND LOSS

1.	$\frac{100 \times 180}{90} = \text{sh } 200$ $\frac{100 \times 180}{120} = \text{sh } 150$ Profit \rightarrow sh 200 - sh.150 $= \text{sh } 50$ $\frac{50 \times 100}{150}$ $= 33\frac{1}{3}\%$ <p style="text-align: right;">1990Q6</p>	3M
2.	$125 \times 3750 = 4687.5$ $\frac{100}{20} \times 3750 = 750$ $4687.5 + 750 = 5437.5$ $5437.5 + 3750 = 9187.5$ $\frac{110 \times 9187.5}{100}$ $= \text{Sh. } 10,106.25$ <p style="text-align: right;">1990Q24</p>	8M
3.	$700 \rightarrow 70\%$ Marked price $\rightarrow \frac{100 \times 700}{70}$ Profit $\rightarrow 1150 - 1000 = 150$ $= \text{Sh}150$ <p style="text-align: right;">1991Q2</p>	3M
4.	Let the buying price be x Profit = (1040-x) Loss = (x-880) $1040 - x = 3(x - 880)$ $4x = 3680$ $x = \text{Shs. } 920$ <p style="text-align: right;">1997Q12</p>	B1 M1 A1 3 marks

5	Trade B.P = $\frac{84 \times 100}{102}$ $= 70$ b) Cost of manufacturers $= 70 \times \frac{100}{140} = 50$ <p style="text-align: right;">1998Q7</p>	M1
6.	Kshs (4320 + 3260 + 2080) 9660 total bill = $9660 \times \frac{115}{100}$ $= 11109$ (long mult) or 11110 (table) <p style="text-align: right;">2001Q6</p>	
7.	Selling price = $\frac{87}{100} \times 800 = 696$ $\frac{100}{120} \times 696 = 580.$ <p style="text-align: right;">2003Q2</p>	M1 M1 A1 3 marks
8.	$\frac{92}{100} \times 400,000 \times \frac{100}{115}$ $= \text{shs. } 320,000$ <p style="text-align: right;">2004Q2</p>	M1 A1
9.	$\frac{98x}{100} = 5880$ $\text{sh } \frac{5880}{98} \times 100 = 6000$ $= \frac{120x}{100} = 6000$ $\text{Sh. } \frac{6000}{120} \times 100 = \text{sh. } 5000$ <p style="text-align: right;">2011Q11</p>	M1 M1 $\frac{A1}{3}$

b) EXCHANGE RATES

1.	$\frac{15}{100} \times 98489 \times 12,000$ $= \text{Ksh } 17,728.00$ <p style="text-align: right;">1990Q6</p>	3M
2.	100000×28.74 $= \text{ksh. } 2,874,000$ $\frac{100000}{1.79} \times 50.80$ $= \text{ksh. } 2,837,988.70$ $2,874,000 - 2,837,988.70$ $= \text{In UK is cheaper by ksh } 36,011.30$ <p style="text-align: right;">1993Q6</p>	4M
3.	$\text{Cost of car} = 5000 \times 105$ $= 525000 \text{yen}$ $\frac{20}{100} \times 525000$ $= 10500 \text{yen}$ $525000 + 10500 \times 80325$ $= 710,325 \text{ yen}$ $\frac{710,325}{105} = 676545 \text{ dollars}$ 6765×63 $= \text{Sh. } 426,195$ <p style="text-align: right;">1994Q11</p>	3M
4.	$\text{Ksh . bought} = 98 \times 84 = 77112$ $\text{£ bought} = \left\{ \frac{9.18 \times 84}{85} \right\} = \text{£ } 907.2$ $\text{£ lost} = \text{£}918 - \text{£}907.2 = \text{£}10$ <p style="text-align: right;">1996Q4</p>	M1 M1 A1 3marks
5.	$\text{No of yen ; } 30000$ 0.5446 $= 55086$ <p style="text-align: right;">1997Q3</p>	M1 A1 2 marks
6.	$\text{Sh. to £} = \frac{50,000}{102} = 4902$ $\text{£ to \$} = \frac{50,000}{102} \times 1.7 = 8.333$ $\text{£ to sh.} = \frac{50,000}{102} \times 1.7 \times 60.6$ $= 505,000$ <p style="text-align: right;">1998Q6</p>	M1 M1 M1 A1 4marks

