Which of the following compounds or ions are aromatic and which are non-aromatic? Why?

Remember the two rules for aromaticity are:

1. A cyclic pi system (p orbitals) exist and
2. The number of pi electrons must meet the Hückel rule of \(4n+2\) where \(n\) are integers including 0. Therefore, the allowed number of pi electrons are 2, 6, 10, 14, 18, 22, 26, ....etc.

Only if it meets both 1 and 2, it is aromatic.

Each has 6 pi electrons in pi system. See below.