



**Post-Graduate Diploma in Computer
Application Examination, 2008
ELECTRONIC DATA PROCESSING**

DCA -103

Time Allowed: Three hours

Maximum Marks: 100

Attempt any five questions. All question carry equal marks.

Unit-I

1. What are the drawback of file management system due to which we move towards the DBMS approach ? What should be the properties of a good DBMS ? Also draw the structure of DBMS. (20)
2. Describe in detail
 - a. Data Independence
 - b. Database model

(7+13)

Unit II

3. Write short notes on :
 - a. Anomalies in Database
 - b. Relational constraint
 - c. Key's
 - d. Characteristic of centralized and client server DBMS
4. What do you mean by functional dependency ? Explain normalization up to BCNF with a suitable example.

(5*4)

(5+15)

Unit III

5. (a) Describe briefly the various types of fields supported in foxpro.(8)
(b) What is the difference between the following command:
 - (i) List and Display all
 - (ii) Delete and Pack
 - (iii) Find and Seek
6. (a) What is memory variable in foxpro ? How we can create and use it ? Explain with an example ?
(b) Explain the following command with syntax:
 - (i) Dimension

(4*3)

(8)

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- (ii) Scatter
(iii) Gather

(4*3)

Unit IV

7. (a) What do you mean by work area in foxpro ? How we can use it ?
Explain with a suitable example? (10)
(b) What do you understand by object linking and embedding ?
Explain it . (10)
8. (a) How indexing is differ from sorting ? How many types of index file
supported by foxpro ? (13)
(b) Write a program to reverse a given number digit without using
string operatiob ? (7)

Unit V

9. (a) What is the purpose of Set Filter command ? Give an example ?(5)
(b) An electric power distribution company charges its domestic
consumers as follows :

Consumption Units	Rate of charge
0-200	Rs.2.5 per unit
201-400	Rs. 500 plus 0.75 per unit Excess of 200 unit
401-600	Rs. 600 plus Rs. 1.20j per unit Excess of 400 unit
601 and above excess	Rs. 890 plus Rs. 1.50 per unit of 600 units

Write a program in foxpro to read the customer number and power
consumed and print the amount to be paid by the customer. (15)

10. (a) Explain the IIF() function with an example. (5)
(b) A bookshop sells three types of books,namely Science subjects,
Commerce subjects and Arts subjects. They offer discount @2%,
3%
And 4% on respective subjects.Besides this the shop also offers
another
Discount 2.5% on gross amount of purchase; if it exceeds Rs.
200.00.
Develop a program to calculate the bill amount for the same.
(15)



**Post-Graduate Diploma in Computer
Application Examination, 2008
JAVA**

DCA -107-b

Time Allowed: Three hours

Maximum Marks: 100

Attempt any five questions. All question carry equal marks.

Unit-I

11. (a) Write down minimum hardware and software requirement of java. (5)
 (b) What are command line argument ? Explain with suitable Example. (10)
 (c) Why java is a platform independent language ? (5)
12. (a) What is JVM ? Explain it. (8)
 (b) Write a program in java to multiply two 2D matrices A and B:
- $$C_{ij} = \sum_{K=1}^m a_{ik} b_{kj}$$
- Where $a_{ik} \in A$
 $b_{kj} \in B$
 $c_{ij} \in C$ (12)

Unit II

13. (a) Create a table to explain the precedence and associativity of Various operators of Java. Explain precedence and associativity With example. (10)
 (b) Write a program to calculate factorial of a given number using Recursion. (10)
14. (a) Explain labeled break and labeled continue with suitable example. (10)
 (b) Write a program to print the following pyramid :



A
 A B
 A B C
 A B C D

(10)

Unit III

15. (a) Explain various type of inheritance available in java. Write a program to explain inheritance. (10)
 (b) What is method overriding ? Explain it with suitable example.(10)
16. (a) What is stack ? Create your own stack class and use it. (10)
 (b) Explain abstract method and abstract class with suitable example. (10)

