List the common causes of metabolic acidosis and respiratory acidosis, metabolic alkalosis and respiratory alkalosis

**Metabolic acidosis**
Bicarbonate loss or hydrogen gain:
- Bicarbonate loss through renal or GI tract (diarrhoea)
- Hydrogen increase through toxic substances and lactic acid
  ➢ This is compensated via hyperventilation, breathing off CO2

**Respiratory acidosis**
Respiratory acidosis can be caused by conditions and diseases that decreases the amount of CO2 expelled by the body (thinking resp. rate and depth)
- Gas exchange conditions
  - COPD chronic obstructive pulmonary disease
  - CORD chronic obstructive respiratory disease
  - COAD chronic obstructive airway disease
  - Pneumonia
- Inhibition of respiratory centres due to drug induced hypoventilation and opiates
- Muscle diseases such as myasthenia gravis and Guillain-Barre
  ➢ This is compensated through renal retention of bicarbonate and excretion of acid salts

**Metabolic alkalosis**
When there is too much H+ lost or there is too much bicarbonate retained therefore the body becomes too alkali.
- Net loss of H+ from ECF
  - Vomiting
  - Renal loss due to diuretics
- Retention of bicarbonate due to the excess administration of bicarbonate
  ➢ This is compensated through hypoventilation

**Respiratory alkalosis**
This is due to conditions where too much CO2 is being breathed off, or expelled
- Hyperventilation (emotional causes)
- Head trauma that increases resp. rate
- Excessive mechanical ventilation
  ➢ This is compensated through renal excretion of bicarbonate, or the retention of acid salts.