**UNIT III**

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| **Q.No.** | **Question** | **Marks** |
| 1 | What is Transaction? Explain ACID properties of transaction. | 6 |
| 2 | Explain various models of transaction processing monitors. | 10 |
| 3 | Describe in details components of transaction processing monitors. | 8 |
| 4 | Explain lock based protocols of concurrency control in brief | 6 |
| 5 | What is Two-Phase locking protocol? Demonstrate with examples how two-phase locking protocol can be used to ensure serializability. |  |
| 6 | Consider the following two transactions :  ***T34 :***read (A);  read (B);  if *A = 0* then *B := B + 1*;  write (B).  ***T35 :***read (B);  read (A);  if *B = 0* then *A := A + 1*;  write (B).  Add lock and unlock instructions to transactions ***T34 andT35*** so that they observer two-phase locking protocol. Can the execution of these transactions result in a deadlock? | 10 |