

Time: 1.5 Hours**Marks: 25**

[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]

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	<ul style="list-style-type: none"> • Provide appropriate output for sample inputs. <p>(Full correct implementation: 8 marks, Partial correctness: 5-6 marks, Minor issues: 3-4 marks)</p>		
3.	<p>Problem Solving (Analysis & Synthesis Level)</p> <p>Problem Scenario: A printer management system requires efficient handling of print jobs. Each print job has a priority value. The system should process:</p> <ul style="list-style-type: none"> • High-priority jobs immediately (Stack behavior: LIFO). • Normal jobs in the order they were received (Queue behavior: FIFO). <p>Task:</p> <ol style="list-style-type: none"> 1. Propose a combination of Stack and Queue to design this system. 2. Draw a flowchart or diagram to represent the process. 3. Explain how the system handles multiple job requests with varying priorities. <p>(Solution approach: 3 marks, Diagram: 1 mark, Explanation: 1 mark)</p>	5	CO2

Good Luck