Total No. of Questions : 4]

SEAT No. :

P696

[Total No. of Pages : 3

[4668] - 2001
F.Y. B.C.A. (Semester - II)
201 : PROCEDURE ORIENTED PROGRAMMING USING - 'C'
(2013 Pattern)

Time : 3 Hours] *[Max. Marks : 80*

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Draw well labelled diagram wherever necessary.***

Q1) Answer the following **(Any Ten)** : **[10 × 2 = 20]**

a) What is nested structure?

b) List different types of files.

c) Define union with example.

d) Explain str(atc) and str(pyc)

e) State different types of relational operators in 'C'.

f) Define Recursion

g) List different preprocessor directives.

h) What is formal parameter? Give example.

i) Give syntax and usage of for loop.

j) What is Identifier?

k) Define Algorithm

l) What is escape sequence?

Q2) Answer the following **(any four)** : **[4 × 5 = 20]**

a) Explain difference between do-while and while loop with example.

b) Define Array. Explain how to declare and initialize two dimensional array with example.

c) Define function and explain function declaration, function definition and function call with example.

d) What is pointer? Explain how to declare and initialize pointer variable with suitable example.

e) What is dynamic memory allocation? Explain its advantages.

P.T.O.

Q3) Answer the following **(Any four)** : **[4 × 5 = 20]**

a) Write a 'C' program for multiplication of m × n matrix.

b) Write a 'C' program to check if the given string is palindrome or not.

c) Create a structure to store data of 10 students as roll no, name and percentage. Write a 'C' program to print roll no, names of students who have secured less than 60 percent.

d) Write a 'C' program to calculate the sum of following series using function. Sum = $1+\frac{1}{x}+\frac{1}{x^2}+\frac{1}{x^3}+\frac{1}{x^4}$.....

e) Write a 'C' program to convert temperature from celcius to faharanite.

Q4) Trace the output and justify **(Any four)** : **[4 × 5 = 20]**

a)
```
main ( )
{
    int i = l ;
    for ( ; ; )
    printf ( " % d ", i ) ;
}
```

b)
```
main ( )
{
    Char s [ ] = "I am the best";
    Printf (" % s ", s);
    Printf (" \ n % c ", s [3] );
    Printf (" \ n % c ", s [8] );
}
```

c)
```
main ( )
{
    int x, y, z;
    x = y = z = 1 ;
    z = + + x i i + + y & & + + z ;
    printf (" x = % d y = % d z = % d \ n", x, y, z);
}
```

d)
```
main ( )
{
    int i = 0, x = 0;
    for (i = 1 ; i < 10; i + +)
    {
        if (i % 2 = = 1)
        x = x + 1 ;
        else
        x – – ;
        printf (“ % d ”, x);
    }
}
```

e)
```
main ( )
{
    int j = l ;
    while ( )
    {
        printf (“ % d ”, j + +) ;
        if (j > 3)
        break ;
    }
}
```

Total No. of Questions : 5]

SEAT No. :

P697

[Total No. of Pages : 2

[4668]-2002
B.C.A. (Semester - II)
DATABASE MANAGEMENT SYSTEM
(2013 Pattern)

Time :3 Hours] *[Max. Marks :80*

Instructions to the candidates :

1) ***All questions are compulsory.***
2) ***Draw neat diagram wherever necessary.***

Q1) Answer the following (**Any Four**) : **[4 × 4 = 16]**

a) Explain dense and sparse index.
b) What are logical and physical files.
c) List various users of DBMS and Specify their jobs.
d) What are anomalies of un-normalized database.
e) Explain advantages and disadvantages of DBMS.

Q2) Answer the following (**Any Four**) : **[4 × 4 = 16]**

a) Explain Basic file operation.
b) Explain object oriented model.
c) List various DDL commands. Explain any one with example.
d) Explain select and project operations in Relational Algebra.
e) What are different aggregate functions in sql.

Q3) Attempt the following : **[16]**

Consider the following entities and their relationship.
Item (item.no, name, quantity)
Sup (no, name, addr, city, phone)
Item and sup are related with many-to-many relationship with rate, discount.
Contraints: Primary key and item qty > 5 and rate > 0.
Create a RDB in 3NF and write queries in Oracle (Any Five)

a) Insert a row in item table.
b) Find the rate and discount of the item key board.
c) Count the number of items supplied by supplier 'Mr. Sathe'.

P.T.O.

d) Display the details of all suppliers from 'Banglore' city.

e) Display item name in descending order of quantity.

f) Display supplier names in ascending order.

