1. The recovery scheme must also provide  
a) High availability  
b) Low availability  
c) High reliability  
d) High durability

Answer: a  
Explanation: It must minimize the time for which the database is not usable after a failure.

2. Which one of the following is a failure to a system  
a) Boot crash  
b) Read failure  
c) Transaction failure  
d) All of the mentioned

Answer: c  
Explanation: Types of system failure are transaction failure, system crash and disk failure.

3. Which of the following belongs to transaction failure  
a) Read error  
b) Boot error  
c) Logical error  
d) All of the mentioned

Answer: c  
Explanation: Types of system transaction failure are logical and system error.

4. The system has entered an undesirable state (for example, deadlock), as a result of which a transaction cannot continue with its normal execution. This is  
a) Read error  
b) Boot error  
c) Logical error  
d) System error

Answer: c  
Explanation: The transaction, can be re-executed at a later time.

5. The transaction can no longer continue with its normal execution because of some internal condition, such as bad input, data not found, overflow, or resource limit exceeded. This is  
a) Read error  
b) Boot error  
c) Logical error  
d) System error

Answer: c  
Explanation: The transaction, can be re-executed at a later time.

6. The assumption that hardware errors and bugs in the software bring the system to a halt, but do not corrupt the nonvolatile storage contents, is known as the  
a) Stop assumption  
b) Fail assumption  
c) Halt assumption  
d) Fail-stop assumption

Answer: d  
Explanation: Well-designed systems have numerous internal checks, at the hardware and the software level, that bring the system to a halt when there is an error. Hence, the fail-stop assumption is a reasonable one.

7. Which kind of failure loses its data in head crash or failure during a transfer operation.  
a) Transaction failure  
b) System crash  
c) Disk failure  
d) All of the mentioned

Answer: c  
Explanation: Copies of the data on other disks, or archival backups on tertiary media, such as DVD or tapes, are used to recover from the failure.

8. The failure occurred sufficiently early during the transfer that the destination block remains intact.  
a) Partial Failure  
b) Total failure  
c) Successful completion  
d) Data transfer failure

Answer: a  
Explanation: Copies of the data on other disks, or archival backups on tertiary media, such as DVD or tapes, are used to recover from the failure.

9. The database is partitioned into fixed-length storage units called  
a) Parts  
b) Blocks  
c) Reads  
d) Build

Answer: b  
Explanation: Blocks are the units of data transfer to and from disk, and may contain several data items.

10. Which of the following causes system to crash  
a) Bug in software  
b) Loss of volatile data  
c) Hardware malfunction  
d) All of the mentioned

Answer: d  
Explanation: The content of non-volatile storage remains intact, and is not corrupted