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School of University Polytechnic

Diploma in Computer Science and Engineering

Mid Term Examination - May 2024

Duration : 90 Minutes

Max Marks : 50

Sem IV - N1DF407B - Data Structure Using CGeneral Instructions*Answer to the specific question asked**Draw neat, labelled diagrams wherever necessary**Approved data hand books are allowed subject to verification by the Invigilator*

- 1) Explain how linked list operations will perform if a given linked list is circular. K2 (2)
- 2) Define a doubly linkedlist with an example. K1 (3)
- 3) Explain the process of inserting a new node at the beginning of a singly linked list with an example. K2 (4)
- 4) Explain the operations of singly linked lists K2 (6)
- 5) Illustrate the various asymptotic notations used in algorithm design. K3 (6)
- 6) Illustrate the different types of data structure. K3 (9)
- 7) Analyze and explain the algorithm for create, insertion operations in circular linked list with example. K4 (8)
- 8) Analyze and explain the algorithm to insert a node at beginning in singly linked list with example. K4 (12)

OR

Analyze and explain the algorithm to insert a node at end in singly linked list with example K4 (12)