Q2. **Consider the following reaction:**

$x\text{MnO}_4^- + y\text{C}_2\text{O}_4^{2-} + z\text{H}^+ \rightarrow x\text{Mn}^{2+} + 2y\text{CO}_2 + (z/2)\text{H}_2\text{O}$
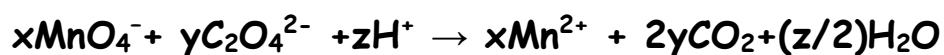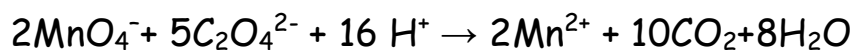
The values of x, y and z in the reaction are respectively :-

(1) 5, 2 and 16

(2) 2, 5 and 8

(3) 2, 5 and 16

(4) 5, 2 and 8

Solution:

The balanced equation is given below.

$2\text{MnO}_4^- + 5\text{C}_2\text{O}_4^{2-} + 16\,\text{H}^+ \rightarrow 2\text{Mn}^{2+} + 10\text{CO}_2 + 8\text{H}_2\text{O}$

The values of x, y and z are 2, 5 and 16, respectively.

Hence _**option (3)**_ is the answer.