

**Bachelor of Computer Application (B.C.A.) Semester—IV (C.B.S.) Examination**

**SQL AND PL/SQL**

**Paper—II**

Time : Three Hours]

[Maximum Marks : 50

**N.B. :—** (1) **ALL** questions are compulsory and carry equal marks.

(2) Draw neat and labelled diagrams wherever necessary.

**EITHER**

1. (a) Explain with syntax and example for “Deriving a table from an Existing table”. 5  
 (b) Explain UNIQUE KEY constraint and PRIMARY KEY constraint with syntax and example. 5

**OR**

- (c) Write a short note on ‘sequence’ database object in ORACLE. 5  
 (d) Given a Table ‘student’ existing with fields rollno, sname, total\_marks, grade.  
 write a query to :  
 (i) Add PRIMARY KEY constraint to rollno column.  
 (ii) Change size of column sname to 20.  
 (iii) Change data type of grade column to CHAR.  
 (iv) Drop column total\_marks.  
 (v) Add column Addr of type VARCHAR2 and size 30. 5

**EITHER**

2. (a) Explain creation and dropping a view from a single table with syntax and example. 5  
 (b) Explain the following categories of PL/SQL data types :  
 (i) Scalar, (ii) Composite, (iii) Reference, (iv) Object, (v) LOB. 5

**OR**

- (c) Write a PL/SQL block to display prime numbers upto n. 5  
 (d) Create an inline view that retrieves the information about employees whose salaries are greater than the company’s average. 5

**EITHER**

3. (a) Explain the WHEN OTHERS clause in exception with the help of an example. 5
- (b) Write a PL/SQL block that illustrates the use of the % ROWTYPE attribute and retrieves the information of the employees with department number 10. 5

**OR**

- (c) Illustrate “parameter passing in cursor” with example. 5
- (d) Create a procedure that displays the information in the EMP table. 5

**EITHER**

4. (a) Write short notes on ‘Purity levels in functions’. 5
- (b) Explain the following Trigger predicates with example :  
(i) INSERTING (ii) DELETING.  
Write syntax to enable, disable and drop triggers. 5

**OR**

- (c) Differentiate between Row level or Statement level trigger. 5
- (d) Create a function that adds new employee in EMP table. The function should display the grade of the salary of an employee. 5
5. Attempt **ALL** :—
- (a) Explain TCL statements with syntax and example. 2½
- (b) Explain Identifiers in oracle. 2½
- (c) Explain Attributes of Explicit cursors. 2½
- (d) Explain Database Triggers with example. 2½

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**Bachelor of Computer Application (B.C.A.) Semester-IV Examination**

**SQL AND PL/SQL**

**Paper-II**

Time : 3 Hours]

[Maximum Marks : 50

**N.B. :—** (1) **ALL** questions are compulsory and carry equal marks.

(2) Draw neat and labelled diagrams wherever necessary.

**EITHER**

1. (a) Explain Codd's rule in detail. 5  
(b) Explain UPDATE and DELETE command with examples. 5

**OR**

- (c) Consider the following table :  
Client-master (Client-no, name, city)  
Salesman\_master (Salesman\_no, name, city)  
Answer the following query using the SET operator :  
(1) Retrieve the names of all the clients and salesmen in the city "Nagpur" from the above table. 5  
(d) Explain Aggregate functions with example. 5

**EITHER**

2. (a) What is a View ? Create a view that retrieves the information about employees whose salaries are greater than 5000. 5  
(b) Explain PL/SQL data types with example. 5

**OR**

- (c) Write a PL/SQL code to find the largest of three numbers. 5  
(d) What is Operator ? Explain PL/SQL operators in detail. 5

**EITHER**

3. (a) What is Exception ? Explain Exception handling in PL/SQL with suitable example. 5  
(b) Write a procedure in PL/SQL to increase the salaries of all employees in an organization by 10%. employee (Name, AGE, SEX, BASIC\_SAL). 5

**OR**

- (c) What is Cursor ? Differentiate between implicit and explicit cursor. 5  
(d) What is Procedure ? Explain how to create a procedure using parameter. 5

**EITHER**

4. (a) What is Trigger ? Write a note on 'enabling and disabling trigger'. 5  
(b) Create a function that calculates and returns the factorial of a number. 5

**OR**

- (c) Explain the use of BEFORE and AFTER triggers giving suitable examples. 5  
(d) Write a function that finds and returns the larger of two numbers. 5

5. (a) Explain integrity constants. 2½  
(b) Explain PL/SQL block structure. 2½  
(c) Explain IN, OUT and IN-OUT Parameters in procedure. 2½  
(d) Explain purity levels in functions. 2½

**Bachelor of Computer Application (B.C.A.) Semester—IV (C.B.S.) Examination****SQL AND PL/SQL****Paper—II**

Time : Three Hours]

[Maximum Marks : 50

**N.B. :—** (i) **ALL** questions are compulsory and carry equal marks.

(ii) Illustrate your answers with suitable example wherever necessary.