Unit IV

17. (a) Give an example where interface can be used to support multiple Inheritance. Develop a standalone java program for the Example. (10)
 (b) Explain the various levels of access protection available for Packages and their implications. (8)
18. (a) Explain life cycle of applet ? (10)
 (b) Explain how applets differ from standalone application. (10)

Unit V

19. (a) Create an applet to draw pie chart for the following data and data are
 Given through html file:
- | Year | Turnover(Rs.crores) |
|------|---------------------|
| 2001 | 110 |
| 2003 | 150 |
| 2005 | 100 |
| 2007 | 170 |
- (10)
- (b) Explain data input stream and data output stream classes. (10)

20. (a) Explain various types of layout used in java. (10)
 (b) Explain various listeners used in java to handle events. (10)



**Post-Graduate Diploma in Computer
Application Examination, 2008
INTRODUCTION TO IT AND PC
PRODUCTIVITY TOOLS**

DCA-001

Time Allowed: Three hours

Maximum Marks: 100

Attempt any five questions. All question carry equal marks.

Unit-I

1. Describe the following :
 - a. Describe the block diagram of computer system ? (10)
 - b. Discuss the processing unit with a suitable diagram. (10)
2. Describe the following questions :
 - a. Convert the following :
 - i. $(101010)_2 = (?)_{10}$
 - ii. $(50)_{10} = (?)_2$
 - iii. $(105)_8 = (?)_2$
 - iv. $(CEA)_{16} = (?)_2$
 - v. $(20.20)_{10} = (?)_2$
 - b. Short notes on :
 - i. BCD
 - ii. ASCII
 - iii. RAM
 - iv. IMPACT PRINTER
 - v. BARCODER PRINTER

Unit II

3. Describe the following questions :
 - a. What do you understand by memory ? Explain any two primary and secondary memory devices ? (10)
 - b. Describe GUI components and why windows operating system are very popular ? (10)
4. Describe the following questions :
 - a. What is classification of computer ? Explain with an example for each with their utilization. (10)
 - b. Which are the characteristics of computer ? Explain them ? (10)

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Unit III

5. Describe the following question :
- a. Write short notes on any two :
 - i. Header and footer
 - ii. Footnote and endnote
 - iii. Template and wizard
- (10)
- b. Differentiate between:
 - i. Notepad vs. Wordpad
 - ii. Scandisk vs. Disk Defragment
 - iii. Windows vs. Dialog Box
- (10)
6. Describe the following question :
- a. What is mail merge used ? Write down the steps to use mail merge.

(10)
 - b. What is word processor ? Write some function of word processor package.

(10)

Unit IV

7. Describe the following question :
- a. What is electronic worksheet ? Explain all the feature of MS Excel ?

(10)
 - b. Explain the function of the following:
 - i. Goal Seek
 - ii. Pivot Table
 - iii. Macros
 - iv. Filter

(10)
8. Describe the following question :
- a. Define the following charts :
 - i. Area chart
 - ii. Line chart
 - iii. Pyramid chart
 - iv. Cylinder chart

(10)
 - b. What is function in excel ? Write down the syntax of any five date and mathematical functions ?

(10)

