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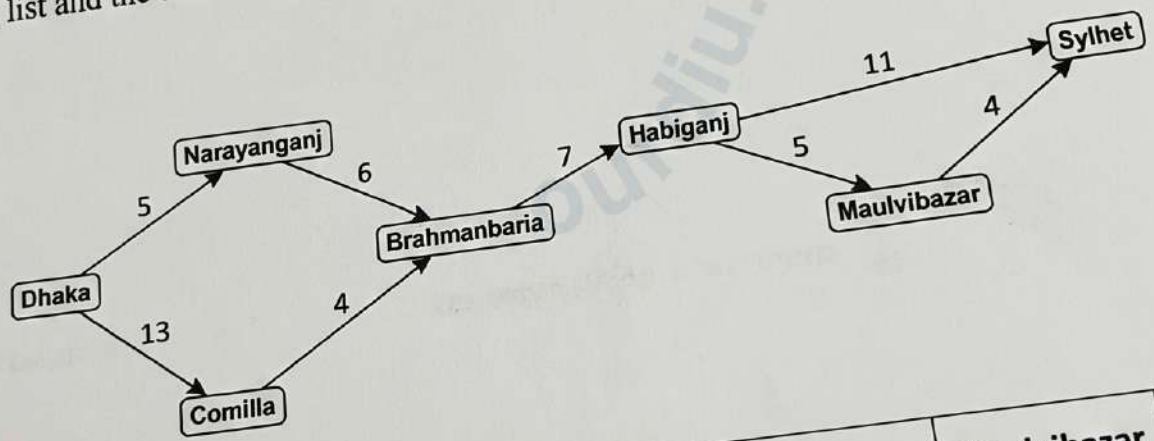
Daffodil International University
Faculty of Science & Information Technology
Department of Software Engineering
Quiz-1, Summer-2026
Course Code: SE 333; Course: Artificial Intelligence
Teacher: NAJ

Time: 30 minutes

Marks: 15

Set-B

Consider the directed graph below showing the road network between districts of Bangladesh. Each edge shows the distance between two locations and each node has a heuristic, h(n), estimating the remaining distance to the goal. Using the A* Search Algorithm, find the shortest path from Dhaka to Sylhet. Show the open list and the calculation of f = g + h at each step, then state the final path and its total cost.



h(n) values:

Node	Dhaka	Narayanganj	Comilla	Brahmanbaria	Habiganj	Maulvibazar	Sylhet (Goal)
h(n)	25	20	18	14	8	3	0