

→ Isomorphic Graph:

Def: The graph $G_1 = (V_1, E_1)$ and $G_2 = (V_2, E_2)$ are called isomorphic if there is one-to-one & onto function from V_1 to V_2 with the property that 'a' & 'b' are adjacent in G_1 if and only if $f(a)$ and $f(b)$ are adjacent in G_2 , for all 'a' and 'b' in V_1 .

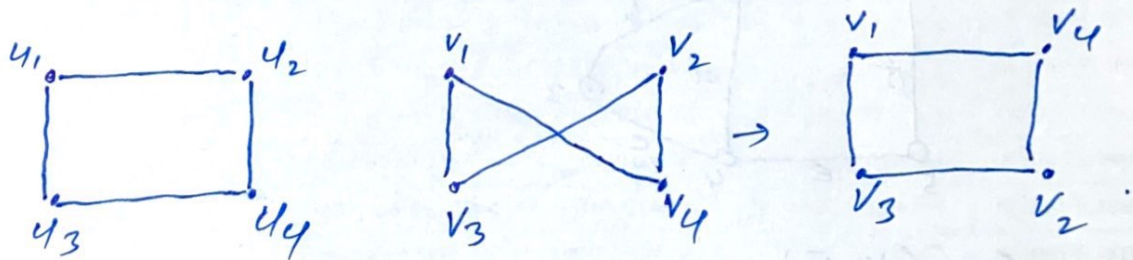
Properties:

Same no. of vertices.

Same no. of edges.

Equal no. of vertices with given degree.

Q:



$f(u_1) = v_1$, $f(u_2) = v_4$ one-to-one
 $f(u_3) = v_3$, $f(u_4) = v_2$ func map-
ping.

$$(u_1, u_2) \cong (v_1, v_4) \checkmark$$

$$(u_1, u_3) \cong (v_1, v_3) \checkmark$$

$$(u_3, u_4) \cong (v_3, v_2) \checkmark$$

$$(u_4, u_2) \cong (v_2, v_4) \checkmark$$