

00692

Seat No. \_\_\_\_\_

**B. C. A. (Sem. III) (External Practical) Examination**  
October / November - 2002  
**Practicals - 306**

Time : 5 Hours]

[Total Marks : 140

1 Note: - Save all your SQL commands in appropriate .sql files. 40

(a) Create the following tables.

1 STUDENT Table

Field Name	Data Type & Width
NAME	VARCHAR2(8)
DOB	DATE
CENDER.	VARCHAR2(1)

While creating table STUDENT add constraint Primary Key for NAME field.

2 COURSE Table

Field Name	Data Type & Width
CCODE	NUMBER(2)
COURSENAME	VARCHAR2(15)
CCOST	NUMBER(5)

While creating table COURSE add constraint Primary Key for CCODE field.

3. STUDIES Table

Field Name	Data Type & Width
NAME	VARCHAR2(8)
CCODE	NUMBER(2)
JDT	DATE

(b) Do as Directed.

1. Add constraint Primary Key for STUDIES table as combination of fields {NAME, CCODE}.
2. Add constraint NOT NULL for COURSENAME field in COURSE table.
3. Add new field GRADE of VARCHAR2(15) data type in STUDIES table.
4. Insert the appropriate data in STUDENT, COURSE and STUDIES tables.

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[Contd..

(c) Write SQL commands for the following.

1. Display NAME, DOB, CCODE.
2. Display all students whose DOB is before April – 1985.
3. Display all students whose COURSENAME is ORACLE.
4. Decrease CCOST by Rs. 500 for all students where CCOST is higher than Rs. 5000.
5. Delete all name where JDT before January 2000.

2 (a) Write a program to create menu driven program to perform following operations on *queue*. Make proper validations wherever necessary. 20

1. Insert element in queue.
2. Delete element from the queue.
3. Display elements of the queue.
4. Exit from program.

(b) Write a program to convert infix expression in reverse polish notation. 20

3 (a) Write a program to create *point* class having member variables *x1* and *y1* (for *x* and *y* co-ordinates of the point). Create class *line* having member variables *x2* and *y2* (for *x* and *y* co-ordinates of the other point of the line). Create class *circle* having member variable *radius* (for radius of the circle). 20

point  
*x1*  
*y1*

-----|-----|  
line circle  
*x2* *radius*  
*y2*

declare show function as pure virtual function in base class and re-declare that function in derived classes. Show function displays member variables of the class.

(b) Create class *Time12* having member variables hour, minute, second and meridian (string for "am" or "pm" value). Create another class *Time24* having member variables hour, minute and second. Perform following type conversion between two class data types. 20

Time24 -----> Time12

4 Viva + journal 25