Step-1

a) Given statement

"The determinant of $S^{-1}AS$ equals to determinant of A" is **true**.

Reason: $\det\left(S^{-1}AS\right) = \det\left(S^{-1}\right)\det A \det S$

$$= \frac{1}{\det S}.\det A.\det S$$
$$= \det A$$

Is always true for any non singular matrix S

Thus, the determinant of $S^{-1}AS$ is same as the determinant of A

Step-2

b) Given statement

"If $\det A = 0$ then atleast on the cofactors must be zero" is **false**

Consider $A = \begin{bmatrix} 1 & 1 \\ 1 & 1 \end{bmatrix}$ so that $\det A = 0$

But the cofactors of all the elements of A are either 1 or "1

Hence the given statement is false.

Step-3

c) Given statement

"A matrix whose entries are os and 1s has determinant $1, 0,$ or -1" Is **false**

Reason: The determinant of a matrix whose entries are os and 1s need not always be $1, 0,$ or -1

Consider $A = \begin{vmatrix} 1 & 0 & 1 \\ 0 & 1 & 1 \\ 1 & 1 & 0 \end{vmatrix}$

Step-4

$$\det A = \begin{vmatrix} 1 & 1 \\ 1 & 0 \end{vmatrix} - 0\begin{vmatrix} 0 & 1 \\ 1 & 0 \end{vmatrix} + 1\begin{vmatrix} 0 & 1 \\ 1 & 1 \end{vmatrix}$$

$$= -1 - 1$$
$$= -2$$
$$\neq 0, 1, -1$$

Hence the given statement is false.