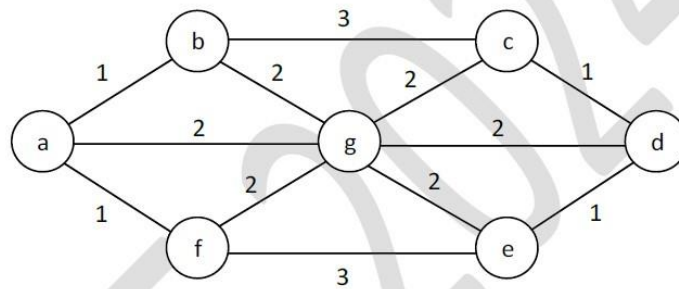Q.34   The number of spanning trees in a *complete* graph of 4 vertices labelled A, B, C, and D is _____

Ans: **Number of labelled spanning trees is $4^{(4-2)} = 16$ (using Cayley's Formula.)**

Q.59   The number of distinct minimum-weight spanning trees of the following graph is _____

Ans:

$$n(G) = 7$$
$$e(G) = 12$$
$$n(MST) = 7$$
$$e(MST) = 7 - 1 = 6$$

We need to remove both the edges *bc* and *fe*. (Edges with maximum weight).

We need to remove 2 edges from {*bg, ag, fg*}. (3 ways)

We need to remove 2 edges from {*cg, dg, eg*}. (3 ways)

∴ Total number of MST= $3 \times 3 = 9$