Banaskantha District Kelavani Mandal Sanchalit

B.C.A. & P.G.D.C.A. College, Palanpur

Internal Examination

BCA 301 : Object Oriented Concepts & Programming

Date: 14/10/2013 **Marks: 75**

Time: 3 hrs. **Seat No: ____**

Que: 1[A] Answer Any four **(04)**

(1) In which situation inline may not work as inline ?
(2) Define function overloading?
(3) Write syntax for member function declaration out side class
(4) Reference Variable
(5) Full form of ADT.

[B] Attempt Any three **(18)**

(1) Distinguish : OOPs Vs POP.
(2) Explain static Function with example
(3) Explain Concepts of OOP
(4) Explain default argument function with example.

Que: 2[A] Answer Any five **(05)**

(1) Which are Dynamic memory Allocation operators
(2) Define Constructor
(3) We can invoke friend function as normal function [T/F]
(4) Define Dynamic constructor
(5) What is use of friend function?
(6) Static member function can access only ____ data.

[C] Attempt (Any Two) **(12)**

(1) Write a program for overloaded constructor
(2) Explain Destructor with example.
(3) Explain Return by object concept with Example

Que: 3[A]Explain Following (Any three) **(06)**

(1) What is operator overloading?
(2) In type conversion, in source class we use____ and in destination we use _____
(3) Which operator can not be overloaded using friend function ?
(4) What is characteristic of casting operator function

[B] Attempt(any two) **(12)**

(1) Write program for Unary operator overloading using friend function
(2) Explain Class To Basic type conversion in detail
(3) Write a Program for mathematical operation (+,>=) on two string objects

Que: 4[A] Attempt(Any Two) **(06)**

(1) Virtual Base Class
(2) Ambiguity Resolution in inheritance
(3) virtual function

[B] Answer (Any two) **(12)**

(1) Explain this pointer and Write program for this pointer
(2) Explain polymorphism in detail with example
(3) Explain Pointer to object with example

♠♠♠ BEST LUCK ♠♠♠

Banaskantha District Kelavani Mandal Sanchalit

B.C.A. & P.G.D.C.A. College, Palanpur.

Internal Examination

BCA 302: Advance Database Management System.

Date: 15/10/13 Marks: 75

Time: 3 hrs. Seat No: ____

Q-1 [A] Attempt any two from the following: [10]

i. Define Transaction. Explain System Recovery.
ii. Define Concurrency. Explain problems of concurrency.
iii. Define Distributed Databases and explain its problems.

[B] Write short notes on (Any two): [5]

i. Data Encryption.
ii. Discretionary Access Control.
iii. Two phase commit.

[C] Do as directed: [4]

i. List any five objectives of distributed database.
ii. _____ support only aggregate queries.
iii. Restoring database is known as _____ recovery.
iv. Failure that affects all running transactions is known as _____ failure.

Q-2 [A] Attempt any two from the following: [8]

i. List out SQL components. Explain DML commands with example.
ii. Define Joins. Explain different types of joins with example.
iii. Define Set operators. Explain them with example.

[B] Explain purpose, syntax and example of following functions. (Any five) [10]

i. LPAD ( )
ii. TO_DATE ( )
iv. INSTR ( )
v. TRUNC( )
vi. LAST_DAY( )

[C] Explain use of GROUP BY and ORDER BY clause with example. [2]

Q-3 [A] Attempt any two from the following: [10]

i. Define Explicit Cursors. Explain Explicit Cursor Management with example.

ii. Define Exceptions. Explain User defined exception handling with example.

iii. Define Indexes. Explain types of Indexes.

[B]. Write Short notes on: [5]

i. Procedures.

ii. Triggers.

[C] Do as directed: [4]

i. Dual table has ____ row and ____ column.

ii. ROWID is a _____ column.

iii. _____ is also known as stored queries.

iv. Views in which updates are not allowed are known as _____view.

Q.4 [A] Attempt any two from the following: [12]

i. Define DSS. Explain aspects of DSS.

ii. Explain Database Design for DSS.

iii. Explain OLAP in Detail.

[B] Write short notes on : [5]

i. Data warehouse.

ii. Data Mining.

4(B) Attempt the following :(Any Two) **10**

(1) Obtain initial basic feasible solution for the below given Problem by NWCM ,LCM and VAM.

	D1	D2	D3	D4	SUPPLY
S1	3	1	7	4	300
S2	2	6	5	9	400
S3	8	3	3	2	500
DEMAND	250	350	400	200	

(2) Find optimal solution for the following Transportation problem.

	D1	D2	D3	D4	SUPPLY
S1	11	13	17	14	250
S2	16	18	14	10	300
S3	21	24	13	10	400
DEMAND	200	225	275	250	

(3) Solve the following assignment problem to Maximize the total cost.

	R1	R2	R3	R4	R4
C1	32	38	40	28	40
C2	40	24	28	21	36
C3	41	27	33	30	37
C4	22	38	41	36	36
C4	29	33	40	35	39

Banaskantha District Kelavani Mandal Sanchalit

B.C.A. & P.G.D.C.A. College, Palanpur

SEM-3 Internal Examination

BCA-303: – Statistics & Optimization Techniques

Date: 17-10-2013 Marks: 75

Time: 3 hrs. Seat No: ____

1(A) Answer the following questions (Any eight) **8**

(1) The mean of a series of 49 observations is 7 then find the sum of observations.
(2) What do you mean by relative frequency distribution.
(3) _____is mode of -5,-7,-1,-2,-5,-5,1,2.
(4) Define: class frequency.
(5) Give formula for coefficient of range.
(6) List out the measures of dispersion.
(7) Find Q_1 for following:20,28,40,12,30,15,50.
(8) Give formula for Quartile deviation.
(9) Find mean of 1 ,2,1½,2¾,5/4,2/3,1/6,5/4

1(B) Attempt (Any two) **10**

(1) Calculate the mean and median for the following distribution.