Unit V

9. Describe the following question :
- a. Write short notes on the following :
 - i. Slide sorter view

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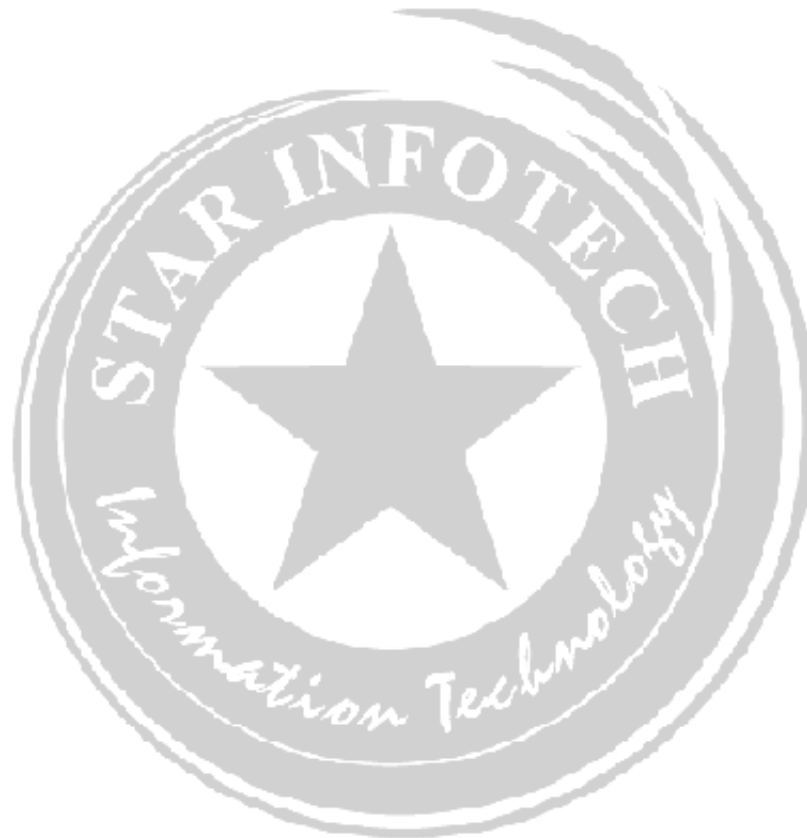
- ii. Organisation chart
- iii. Speaker notes
- iv. Animation

(10)

- b. Describe various components of power point presentation.(10)

10. Describe the following question :

- a. What are the steps for animation of various slides in power point presentation ? Explain. (10)
- b. What are the differences and similarities between slide transition and custom animation ? Explain an example. (10)





**Post-Graduate Diploma in Computer
Application Examination, 2008
OPERATING SYSTEM**

Paper :105

Time Allowed: Three hours

Maximum Marks: 100

Attempt any five questions. All question carry equal marks.

Unit-I

11. (a) What is the operating system ? Give functions of operating system As resource manager. (10)
- (b) What is the main advantage of multiprogramming ? Why was time Sharing not widespread on second generation of computers. (10)
12. (a) Discuss the different and essential properties of the following types Of operating systems :
- i. Batch
 - ii. Time sharing
 - iii. Real time
 - iv. Distributed
- (b) Explain the role of system call in operating system. List all system calls Related for process management. (10)

Unit II

13. (a) What is the necessity of process scheduling ? Discuss the various low Level scheduling policies. (10)
- (b) Distinguish between a program and a process. Describe a process life-cycle with the help of a process state diagram. (10)
14. (a) Explain the concept of process. What are the typical characteristics of A process needed to be maintained ? Explain. (10)
- (b) Discuss any one scheduling algorithm for process management. (10)

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Unit III

15. (a) What is a 'deadlock' ? Which is better 'deadlock prevention' or 'deadlock removal'; ? Explain. (8)
 (b) Give one algorithm for deadlock detection and removal. (12)
16. (a) Discuss the concept of 'semaphore'. Illustrate the application of semaphore in 'procedure-consumer' or any other problem. (12)
 (b) Compare the relative merits of paging and segmentation Techniques. (8)

Unit IV

17. (a) Discuss the need of a network operating system. Discuss its advantages over a single processor multiuser system.
 (b) Discuss I/O scheduling strategies ?
18. Under which circumstances would a client prefer a location transparent DFS ? Under which would client prefer a location independent DFS ? Discuss the reasons for their performance. (20)

Unit V

19. (a) What are the main feature pf a linux system ? Explain the architecture of LINUX operating system. (10)
 (b) Write a shell program to count the number of positive and negative numbers in a given list. (10)
20. (a) What are the key feature of 'Vi' editor of Unix ? (5)
 (b) Write short notes on following:
 1. Shell
 2. File structure of Unix
 3. 'Cat' and 'Cal' command of Unix O.S. (5+5+5)



**Post-Graduate Diploma in Computer
Application Examination, 2008
ADVANCED DATABASE MANAGEMENT**

DCA :102

Time Allowed: Three hours

Maximum Marks: 100

Attempt any five questions. All question carry equal marks.

