Question Number	Scheme	Marks
4.	$6(1-\cos^2 x)-\cos x-4=0$ $6\cos^2 x+\cos x-2=0$ $(3\cos x+2)(2\cos x-1)=0$ $(\cos x=-\frac{2}{3})$ or $\cos x=\frac{1}{2}$ $x=-60$ or $x=60$	M1 A1 M1 A1 A1 A1 (6)

Notes

Question 4

M1 for using $\cos^2 x + \sin^2 x = 1$ to achieve an equation in terms of cos x only. (=0 not required for this mark)

A1 for forming the correct 3TQ

M1 for solving their 3TQ as far as cos x = …….(usual rules for an attempt) Their quadratic need not = 0 at this stage

A1 $\cos x = \frac{1}{2}$, ($\cos x = -\frac{2}{3}$ – this need not be seen)

A1 for either value of $x =$ 60 , $x =$ 60

A1 for both values $x =$ 60 $x =$ 60

If other values are given, ignore if not in range. Deduct one A mark for each extra value that is in range, up to a maximum of the last two A marks.