

2018

(CBCS)

(4th Semester)

**BACHELOR OF COMPUTER APPLICATIONS**

Paper No. : BCA-402P

**( Oracle Laboratory )****( Practical )**

Full Marks : 75

Time : 3 hours

*The figures in the margin indicate full marks for the questions***SECTION—A**

Answer any two questions

1. Consider the following relations for an order processing database application in a company :

CUSTOMER	(cust:int, cname:string, city:string)
ORDER	(order:int, odate:date, cust:int, ord-amt:int)
ORDER_ITEM	(order:int, item:int, qty:int)
ITEM	(item:int, unitprice:int)
SHIPMENT	(order:int, warehouse:int, ship-date:date)
WAREHOUSE	(warehouse:int, city:string)

- (a) Create the above tables by properly specifying the primary keys and the foreign keys. 4
- (b) Enter at least five tuples for each relation. 3
- (c) Produce a listing: CUSTNAME, # of orders, AVG\_ORDER\_AMT, where the middle column is the total no. of orders by the customer and the last column is the average order amount for that customer. 5
- (d) Find out which unit price is the lowest. 3

2. Consider the following database of student enrollment in courses and books adopted for each course :

STUDENT (regno:string, name:string, major:string, bdate:date)  
 COURSE (course:int, cname:string, dept:string)  
 ENROLL (regno:string, course:int, marks:int)  
 BOOK\_ADOPTION (course:int, sem:int, book-ISBN:int)  
 TEXT (book-ISBN:int, book-title:string, publisher:string, author:string)

- (a) Create the above tables by properly specifying the primary keys and foreign keys. 4
- (b) Enter five tuples for each relation. 3
- (c) Produce a list of textbooks in alphabetical order for courses offered by BCA department that uses more than two books. 3
- (d) List any department that has all its adopted books published by a specific publisher. 5

3. Consider the following database for a banking enterprise :

BRANCH (branch-name:string, branch-city:string, assets:real)  
 ACCOUNT (accno:int, branch-name:string, balance:real)  
 DEPOSITOR (customer-name:string, accno:int)  
 CUSTOMER (customer-name:string, customer-street:string, city:string)  
 LOAN (loan-number:int, branch-name:string, loan-number:int)  
 BORROWER (customer-name:string, customer-street:string, city:string)

- (a) Create the above tables by properly specifying the primary and foreign keys. 4
- (b) Enter 5 tuples for each relation. 3
- (c) Find all the customers who have at least two accounts at the main branch. 3
- (d) Find the average loan taken by each customer in any branch. 3
- (e) Find the lowest and highest balance in account table. 2

#### SECTION—B

Answer **any one** question

4. The following tables are maintained by a book dealer :

AUTHOR (author-id:int, name:string, city:string, country:string)  
 PUBLISHER (publisher-id:int, name:string, city:string, country:string)  
 CATALOG (book-id:int, title:string, author-id:int, publisher-id:int, category-id:int, year:int, price:int)  
 CATEGORY (category-id:int, description:script)  
 ORDER\_DETAILS (order-no:int, book-id:int, quantity:int)

- (a) Create the above tables by properly specifying the primary keys and foreign keys. 4

- (b) Enter at least five tuples for each relation. 3
- (c) Find the author of the book which has maximum sales. 3
- (d) List all authors whose name begins with a letter 'L'. 3
- (e) Select the order detail ordered by quantity. 4
- (f) Show the total and average quantity of book order. 3
5. (a) Create the following *three* tables : 8

(i) Salesman :

SNUM	SNAME	CITY	COMMISSION
1001	PIYUSH	LONDON	12%
1002	NIRAJ	SURAT	13%
1003	MITI	LONDON	11%
1004	RAJESH	BARODA	15%
1005	ANAND	NEW DELHI	10%
1006	RAM	PATNA	10%
1007	LAXMAN	BOMBAY	09%

SNUM : A unique number assigned to each salesman.

SNAME : The name of salesman.

CITY : The location of salesman.

COMMISSION : The salesman commission on order.

(ii) Customer :

CNUM	CNAME	CITY	RATING	SNUM
2001	HARDIK	LONDON	100	1001
2002	GITA	ROME	200	1003
2003	LAXIT	SURAT	200	1002
2004	GOVIND	BOMBAY	300	1002
2005	CHANDU	LONDON	100	1001
2006	CHAMPAK	SURAT	300	1007
2007	PRATIK	ROME	100	1004

CNUM : A unique number assigned to each customer.

CNAME : The name of customer.

CITY : The location of customer.

RATING : A level of preference indicator given to this customer.

SNUM : A salesman number assigned to this customer.

(iii) Orders :

ONUM	AMOUNT	ODATE	CNUM	SNUM
3001	18.69	10/03/99	2008	1007
3002	767.19	10/03/99	2001	1001
3003	1900.10	10/03/99	2007	1004
3004	5160.45	10/03/99	2003	1002
3005	1098.25	10/04/99	2008	1007
3006	1713.12	10/04/99	2002	1003
3007	75.75	10/05/99	2004	1002
3008	4723.00	10/05/99	2006	1001
3009	1309.95	10/05/99	2004	1002
3010	9898.87	10/06/99	2006	1001

- (b) List all orders for more than ₹ 1000. 4
- (c) List all customers whose name begins with a letter 'C'. 4
- (d) Calculate the total of orders for each day. 4

SECTION—C

6. Viva voce. 15
7. Practical record book. 10