

Books, watches, notes or cell phones are **not** allowed. The **only** calculators allowed are the Sharp EL-531** . You **must** show all your work, the correct answer is worth 1 mark the remaining marks are given for the work.

Question 1. (5 marks) Only using cofactor expansions evaluate

$$\begin{vmatrix} 3 & 0 & 4 & -6 \\ 2 & 7 & -1 & 1 \\ -4 & 1 & -6 & 8 \\ -2 & 0 & 4 & 4 \end{vmatrix}$$

Question 2. (5 marks) Evaluate $\begin{vmatrix} a-5g & -a+2d & -3g \\ b-5h & -b+2e & -3h \\ c-5i & -c+2f & -3i \end{vmatrix}$, if we know $\begin{vmatrix} a & b & c \\ d & e & f \\ g & h & i \end{vmatrix} = -4$