

SYBSC Comp Sci USCS304 Sem-III
 14-11-17 Database Management System
 (2½ Hours)

NOV 2017
 Q.P. Code: 23721

Regular

[Total Marks: 75]

- N.B.**
- 1) All questions are compulsory.
 - 2) Figures to the right indicate marks.
 - 3) Illustrations, in-depth answers and diagrams will be appreciated.
 - 4) Mixing of sub-questions is not allowed.

Q. 1 Attempt All(Each of 5Marks)

(15M)

(a) Choose the Correct Alternative

- i Triggers _____ enabled or disabled
 - a) Can be b) Cannot be
 - c) Ought to be d) Always
- ii combines the data manipulating power of SQL with the data processing power of Procedural languages.
 - a) PL/SQL b) SQL
 - c) Advanced SQL d) PQL
- iii Which of the following is not a property of transactions?
 - a) Atomicity b) Concurrency
 - c) Isolation d) Durability
- iv A transaction completes its execution is said to be
 - a) Saved b) Loaded
 - c) Rolled d) Committed
- v Assume transaction A holds a shared lock R. If transaction B also requests for a shared lock on R.
 - a) It will result in a deadlock situation
 - b) It will immediately be rejected
 - c) It will immediately be granted
 - d) It will be granted as soon as it is released by A

(b) Fill in the blanks by selecting the correct option from the pool given:

(DROP SEQUENCE sequence_name, Data Control Language, Cursors, Pointers, Replace, Recovery measures, committed, Completed)

- i To drop a specific sequence we have to enter following syntax
- ii The statement changes the control within a PL/SQL Block
- iii are used to recreate if trigger already exists.
- iv Checkpoints are a part of
- v A transaction that completes its execution successfully is said to be

- (c) Explain the following in one or two line
- How to view stored procedure?
 - How to alter a sequence?
 - Give syntax of anonymous PL/SQL block.
 - What is a SAVEPOINT ?
 - What REVOKE command does?

Q. 2 Attempt the following (Any THREE)

(15M)

- Explain insert, update trigger with an example.
- Define Index. What do you mean by primary and secondary index?
- Explain sequential file organization.
- Write a short note on sequence along with an example.
- How to create and execute stored procedure?
- Explain with an example how will you drop an index in the database.

Q. 3 Attempt the following (Any THREE)

(15M)

- State how to write, call and execute the function from a PL/SQL block along with an example.
- Write PL/SQL blocks to print sum of odd numbers between 1 to 30.
- Write a short note on loop and exit statement.
- Explain IF-THEN statement with an example.
- Write a block in PL/SQL to explain GOTO statement.
- Find out the similarities and differences between loop...end loop and while statement.

Q. 4 Attempt the following (Any THREE)

(15)

- What is Serializability? Write a note on view serializability?
- Describe ACID properties for transaction.
- Define COMMIT and SAVEPOINT commands along with an example.
- Write a note on two phase locking protocol.
- Explain two phase Commit protocol.
- Explain undo and redo phase in Aries algorithm.

Q. 5 Attempt the following (Any THREE)

(15)

- Explain how to create a trigger with an example.
- List advantages of PL/SQL.
- How to make permanent changes to database. Explain.
- Explain Timestamp based protocol.
- What is write-ahead log protocol? Explain with example.