UNIT-1

1. (a) Construct an object oriented Database schema definition for a hospital with set of patients and set of medial doctors . A log of various conducted tests is associated with each patient. Use inheritance where appropriate .
(b) Explain the concepts of generalization with the help of suitable example .
2. (a) Construct an object oriented Database Schema definition for car insurance company having more than one branch , with a set of customers each of which own a car. Each car has a number of recorded accidents associated with it . use class and aggregation where appropriate .
(b) Explain in brief with suitable example – object query language and encapsulation of OOPs.

UNIT-II

3. (a) Explain various concurrency control techniques used in distributed database system
(b) Explain the term used in DDBMS two phase locking.

Or

4. (a) Write the definition od DDBMS . Write advantage of DDBMS over central Database
(b) Explain with suitable diagram data placement and components of distributed Data processing system

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UNIT-III

5. (a) Discuss the Factors that affect query decomposition . How are guard conditions and attribute lists of fragments using query decomposition process.
- (b) Discuss the semi join method for executing an equijoin of two files located at different sites . Under what conditions is an equijoin strategy efficient ?
6. (a) What is the difference between attributes and element in XML ? List some of the important attributes used in specifying elements in XML scheme .
- (b) Explain the term datamining , also define the goals that datamining

UNIT-IV

7. (a) What is SQL ? How many types of SQL*plus commands ? Describe each of them with at least one example.
- (b) Write short note on Oracle procedures.
8. (a) What is Trigger ? Write down the uses and importance of trigger in various Database applications. Describe various types of trigger with the help of example.
- (b) Explain in brief SOL security commands with suitable illustration.

UNIT-V

9. (a) What in IMS Physical Database and Logical Database also explain DB2 internal.
- (b) Explain in brief RPG/400 eval expression and arithmetic functions.
- 10 .(a) Write a program in RPG/400 to find layout of three number
- (b) Write short notes on :
 - (i) DB2 external views
 - (ii) RPG/400 array and table.



**Post-Graduate Diploma in Computer
Application Examination, 2008
PROGRAMMING WITH C AND
VISUAL BASIC**

DCA :102

Time Allowed: Three hours

Maximum Marks: 100

Attempt any five questions. All question carry equal marks.

Unit-I

1. (a) Discuss the primary and user define data types available in C. (10)
(b) Explain various operators of C. (10)
2. (a) What do you mean by function ? How are they declared and called.
Differentiate between call by value and call by address. (12)
(b) Write a short notes on storage classes. (8)

Unit-II

3. (a) What is a pointer ? Write the advantages of using pointer ? Write a
program to sum elements of an array using pointer. (14)
(b) Explain the popular string functions. (6)
4. (a) What is an array ? Write a program to multiply 2 matrices of 3*3. (14)
(b) Explain pointer to a function giving example. (6)

Unit-III

5. (a) Differentiate between arrays and structure. Explain pointer to structure
With an example. (10)
(b) What is a stack ? Discuss the various operations that can be reformed
On a stack. (10)
6. (a) Write a algorithm for deletion from a doubly linked list. (10)
(b) Write an algorithm for insertion in a circular queue. (10)

Unit-IV

7. (a) Explain the various decision making and iterative statements used
In VB along with suitable example. (14)
(b) Write a program to find the maximum from three numbers by using the
concept of function. (6)
8. (a) What are controls ? list any three controls used in a form. Explain each
With example. Write a procedure that computes and prints the total

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- Number of controls in all forms within the current application. (15)
 (b) What is the difference between input validation and error trapping. (5)

Unit-V

9. (a) Explain any three graphic control used in VB. (5)
 (b) What do you understand with database connectivity to VB ? What are the options available to connect a database to VB ? Give a step by step procedure to connect a database field to a textbox control in a form. (15)
10. Differentiate between :
- Input box, Message box and display box
 - Image control and picture box
 - List box , Text box and combo box
 - SDI form and MDI form
 - File box, Dir list box and drive list box

(4+4+4+4+4)

