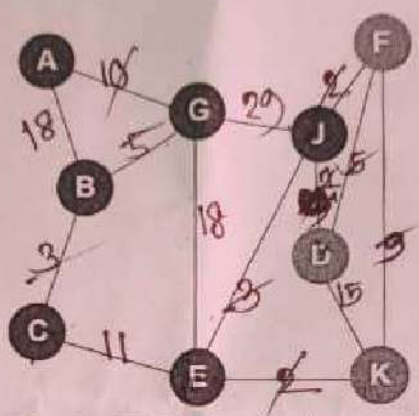
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Class Test (3) Examination: Summer-2026
Course Code: CIS 132
Course Title: Algorithms
Date: 10/08/2026
Section: 23_B

Time: 30 Minutes **Total Marks: 15**

1.	 a) Perform Depth-First Search (DFS) starting from node A and write the traversal order. b) Apply Kruskal's Algorithm to construct the MST. Show edge sorting and selection process.	[10]
2.	*An e-commerce warehouse needs to deliver customer orders using delivery vans. Each van has a maximum carrying capacity of **100 kg**. The warehouse receives the following packages:* ***Weights (kg): 60, 45, 40, 30, 25*** a) Calculate the **Lower Bound (LB)** on the minimum number of delivery vans required. b) Apply the **First Fit (FF)** algorithm to allocate the packages into delivery vans. Show each allocation step. c) Apply the **First Fit Decreasing (FFD)** algorithm to allocate the packages into delivery vans. Show the sorting process and each allocation step. d) Compare the results obtained from **Lower Bound, First Fit**, and **First Fit Decreasing**. Which algorithm provides the better solution for this scenario?	[5]