Marks	0-20	20-40	40-60	60-80	80-100
No. of mangoes	03	17	27	20	09

(2) Find the missing frequencies from the following frequency Distribution. N=120, Mean=60

Class	10-30	30-50	50-70	70-90	90-110
No of Persons:	17	F1	32	F2	19

(3)Calculate the standard deviation from the following.

Class:	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Students:	5	12	30	45	50	37	21

2 (A) Attempt the following

(1)Explain the difference between correlation and Regression. **3**

2 (B) Attempt the following : **5**

(1) Define Regression.
(2) Which are types of correlation?
(3) Difference between Linear and curvilinear correlation
(4) Give formula for probable error.
(5) What is scatter diagram?

2 (C) Attempt (Any two) **10**

(1) Calculate the coefficient of correlation between x and y From the following data.(Assume 69 and 112 as the mean Value for x and y respectively)

X:	78	89	99	60	59	79	68	61
Y:	125	137	156	112	107	136	123	108

(3) The ranking of ten students in two subjects x and y are as Follows:

X:	06	05	03	10	02	04	09	07	08	01
Y:	03	08	04	09	01	06	10	07	05	02

(

Calculate rank correlation coefficient.

3) Construct two regression equations for the Following data:.

X:	6	2	10	4	8
Y:	9	11	5	8	7

3(A) Attempt the following

(1) Difference between pert and cpm **02**

(2) Define: **03**

(1) Slack variable
(2) Event
(3) Dummy activity

(3) Give the standard form of an LPP 04

3(C) Attempt the following: (Any two) **12**

(1)Use the simplex method to solve the following LP Problem.

Max $Z=3x_1+5x_2+4x_3$

Subject to the Constraints

$2x_1+3x_2 \leq 8$

$2x_2+5x_3 \leq 10$

$3x_1+2x_2+4x_3 \leq 15$

And $X_1, X_2, X_3 \geq 0$

(2)Draw the network diagram for the following Activities:

Activity	A	B	C	D	E	F	G	H	I	J	K	L	M
Predecessor Activity	-	A	B	A	D	E	-	G	J,H	-	A	C,K	I,L

(2) Solve the following LPP by graphical method:

Min $Z= 20x_1+10x_2$

Subject to Constraints

$x_1+2x_2 \leq 40$

$3x_1+x_2 \geq 30$

$4x_1+3x_2 \geq 60$

And $X_1, X_2 \geq 0$

4(A) Attempt the following

(1) Give two Application of traveling salesman Problem. 2

(2) What is unbalanced transportation problem? How Can we balance it? **2**

(2) Write down Mathematical formulation of transportation problem. **04**

Banaskantha District Kelavani Mandal Sanchalit

B.C.A. & P.G.D.C.A. College, Palanpur

Internal Examination

BCA 304: – Computer Networking

Date: 18-10-2013 Marks: 75

Time: 3 hrs. Seat No: ____

Que 1[A] Explain following in detail(Any One) **[07]**

1.Explain TCP/IP reference model.

2. Explain structure of telephone system

Que1[B] Answer any Three **[06]**

1. Compare Circuit switching and Packet switching
2. Explain Simplex and Half duplex
3. Compare LAN and WAN.
4. Point to point and Multipoint

Que1[C] List All types of topology. Explain Mesh topology with Advantage and disadvantage. **[5]**

Que2 [A]Explain following in detail(Any Four) **[12]**

1) Compare Fiber optic with Copper wire
2) Explain types of fiber optic cable
3) Impairment of transmission Media
4) Define Term :-Throughput ,Radiation,Crosstalk,Collision
5) Give full form:-MAC,LASER,TDMA,SIM,FDMA,LED

Que2 [B]Explain Following. **[10]**

1. Explain Twisted pair cable.**[5]**

OR

Explain Coaxial cable with its feature.

2. Explain Radio wave transmission **[5]**

OR

Explain Microwave transmission

Que 3 [A] Do as directed **[06]**

1.List out all data communication component explain any one**[6]**

OR

2. Explain asynchronous transmission and synchronous transmission.**[6]**

Que 3[B]Do as directed (Any Three) **[6]**

.1 Define term: Bitstuffing

2 What is subnet ?

3 Difference between subnet mask and default mask..

4.Find Class of following IP address given in decimal Notation

(A)192.6.13.2

(B)164.8.12.56

5.Find Class of following IP address given in Binary Notation

(A) 01110000 00001011 00001011 11101111

(B) 11100000 00001011 00001011 11101111

Que:3[C] **[06]**

1 Explian detail about HDLC protocol.

OR

1. Explain asynchronous protocol in detail.

Que:4[A] Explain GSM architecture in detail **[07]**

Que:4[B] Do as Directed **[10]**

1. What is mobile computing[3].

2. Explain PDA.[4]

3 Compare GSM and GPRS[3]

Or

3 Compare GSM and CDMA