Q4) Answer the following (**Any Four**) : **[4 × 4 = 16]**

a) Explain sequential file organization in detail.

b) Write a note on Normalization.

c) Explain the terms :

i) Super Key

ii) Entity

iii) Tuple

iv) Domain

d) Explain entity and attributes and explain its types.

e) Explain primary key and Foreign key with suitable example.

Q5) Attempt the following : **[8]**

a) Design database for banking enterprise which records information about customers, employees of bank. A customer can be depositor or borrower. An employee of the bank can be customer of bank.

There are two types of accounts, saving account and current account.

A database should provide following details.

i) Identify all entities.

ii) Identify all relationship

iii) Draw E-R diagram.

b) Consider relational database : **[8]**

Customer (cust-no, cust-name, address, city)

Loan (loan-no, loan-amt, loan-date, cust-no)

Customer and loan are related with one to many relationship.

Write relational algebric expression for the following :

i) List loan details of customer name as "Mr. Damle".

ii) List names of customer names who have taken loan of amount more than 50,000 and city as 'Mumbai'.

iii) List names of customer who do not have loan at the bank.

iv) Display customer with loan amount greater than 1,00,000.

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Total No. of Questions : 8]

SEAT No. :

P667

[Total No. of Pages : 1

[4668]-201

B.C.A. (Semester - II)

211 : ORGANISATIONAL BEHAVIOUR

(2008 Pattern)

Time :3 Hours] *[Max. Marks :80*

Instructions to the candidates :

1) ***Solve any five questions.***
2) ***All questions carry equal marks.***

Q1) What is Organizational Behaviour? Explain Nature, Scope and importance of Organizational Behaviour. **[16]**

Q2) What is Job Satisfaction? Explain various factors relating to Job satisfaction.**[16]**

Q3) Define Motivation? Explain in details the McGreger's Theory X and Theory Y**[16]**

Q4) Explain in detail the theories of Personality. **[16]**

Q5) What is Employee Counseling? State its Features and Functions. **[16]**

Q6) What is Leadership? Explain various Traits of Effective Leader. **[16]**

Q7) What is 'Conflict'? Explain Positive and Negative Consequences of conflicts.**[16]**

Q8) Write explanatory notes on **(Any Two)** **[2 × 8 = 16]**

a) Perception process
b) Characteristics of Effective Team
c) Characteristics of Group

Total No. of Questions : 5]

SEAT No. :

P668

[Total No. of Pages : 4

[4668]-202
B.C.A. (Semester - II)
ELEMENTS OF STATISTICS
(2008 Pattern)

Time :3 Hours] *[Max. Marks :80*

Instructions to the candidates :

1) ***All questions are compulsory.***
2) ***Figures to the right indicate full marks.***
3) ***All questions carry equal marks.***
4) ***Use of statistical table and calculator is allowed.***
5) ***Symbols and abbreviations have their usual meanings.***

Q1) Attempt any four of the following **[4 × 4 = 16]**

a) What are the requirements of good measure of central tendency?

b) A.M. of marks of 30 candidates was 40. Later on it was found that a score of 37 was misread as 73. Find correct mean?

c) Calculate standard deviation for the following data : 4, 6, 10, 18, 9, 3

d) The range, A.M. and S.D. of 10 items is 20, 62, 10 respectively. If each observation is increased by 5, what will be the range A.M. and S.D.

e) Explain the causes of variation in SQC?

f) What is probability that a leap year will contain 53 Mondays?

Q2) Attempt any four of the following : **[4 × 4 = 16]**

a) Explain absolute and Relative measure of dispersion.

b) Define the following terms :

i) Sample space

ii) Exhaustive events

iii) Mutually exclusive events

iv) Compound event

P.T.O.

c) The daily expenditure of 100 families is given below :

Expenditure (in Rs.) :	20-40	40-60	60-80	80-100	100-120
No. of families :	14	-	27	-	15

If the mean of the distribution is 74. Find the missing frequencies.

d) A group of 50 items have mean and S.D 61 and 8 respectively. Another group of 100 observations has mean and S.D. 70 and 9 respectively. Find the mean and S.D. of combined group.

e) Two cards are drawn at random from a well shuffled pack of playing cards. Find the probability that :

i) Both are ace

ii) Both are spade

f) Find the Geometric mean for the following data :

12, 26, 20, 22, 30

Q3) Attempt any four of the following : **[4 × 4 = 16]**

a) Write note on statistical Quality control.

b) The probability that a contractor will get a plumbing contract is 0.4 and the probability that he will get on electric contract is 0.3. If the probability of getting at least one contract is 0.6, then find the probability that he will get both the contracts?

c) The following is the distribution of the height of students in a class of secondary school.

