Graph Theory Key Terms Match-Up

1	2	3	4	5	6
Weighted Graph	Subgraph	Degree / Valency / Order	Walk	Path	Trail

7	8	9	10	11	12
Loop	Cycle	Hamiltonian Cycle	Simple Graph	Digraph	Handshake Lemma

A	A walk with no repeated vertices.
B	The number of edges incident to a node.
C	An edge that starts and end at the same vertex.
D	A graph formed from a subset of vertices and edges of another graph.
E	A closed path – starts and ends at the same vertex with no other repeats.
F	A graph with at least one direction on an edge.

G	In an undirected graph, the total of the order of vertices is $2 \times$ the number of edges. Therefore, the number of odd nodes must be even.
H	A cycle that visits every node exactly once.
I	A graph in which edges have values associated with them.
J	A graph with no loops, and no multiple edges between vertices.
K	A sequence of edges and vertices with repetition allowed.
L	A walk with no repeated edges.

Answer Box

1	2	3	4	5	6
I	D	B	K	A	L

7	8	9	10	11	12
C	E	H	J	F	G