**EITHER**

1. (A) What is sequence ? Give syntax for creating a sequence. 5
- (B) What is transaction ? Explain COMMIT, ROLLBACK and SAVEPOINT in transaction. 5

**OR**

- (C) Explain different types of constraints in SQL. 5
- (D) Explain any two database objects in detail. 5

**EITHER**

2. (A) What is a view ? How will you create views from a single and multiple tables ? 5
- (B) What is PL/SQL ? What are the sections in a PL/SQL code ? Explain. 5

**OR**

- (C) Write a PL/SQL code to swap two numbers. 5
- (D) Explain object view in detail. 5

**EITHER**

3. (A) Define cursor. Explain implicit cursor. 5
- (B) What are user defined exceptions ? Explain with example. 5

**OR**

- (C) How will you create, call and remove a stored procedure ? 5
- (D) Explain parameter passing in cursors. Illustrate with the help of a PL/SQL code. 5

**EITHER**

4. (A) Distinguish between BEFORE and AFTER trigger with a suitable example. 5
- (B) Create a function to calculate total salary of employees whose basic salary, travelling allowances and medical allowances are passed as parameters. 5

**OR**

(C) Explain the enabling and disabling of trigger in PL/SQL. 5

(D) Create PL/SQL function to find largest of three numbers. Call the function to display function output. 5

5. Attempt **ALL** :

(i) Explain the use of DDL, DML and DCL. 2½

(ii) What are the advantages of PL/SQL ? 2½

(iii) Differentiate between implicit and explicit cursor. 2½

(iv) What are the advantages of using triggers ? 2½

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**Bachelor of Computer Application (B.C.A.) Part—II  
(Semester—IV) (C.B.S.) Examination**

**SQL & PL/SQL**

**Paper—II**

Time—Three Hours]

[Maximum Marks—50

- Note :—** (1) All questions are compulsory and carry equal marks.  
(2) Draw neat and labelled diagram wherever necessary.

**EITHER**

1. (a) Explain Codd's rules in detail. 5  
(b) What are data types in SQL ? Explain with an example. 5

**OR**

- (c) What are DML statements ? Give the purpose and syntax of each. 5  
(d) Write a note on the following :  
(i) Date  
(ii) Aggregate. 5

**EITHER**

2. (a) What is view ? Write a syntax to create a view.  
Explain different types of views. 5
- (b) Differentiate between SQL and PL/SQL. Write a PL/SQL block for swapping two numbers. 5

**OR**

- (c) Explain identifiers in PL/SQL program structure.  
Give an example of each. 5
- (d) Write a PL/SQL block that uses the cursor to increment the salary by 200 of the employees having department number 10. 5

**EITHER**

3. (a) What are exceptions ? State syntax, purpose and example of creating user defined exceptions. 5
- (b) Differentiate between implicit cursor and explicit cursors. 5

**OR**

- (c) Write a procedure to find the sum of digits of a given number. 5
- (d) Explain calling procedure in detail. Give its syntax with an example. 5

**EITHER**

4. (a) Explain creating and dropping functions with an example. 5
- (b) What are triggers ? Explain types of triggers. 5

**OR**

- (c) Write a note on the following :
- (i) Database trigger
- (ii) Trigger predicate. 5
- (d) What are the problems on functions and triggers ?  
Comment on it. 5
5. (a) Write a syntax and purpose for DESC and drop command. 2½
- (b) What are the advantages of views ? 2½
- (c) Explain calling procedures. 2½
- (d) Discuss trigger predicates with example. 2½

## Bachelor of Computer Application (B.C.A.) Semester—IV (C.B.S.) Examination

## SQL AND PL/SQL

## Paper—II

Time : Three Hours]

[Maximum Marks : 50

- N.B. :—** (1) **ALL** questions are compulsory and carry equal marks.  
 (2) Draw neat and labelled diagrams wherever necessary.

**EITHER**

1. (a) Write syntax to create a table from another table giving a suitable example. Give its advantages. 5  
 (b) Explain different constraints used in creation of table. 5

**OR**

- (c) Consider a table Emp. having the following structure : 5

Column Name	Datatype	Size
Emp _ no.	NUMBER	4
Ename	VARCHAR 2	25
Designation	VARCHAR 2	20
Job	VARCHAR 2	10
Salary	NUMBER	10.2
Dept _ no.	NUMBER	10

Write queries to :

- (i) Drop column job.  
 (ii) Find all employees who have same designation as that of PROGRAMMER.  
 (iii) Display all employees who earn more than or equal to 20,000 /-.  
 (iv) Display names of employees arranging Emp \_ no. in ascending order.  
 (v) Delete record of employee with Dept \_ no. = 10
- (d) Explain following predicates giving suitable examples : 5  
 (i) BETWEEN  
 (ii) IN.



**EITHER**

2. (a) What is VIEW ? What is the advantage of creating a view ? Write syntax to create a view. 5  
(b) Explain different blocks available in PL/SQL. 5

**OR**

- (c) Write a PL/SQL block to find the largest of two numbers. 5  
(d) Create a view that retrieves the information about employees whose salaries are greater than 10,000 /- (consider suitable table for keeping employee's information). 5

**EITHER**

3. (a) Write syntax for creating a stored procedure. Write a procedure to swap values stored in two variables. 5  
(b) What is Exception ? Explain following Exceptions : 5  
(i) DUP \_ VAL \_ ON \_ INDEX  
(ii) NO \_ DATA \_ FOUND  
(iii) ZERO \_ DIVIDE  
(iv) VALUE \_ ERROR.

