

Preparation Questions2

- 1) Briefly explain the importance of 3NF, BCNF and 4NF with a suitable example.
- 2) Explain the ACID properties of transactions.
- 3) Explain Time stamp-Based Concurrency Control protocol?
- 4) Consider a relation schema $R(A, B, C, D, E)$ with a set of FDs $F = \{A \rightarrow B, BC \rightarrow E, ED \rightarrow A\}$
 - (i) List all keys of R
 - (ii) Is R in 3NF
 - (iii) Is R in BCNF
- 5) What is Database recovery system and explain the types of database recovery.
- 6) Explain concurrency control with lock based protocols
- 7) Describe what are the types of Functional Dependency. Why we use Normalization?
- 8) Explain transaction states with a neat diagram.
- 9) A relation $R(A, B, C, D, E)$ with functional dependencies $FD = \{AB \rightarrow C, B \rightarrow D, C \rightarrow E, D \rightarrow A\}$, Find the key from the given Functional dependencies.
- 10) Explain lossless & dependency preserving decomposition
- 11) Discuss on two-phase locking protocol and time stamp- based protocol
- 12) Write about: a) dead lock detection b) dead lock avoidance.