7.	<p>a) Swiss francs</p> $52 / 1.28 = 40.63$ <p>b) Kshs. 40.63×45.21</p> $= 1837.$ <p style="text-align: right;">2002Q7</p>	
8.	$\text{Euros to Kshs} = 84.15 \times 500$ $= 420 750$ $\text{Balance in Kshs} = 420750 - 289850$ $= 130900$ $\text{Balance in Japan yen}$ $= \frac{130900 \times 100}{65.45}$ $= 200 000$ <p style="text-align: right;">2004Q14</p>	M1 M1 M1 A1
9.	10500×9.74 $\text{Shs } 1022700$ $1022700 - 403879 = 618821$ $\frac{12.11}{12.11}$ $= 51000 \text{ rands}$ <p style="text-align: right;">2006Q7</p>	M1 M1 A1 3 marks
10.	2950000 118 $\text{US dollar } 25,000$ $\text{Duty paid} = 25,000 \times 20/100 \times 76$ $\text{Shs} = 380,000$ <p style="text-align: right;">2007Q4</p>	M1 M1 A1
11.	<p>a) sh $77.24 \times 100,000$</p> $= \text{sh } 7,724,00$ <p>b) Sh $77.24 \times 100 000$</p> $= 63172$ 122.27 <p style="text-align: right;">2010 Q6</p>	M1 A1 M1 A1 4
12. (a)	$19250 \text{ Chinese Yuan into Kenyan Shillings}$ $= 19250 \times 12.34 = 2409385$	B1
(b)	Balance: $= 2409385 - 1258000$ $= 1151385$ $\text{Balance in S.A. Rand}$ $= 1151385$ $\frac{11.37}{11.37}$ $= 101265$ <p style="text-align: right;">2012Q14</p>	M1 M1 A1 4

c) COMMISSIONS

1.	$(a) 15000 \times \frac{15}{100} = \text{sh } 750$ $25000 \times \frac{2.5}{100} = \text{sh } 625$ $25,000 \times \frac{2}{100} = \text{sh } 500$ $750 + 625 + 500$ $= \text{sh } 1,875$ <p>(b) $1875 + \text{sh } 1,500$ sh,3,375</p> <p style="text-align: right;">1989Q10</p>	4M
2.	<p>Selling price $\frac{115}{100} \times 80,000$</p> <p>Sh $\frac{92}{100} \times 92,000$</p> <p>= Sh.84,640</p>	3M
3.	<p>(a) $21000 \times 48 - 560000$ $10080000 - 560000$</p> <p>(b) $448000 - \frac{560,000 \times R \times 4}{100}$</p> $R = \frac{448000 \times 100}{560000 \times 4}$ $= 20\%$ <p style="text-align: right;">1996Q7</p>	M1 A1 M1 A1 4marks
4.	$17500 \times \frac{95}{5} = 33,2500$ <p style="text-align: right;">1996Q9</p>	M1 A1 2marks
5.	<p>Commission = $\frac{2.4}{100} \times 100,000 + \frac{3.9}{100} \times 180,000$</p> <p>$2400 + 70.20$</p> <p>Sh.5100 = sh 9420</p> <p style="text-align: right;">1998Q5</p>	M1
6.	<p>a). premium = $\text{shs.} 6750 \times \frac{100}{4.5}$ = 150000</p> <p>b). amount earned = $\frac{1}{3} \times 4.5 \times 150000$ or $\frac{6750}{100} \times \frac{2.3}{100} \times 90.100$ = shs. 2025</p> <p style="text-align: right;">1999Q5</p>	B1 A1

7.	<p>(a) total sales = sh 360 x 500 = sh.180,000</p> <p>Commission = sh(180,000 - 100,000) x $\frac{2}{3}$ = 13600</p> <p>(b) (i) New salary = sh.(12000 + 12000 x $\frac{10}{100}$) = sh. 13200</p> <p>Commission paid = sh(17,600 - 13,200) = sh.4400</p> <p>Commission is paid on sh.4400 x $\frac{100}{2}$ = 220,000</p> <p>Total sales = sh.220,000 + 100,000 = 320,000/=</p> <p>(ii) no of handbags sold = $\frac{320,000}{500} = 640$</p> <p style="text-align: right;">2010Q17</p>	
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