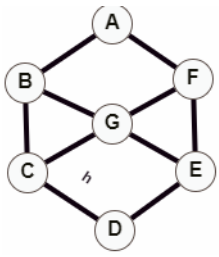
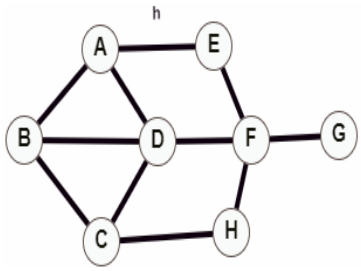
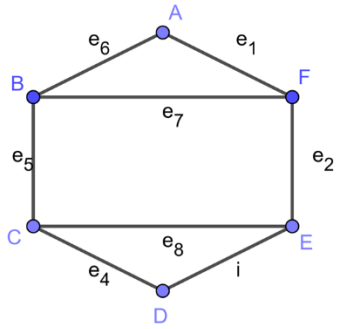
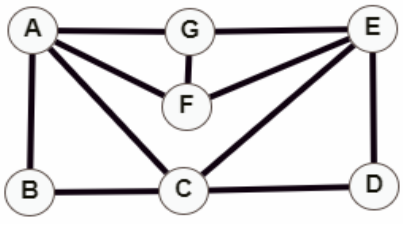
Subject: DM **SEM: 04** **AY: 2024-25**

Tutorial-2
Unit: Graphs & Trees

1	For each of the given Graph G, draw diagram of subgraphs G-{A}, G-{F}, G-{h}. 1]  2]  	Evaluate
2	Find the number of edges in a r-regular graph with n-vertices.	Evaluate
3	Define 1) Open Walk 2) Closed Walk 3) Circuit 4) Trail 5) Path 6) Cycle	Remembering
4	Evaluate 3 walks, 3 paths and 3 cycles for the following graph.  	
5	Does a 3-regular graph with 5 vertices exists?	Evaluate
6	Define (1) Hamiltonian Graph (2) Euler Graph (3) Petersen graph.	Remembering
7	Check the following are Hamiltonian graph or not. 1]  	Understanding

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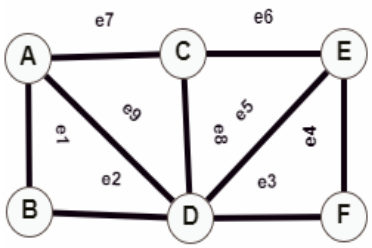
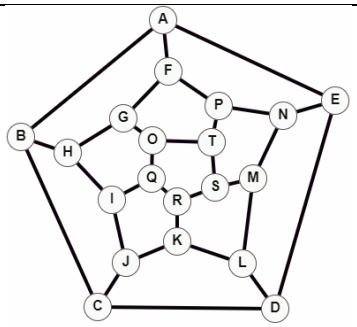
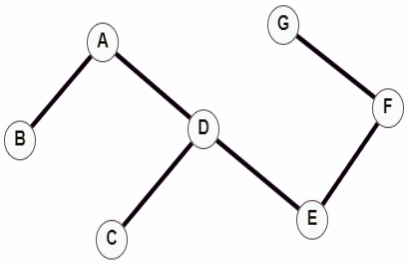
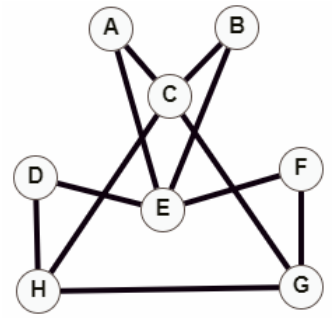
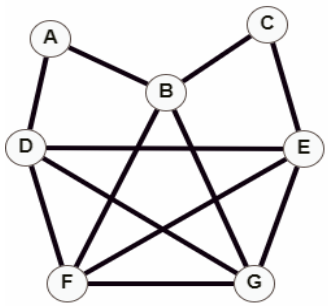
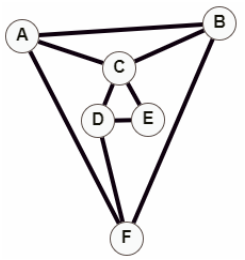
Unit: Graphs & Trees

	2]  **8**3]  4] 	
8	Is the graph Eulerian? Explain your answers. Also check for Hamiltonian graph? 1]  2] 	Understanding
9	What is Petersen graph? Is the graph Hamiltonian? Is it Eulerian? Explain your answers.	Understanding
10	Is the graph Hamiltonian? If no, why not? If yes, find all Hamiltonian cycles. 	Understanding