Height in cm	130-134	135-139	140-144	145-149	150-154	155-159	160-164
No. of Students	5	15	28	24	17	10	1

Find i) State the type of classification

ii) Class-width of any class

iii) Class-boundaries of 5^{th} class

iv) Class-limits of 6^{th} class

d) Calculate mean, median and mode for the following data :

51, 52, 53, 51, 53, 54, 50, 55, 53

e) Write note on SRSWR and SRSWOR

f) If P(A) = 0.3, P(B) = 0.4, P (A$\cup$B) = 0.5

Find P(A'$\cap$B'), P(A $\cap$ B)

Q4) Attempt any four of the following : **[4 × 4 = 16]**

a) What are the advantages of sampling method over census method?

b) Let A and B be two events defined on sample space Ω such that, P(A) = 0.8, P(B) = 0.5 and P(A∩B) = 0.45. obtain

i) P(A|B)

ii) P(A'|B')

c) Information about the daily salaries of employees in firms A and B is stated below :

Firm	No. of employees	Mean salary	S.D. of salary
A	586	52.5	10
B	647	47.5	11

i) Which firm has smaller variation in salary

ii) Find combined mean salary.

d) The Median daily salary of 50 employees is Rs. 188.40. Frequency distribution of salaries of these employees in which some frequencies are missing is given below

Salary	140-160	160-180	180-200	200-220	220-240
Frequency	6	-	17	-	5

Find missing frequencies

e) Explain chance causes and assignable causes.

f) A family consisting of an old man, two children and 4 adults is to be seated in a row for dinner. The two children wish to occupy the two seats at each end and the old man refuses to have a child either side of him. In how many different ways can the arrangement be made?

Q5) Attempt any two of the following **[16]**

a) A pharmaceutical company employees quality control technique to control the concentration of a certain integredient in their product. Ten samples each of size 3 where taken, which are summerised below :

Sample No.	1	2	3	4	5	6	7	8	9	10
$\overline{X}$	10.2	10.5	10.4	10.3	9.75	10.2	10.4	10.2	10.3	9.75
R	0.45	0.69	0.53	0.15	0.55	0.24	0.11	0.71	0.9	0.55

Can you say that the process is under statistical control? (For n = 3, A2 = 1.023, $D_3 = 0$, $D_4 = 2.575$)

b) Prices of a particular commodity in 5 years in two cities are given below :

Prices in city A (in Rs.)	20	22	19	23	26
Prices in city B (in Rs.)	10	20	18	12	15

Which city has more stable prices? Justify?

c) Write down the sample space for each of the following experiments :

i) A coin is tossed until tail occurs.

ii) Tossing of three coins simultaneously.

iii) Ten seeds are planted and total number of seeds germinated are recorded after a week.

iv) A coin and a die is tossed simultaneously.

Total No. of Questions : 5]

SEAT No. :

P678

[Total No. of Pages : 2

[4668] - 401
S.Y. B.C.A. (Semester - IV)
(411) NETWORKING
(2008 Pattern)

Time : 3 Hours] *[Max. Marks : 80*

Instructions to the candidates :

1) ***All questions are compulsory.***

2) ***Draw neat diagram wherever necessary.***

Q1) Solve any 3 of following : **[3 × 5 = 15]**

a) Explain the devices used to maintain network security.

b) Explain Network Adapter card.

c) Define Network. Explain Network criteria.

d) What is IP address. Explain classification of it.

Q2) Solve any 3 of following : **[3 × 5 = 15]**

a) Explain working of gateways with diagram.

b) Define Topology. Explain any 2 topologies.

c) Describe connection - oriented services.

d) Differentiate between UTP & STP.

Q3) Solve any 3 of following : **[3 × 5 = 15]**

a) Explain Internet Service Providers (ISP).

b) Explain Goals of Network.

c) What are the Design issue of layers in network.

d) Explain fiber optics cable.

P.T.O.

Q4) Solve any 3 of following : **[3 × 5 = 15]**

a) Define Hub. Explain its types.

b) What is Asynchronous communication? Explain it with advantages & disadvantages.

c) Explain working of Search Engines.

d) Explain Microwaves with its two types.

Q5) Write short notes on following (any 4) : **[4 × 5 = 20]**

a) Routers.

b) Token Ring (IEEE 802.5).

c) Architecture of Bluetooth.

d) SAP technology.

e) TCP / IP Model.

