(PGDCA 01)

P.G.DIPLOMA EXAMINATION, MAY 2007.

Computer Applications

Paper I –INFORMATION TECHNOLOGY

Time: Three hours   Maximum: 75 Marks

Answer any FIVE questions

All Questions carry equal marks.

1. What is an information system ? How it is managed in organizations?

2. Explain framework for understanding Management Information systems.

3. What is program? Explain program development steps.

4. What is DBMS ? Explain various data models.

5. Describe the five generation levels of programming languages.

6. What are secondary storage devices ? Explain them in detail.

7. Write the difference between system software and application software.

8. Explain telecommunications and write its applications.

9. Define (a) TCP/IP (b) http (c) URL   (d) home page.

10. What is internet ? Explain various Internet applications.

(PGDCA 02)

P.G.DIPLOMA EXAMINATION, MAY 2007.

Computer Applications

Paper II – PROGRAMMING WITH C++

Time: Three hours   Maximum: 75 Marks

Answer any FIVE questions

All Questions carry equal marks.

1. Explain various features of OOPs.

2. Explain operator precedence in C++

3. Explain about objects and classes in C++

4. What is the difference between C++ struct and class ? Explain with example.

5. Explain about friendly functions.

6. Define a constructor. Explain void constructor, Default constructor and Parameterized constructor with relevant examples.

7. Explain static member data and static member function with examples

8. Discuss about exception handling with examples

9. Explain briefly about reference variables in C++ ?

10. Distinguish between function template and template class with relevant examples.

(PGDCA 03)

P.G.DIPLOMA EXAMINATION, MAY 2007.
Computer Applications
Paper III – COMPUTER ORGANIZATION

Time: Three hours   Maximum: 75 Marks

Answer any FIVE questions

All Questions carry equal marks.

1. Explain the important features of various computer generations.

2. Explain the designing of performance

3. Explain interrupts and methods to dealing with multiple interrupts.

4. Explain PCI bus structure in detail.

5. Explain magnetic disk read and write mechanism

6. Briefly explain seven RAID levels.

7. Explain Addition and Subtraction of integers and draw the block diagram of hardware to implement these operations.

8. Explain floating point representation of binary numbers and IEEE standard.

9. Explain the CPU organization with block diagram.

10. Explain instruction cycle with the help of state diagram.

(PGDCA 04)

P.G.DIPLOMA EXAMINATION, MAY 2007.
Computer Applications
Paper IV – DATA STRUCTURES

Time: Three hours   Maximum: 75 Marks

Answer any FIVE questions

All Questions carry equal marks.

1. Write a program for Matrix multiplication

2. Explain about various stack applications.

3. Explain about Single and Double linked lists with example.

4. Write the procedure for two stacks in a single array.

5. What is a linked list and give the structure representation of a linked list ?

6. Explain about Linked stack.

7. What is a Doubly ended queue and give examples ?

8. Explain about a procedure for searching for a element in a given list.

9. Explain about Circular Linked list and give its advantages over Singly Linked List.

10. Explain about the insertion and deletion of a node in a Binary Search Tree.

(PGDCA 05)

P.G.DIPLOMA EXAMINATION, MAY 2007.

Computer Applications

Paper V – OPERATING SYSTEMS

Time: Three hours   Maximum: 75 Marks

Answer any FIVE questions

All Questions carry equal marks.

1. Elaborate on basic concepts of an operating system.

2. What do you mean by inter process communications (IPC) ? Explain the basic ways of implementing I.P.C.

3. Explain any three process scheduling algorithms.

4. Elucidate on design issues for paging system.

5. Discuss various methods of implementing files and directories.

6. Explain deadlock prevention measures.

7. How CPU scheduling is done in UNIX O/S.

8. Explain Bankers algorithms for avoiding deadlocks

9. Explain about swapping and swapping overheads.

10. Write short notes on the following
    a) Belady's anomaly   (b) Device drivers.

(PGDCA 06)

P.G.DIPLOMA EXAMINATION, MAY 2007.

Computer Application

Paper VI – DATA BASE MANAGEMENT SYSTEMS

Time: Three hours   Maximum: 75 Marks

Answer any FIVE questions

All Questions carry equal marks.

1. Explain (a) DDL   (b) DML   (c) Data dependency
   (d) Data Independency   (e) Data Dictionary.

2. Explain about various Boycee Codd Rules

3. Write a short note on :
   a) Primary Key   b) Functional Dependency   c) 2nd Normal Form
   d) Foreign Keye) Transitive Dependency.