**OR**

- (c) What is cursor ? Explain parameter passing in cursor with example. 5  
(d) Differentiate between user defined exception and pre defined exception. 5

**EITHER**

4. (a) What is trigger ? What are the different types of triggers ? Give syntax for defining a database trigger. 5  
(b) Create a function that returns the updated salary of an employee on the basis of employee no. Increase salary by 10 % (Assume Employee table). 5

**OR**

- (c) Write a function to find gcd of two numbers. 5  
(d) Write notes on :  
(i) Enabling and Disabling triggers.  
(ii) Replacing and dropping triggers. 5

5. Attempt **ALL** :

- (a) Explain Commit and Rollback command with syntax and example. 2½  
(b) Explain updatable view. 2½  
(c) Explain explicit cursor. 2½  
(d) Explain BEFORE and AFTER trigger. 2½

**Bachelor of Computer Application (B.C.A.) Semester—IV (C.B.S.) Examination****SQL AND PL/SQL****Paper—II**

Time : Three Hours]

[Maximum Marks : 50

**Note :—** (1) All questions are compulsory and carry equal marks.

(2) Draw neat, labelled diagrams wherever necessary.

**EITHER**

1. (a) Explain different operators in SQL. 5
- (b) Explain the following constraints :
- (i) Foreign key constraint
- (ii) Check constraint. 5

**OR**

- (c) Write a short note on sequence and synonyms. 5
- (d) Give syntax, purpose and example for :
- (i) SELECT using order by clause
- (ii) SELECT using Group by and Having clause. 5

**EITHER**

2. (a) What is a view ? Write the rules for updating views. Also write down the syntax and example for updating a view. 5
- (b) Write a program in PL/SQL to swap the values of two variables without using a third variable. 5

**OR**

- (c) Write short notes on object view and read only view. 5
- (d) Write a PL/SQL code to find the largest of three numbers. 5

**EITHER**

3. (a) What is a cursor ? Explain the different types of cursors. 5
- (b) Write an example to show the exception that is raised in the inner block and handled in the outer block. 5

**OR**

- (c) Write the difference between :
- (i) procedure and function
- (ii) predefined exception and user defined exception. 5
- (d) Explain procedures having parameters with example. 5

**EITHER**

4. (a) What are functions and their purity levels ? Explain with an example. 5
- (b) Write a trigger on the Employee table, which makes the entry in the name column in upper case :
- Employee (name, age, sex, salary) 5

**OR**

- (c) Explain various types of triggers giving suitable example. 5
- (d) Create a function that returns the updated salary of an employee on the basis of employee number. Increase the salary by 10%. 5
5. Attempt **all** :
- (a) Differentiate between :
- (i) char and varchar
- (ii) long and long raw. 2½
- (b) Write the advantages of views. 2½
- (c) Explain the various sections of PL/SQL procedure. 2½
- (d) Explain the use of before and after triggers. 2½

**Bachelor of Computer Application (B.C.A.) Semester-IV Examination****SQL AND PL/SQL****Paper-II**

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[Maximum Marks : 50

**Note :—**(1) All questions are compulsory and carry equal marks.

(2) Illustrate your answers with suitable example wherever necessary.

**EITHER**

1. (A) What is SQL ? Explain its features. 5  
 (B) What are aggregate functions ? How are they used ? Explain with example. 5

**OR**

- (C) Explain set operators with example. 5  
 (D) Explain Codd's rule in relational database. 5

**EITHER**

2. (A) Define view. Explain how to create, update and delete views. 5  
 (B) Explain PL/SQL block structure. 5

**OR**

- (C) Explain PL/SQL flow control structures with its type and syntax. 5  
 (D) Write PL/SQL program to insert 3 new location\_id for the country code "IND" and city "Nagpur" using For---loop in location table. (Location : location\_id, country\_code city). 5

**EITHER**

3. (A) Define cursor. Explain the use of explicit cursor with the help of a code. 5  
 (B) What are predefined exceptions ? Explain. 5

**OR**

- (C) What is exception ? Explain the syntax of handling exception in PL/SQL. 5  
 (D) Write a procedure to find the maximum of two numbers. 5

**EITHER**

4. (A) What is trigger ? Explain the syntax of creating trigger in PL/SQL with suitable example. 5  
 (B) Create PL/SQL function to find the largest of three numbers. Call the function to display function output. 5

**OR**

- (C) Write a note on creating and dropping function in PL/SQL. 5  
 (D) Create a trigger to restrict insert into the employee table to certain business hours (8:00-18:00), Monday to Friday. 5

5. Attempt all :

- (A) What are integrity constraints ? 2½  
 (B) What are the advantages of PL/SQL over SQL ? 2½  
 (C) Differentiate between implicit and explicit cursor. 2½  
 (D) Write differences between procedure and function. 2½