Total No. of Questions : 5]

SEAT No. :

P679

[Total No. of Pages : 3

[4668] - 402
S.Y. B.C.A. (Semester - IV)
(412) VISUAL BASIC
(2008 Pattern)

Time : 3 Hours] *[Max. Marks : 80*

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Figures to the right indicate full marks.***
3) ***Give illustration wherever necessary.***
4) ***Design proper GUI.***

Q1) Explain the following property setting (Any Eight) : **[8 × 2 = 16]**

a) Property use to make button invisible at run time.

b) Property use to align text at right in text box.

c) Property use to change text color in text box.

d) Property use to sort items in combo box.

e) Property use to specify start range of scroll bar control.

f) Property use to change background color of form.

g) Property use to hide data control at run time.

h) Property use to draw circle from shape control.

i) Property use to set value of check box.

j) Property use to resize picture dinamically to fit the dimensions of picture box control.

P.T.O.

Q2) Answer the following (Any Four) : **[4 × 4 = 16]**

a) Explain steps to create 'Menu' in VB.

b) Explain ADO controls in VB.

c) Explain built in function of type string with suitable example.

d) Enlist different control structures used in VB, Explain any 2.

e) What is meant by ActiveX controls.

Q3) Answer the following (Any Four) : **[4 × 4 = 16]**

a) Write a VB program to find factorial of given number.

b) Write a menu driven program

i) To display area of rectangle

ii) To display area of circle.

c) Write a program to accept student name, course, marks and display student name and percentage in msg box.

d) Write a VB program for addition of 2 matrices.

e) Write a VB program to accept a string in textbox and print it's length by reversing it.

Q4) Answer in brief (Any Two) : **[2 × 8 = 16]**

a) What are control array? Explain with the calculator's example.

b) Write a VB program to accept the details of BUS like number, capacity, depot name, route no, source, destination, no_of_stations) and store that details in to database. (Don't use standard control)

c) What is an event? Explain four events of the following :

i) Mouse

ii) Keyboard

Q5) Short Notes (Any 4) : **[4 × 4 = 16]**

a) Picture box.

b) Common dialog boxes (any 2).

c) Data grid.

d) Rich text box.

e) Explain subroutine in VB with syntax and example.

Total No. of Questions : 7] **SEAT No. :**

P687 **[Total No. of Pages : 1**

[4668] - 601
T. Y. B.C.A. (Semester - VI)
(601) E-COMMERCE
(2008 Pattern)

Time : 3 Hours] ***[Max. Marks : 80***

Instructions to the candidates:

1) ***Q. No. 7 is compulsory.***
2) ***Answer any four from remaining.***

Q1) What is E-commerce? Explain goals & functions of E-commerce. **[15]**

Q2) What is meant by www? Brief about cost, time & reach factors for building own website. **[15]**

Q3) Explain concept of EDI. Discuss applications & limitations of EDI. **[15]**

Q4) What do you mean by planning for e-commerce? Describe strategies for developing electronic commerce websites. **[15]**

Q5) Define electronic payment system. With help of suitable diagram describe process of EPS. **[15]**

Q6) Explain Internet marketing. Describe pros & cons of online shopping.**[15]**

Q7) Write short notes (Any Four) : **[20]**

a) C2G & B2G
b) E-Cyele
c) Web promotion.
d) Paperless bills.
e) E-governance.
f) Intranet.

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Total No. of Questions : 5] **SEAT No. :**

P688 **[Total No. of Pages : 2**

[4668] - 602
B.C.A. (Semester - VI)
(612) MULTIMEDIA SYSTEMS
(2008 Pattern)

Time : 3 Hours] ***[Max. Marks : 80***

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Draw diagram wherever necessary.***

Q1) Answer in short (any eight) : **[16]**

a) List any four MIDI components.

b) NTSC.

c) List system independent file formats.

d) What is storyboard.

e) DUD.

f) Hypertext.

g) Multimedia.

h) S-Video.

i) Node.

j) Quantization.

Q2) Answer the following (Any four) : **[16]**

a) Explain concept of system dependent file formats.

b) Define Multimedia Presentation.

c) Explain various video signal formats.

d) Explain conceptualization.

e) Distinguish between analog and digital video.

P.T.O.

Q3) Answer the following (Any four) : **[16]**

a) Explain 24 bit colour image.

b) Explain Types of synthesizer.

c) Explain RAID and its use in multimedia.

d) Explain Architecture of Hypertext.

e) Differentiate between descrete and continuous media.

Q4) Answer the following (Any four) : **[16]**

a) Explain various Music sequencing notations tools.

b) What is Nyquist Theorem?

c) Explain MIDI Messages.

d) Explain different Television Broadcasting standards.

e) Explain various Applications of multimedia systems.

Q5) Write short notes (Any four) : **[16]**

a) Types of DUD.

b) GIF.

c) Various formats of CD.

d) Hypermedia.

e) Guidelines for visual elements.

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