4. Explain about data Redundancy and explain the concept of Normalization, write about 1st and 2nd Normal forms.

5. Write about Hierarchical Data base.

6. What is ER model ? Explain about various symbols used in ER diagram.

7. Differentiate between Hierarchical and Network Database.

8. Define a Relation, degree of a Relation and Relational Schema.

9. Write about Data Base Operating and maintenance.

10. Explain about the database maintenance process.

(PGDCA 07)

P.G.DIPLOMA EXAMINATION, MAY 2007.

Computer Applications

Paper VII – ACCOUNTS AND FINANCE

Time: Three hours   Maximum: 75 Marks

Answer any FIVE questions

1. Distinguish between journal and ledger. Explain with some examples

2. Correct the following Trail Balance (In Rs.)

Dr.	In. Rs.	Cr.	In.Rs.
Return outwards	16,000	Debtors	15,000
Opening stock	34,200	Carriage outward	5,000
Salaries	12,000	Capital	55,200
Creditors	28,000	Machinery	18,000
Bank	45,000	Return inward	3,000
Carriage inward	6,000	Discount received	4,000
Rent received	3,000	Trade expenses	6,000
Discount allowed	2,000	Sales	1,40,000
Purchases	1,00,000	Building	20,000
Bills payable	20,000	....	
	2,66,200		2,66,200

3. In Cash book a journal on ledger ? What are different types of cash books ?

4. The following is trial balance of Mr.Bharat on 31st Dec, 2006.

Particulars	Dr(Rs.)	Cr(Rs.)
Capital		4,000
Sundry Creditors		5,200
Plant and Machinery	5,000	
Office furniture and fittings	260	
Stock as on 1st Jan, 2006	4,800	
Motor van	1,200	
Sundry debtors	4,570	
Cash in hand	40	
Cash at bank	650	
Wages	15,000	
Salaries	1,400	
Purchases	21,350	
Sales		48,000

Particulars	Dr(Rs.)	Cr(Rs.)
Bills payable		560
Bills receivables	720	
Return inwards	930	
Provision for doubtful debts		250
Drawings	700	
Returns outwards		550
Rent	600	
Factory lighting and heating	80	
Insurance	630	
General expenses	100	
Bad debts	250	
Discount	650	370
Total	58,930	58,930

The following adjustments are to be made:

(a) Stock on 31st Dec, 2006 Rs.5,200

(b) 3 months factory lighting and heating is due, but not paid Rs.30

(c) 5% depreciation written off on furniture

(d) Write off further bad debts Rs.70

(e) Provision for doubtful debts to be increased to Rs.300 and provisions for discount on debtors @2% to be made

(f) During year machinery was purchased for Rs.2,000 but it was debited to purchase a/c. Prepare Trading and Profit and Loss Account and Balance Sheet.

5. What do you mean by Bank reconciliation? Is it necessary ?

6. Give a detailed account of cost classification.

7. Describe the functions of finance and explain the nature of financial decision making

8. Discuss the objectives of Ratio Analysis

9. The Ratios relating to Cosmos Ltd are given as follows:

    Gross Profit Ratio : 15%

    Stock Velocity : 6 months

    Debtors Velocity : 3 months

    Creditors velocity : 3 months

    Gross profit for year ending Dec 31st, 2006 amounts to Rs.6,00,000 closing stock is equal to opening stock.

Find out :

    (a) Sales (b) Closing debtors   (c) Sundry debtors (d) Sundry creditors

10. Describe the need and determinants of working capital.

(PGDCA 08)

P.G.DIPLOMA EXAMINATION, MAY 2007.

Computer Applications

Paper VIII – GRAPHICS

Time: Three hours   Maximum: 75 Marks

Answer any FIVE questions

1.   Explain various graphic input and output devices

2.   What is scan conversion? Write an algorithm for the scan conversion of a line.

3.   Explain Bresenhaui's algorithm for the scan conversion of a circle

4.   Explain various two dimensional transformation along with the transformation matrices.

5.   Explain window-to-viewport transformation.

6.   Find the transformation matrix for finding image of an object in the line y=mx+c

7.   Explain clipping. Write an algorithm for clipping a line.

8.   Explain parallel projection. What are the differences between parallel and perspective projections.

9.   Explain the differences between vector and raster graphics

10. Explain the display file structures