(PGDCA 01)

PG DIPLOMA EXAMINATION, MAY – 2015

COMPUTER APPLICATIONS

Paper – I : Information Technology

Time : 3 Hours **Maximum Marks : 75**

Answer any Five questions.

All questions carry equal marks.

1) What are the uses of IT in business?

2) Explain the use of IT in modern organizations.

3) Distinguish between data, information and knowledge.

4) Give an account of computer application software.

5) Bring out telecommunication applications.

6) Describe different types of networks.

7) How do business men use internet?

8) Explain the use of enterprise information portal by business.

9) What are the uses of various kinds of input and output technologies?

10) Distinguish between hardware and software.

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(PGDCA 02)

PG DIPLOMA EXAMINATION, MAY – 2015

COMPUTER APPLICATIONS

Paper - II : Programming with C++

Time : 3 Hours **Maximum Marks : 75**

Answer any Five questions. ***(5 x 15 = 75)***

All questions carry equal marks.

1) Explain the structure of C++ program with an example.

2) Explain the following with example program :

a) Call by value

b) Call by address

c) Call by reference.

3) Write a C++ program for linear search using arrays.

4) Explain string handling functions with example.

5) Discuss about pointers and references in detail.

6) Explain about overloading binary operators with example program.

7) What is Inheritance? Explain different types of inheritance in detail?

8) What is Template? Explain function template and class template in detail.

9) Discuss about standard C++ Vectors in detail.

10) Explain about C-strings in detail.

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(PGDCA 03)

PG DIPLOMA EXAMINATION, MAY – 2015

COMPUTER APPLICATIONS

Paper – III : Computer Organization

Time : 3 Hours **Maximum Marks : 75**

Answer any Five questions.

All questions carry equal marks.

1) What are the functions of computers?

2) Bring out the structure of CPU.

3) Explain the possible states that define in instructions.

4) Enumerate the languages used in computers.

5) How are data written on a magnetic disk?

6) Elucidate the recent developments in computers.

7) Explain the data supported by user visible registers.

8) Discuss the input-output devices of a computer.

9) Describe the third generation computers.

10) Give an account of components of embedded system.

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(PGDCA 04)

PG DIPLOMA EXAMINATION, MAY – 2015

COMPUTER APPLICATIONS

Paper – IV : Data Structures

Time : 3 Hours **Maximum Marks : 75**

Answer any Five questions.

All questions carry equal marks.

1) Explain the differences between linked list and arrays.

2) What is a pointer? Write a program using pointers.

3) What is Single linked list? Explain the operations of SLL.

4) Explain the applications of Queues in detail.

5) Discuss about the Infix, Prefix and Postfix expressions using stacks.

6) What is a binary tree? Explain about the operations of binary tree.

7) Explain binary tree traversals in detail with neat diagram.

8) Discuss about Binary search trees and Heap trees.

9) Explain heap sort with an example program.

10) Explain linear search and binary search with example.

(PGDCA 05)

PG DIPLOMA EXAMINATION, MAY – 2015

COMPUTER APPLICATIONS

Paper - V : Operating Systems

Time : 3 Hours **Maximum Marks : 75**

Answer any Five from the following ***(5 x 15 = 75)***

All questions carry equal marks

1) Explain in detail structure of the Operating System and types of Operating System.

2) Enumerate Scheduling Concepts with suitable example. Compare the performance of FCFS, SFS algorithms using C++ program.

3) Describe in detail critical-section problem & various solutions. Examine classic problems of synchronization.

4) Discuss in detail paging concept with neat diagram.

5) Elaborate Page Replacement Algorithms with suitable examples.

6) Describe File-system Implementation with various allocation methods.

7) Explain in detail Disk scheduling and RAID Structure.

8) Discuss in detail I/O Hardware and application I/O interface.

9) Enumerate cryptography as a security tool with suitable example.

10) Discuss about the types of threats and principles of protection in operating systems.

(PGDCA 06)

PG DIPLOMA EXAMINATION, MAY – 2015

COMPUTER APPLICATIONS

Paper – VI : Data Base Management Systems

Time : 3 Hours **Maximum Marks : 75**

Answer any Five questions. ***(5 x 15 = 75)***

All questions carry equal marks.

1) What is DBMS? Explain the database concepts in detail.

2) Explain different data models in detail with neat illustration.

3) Discuss about the object oriented model and functional model in detail.

4) Explain Entity relationship design in detail taking an example of your own.

5) Explain Network database management system in detail.

6) Discuss about the components of Structured Query Language (SQL).

7) Describe the relational calculus operations in detail.

8) Explain the functions of Database Administrator (DBA).

9) Discuss about RDBMS in detail with example.

10) Explain various security issues in database systems.

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(PGDCA 07)

PG DIPLOMA EXAMINATION, MAY – 2015

COMPUTER APPLICATIONS

Paper – VII : Accounts & Finance

Time : 3 Hours **Maximum Marks : 75**

Answer any Five questions

All questions carry equal marks

1) Explain the subsidiary books maintained in accounts.

2) Classify costs with examples.

3) State the tools used in financial analysis.

4) What are the considerations in financial decision making?

5) Bring out the limitations of ratio analysis.

6) How do you estimate working capital requirements of a concern?

7) What are the managerial uses of funds flow statement?

8) The following balances have been taken from the account books of Surya Chemicals Ltd. as on the 31st August, 1975.

	Amount Rs.		Amount Rs.
Debentures interest	1,250	Sales	41,35,000
Purchases	38,20,000	Discount received	4,350
Wages	1,42,500	Salaries	33,500
Income tax	13,500	Electricity	4,250
Director's fees	17,000	Repairs	6,250

Trade expenses	15,000	Rates & interest	10,000
	Amount Rs.		Amount Rs.
Advertising	65,000	Packing materials	8,250
P & L Account 1-9-74	1,50,350	Share Capital	10,00,000
5% debentures	50,000	Premises	7,00,000
Furniture	50,000	Stock 1-9-74	6,10,000
Sales ledger balances	18,500	Cash on hand	700
Bought ledger balances	72,500	Cash reserve	75,000
Accumulated depn. On furniture	7,500	Bank O.D.	21,000

Prepare the profit and loss account and the Balance Sheet after taking into account the following :

a) Closing stock was Rs. 7,93,350.

b) Furniture to be depreciated at 10% on the straight line basis.

c) Rs. 1,750 for doubtful debts to be provided.

d) Rs. 5,000 to be transferred to Capital reserve.

e) Repairs outstanding : 23,540.

f) Insurance Repaid : 3,300.

g) Stock of packing materials at the end accounted to Rs. 4,000.

h) Provision for income tax : Rs. 77,500 and for dividend at 6%.

9) Journalize the following transactions in the books of Ali

2004

Dec. 1 Started business with cash Rs. 60,000.

1 Paid into the bank Rs. 25,000.

3 Goods bought for cash Rs. 20,000.

5 Purchased furniture and paid by cheque Rs. 5,000.

8 Sold goods to Amit Rs. 15,000.

11 Sold goods worth Rs. 10,000 and received Rs. 6,500 from mohan.

15 Purchased goods and paid by cheque Rs. 12,500.

17 Amit returned goods Rs. 1,000.

24 Withdrew from bank for Personal use Rs. 3,000.

29 Mohan paid Rs. 3,500 by cheque.

30 Paid Rent Rs. 2,500.

10) The following balances were extracted from the boxes of Rajaram on 31-12-2004.

Prepare final accounts.

	Rs.		Rs.
Capital Account	9,000	Purchases	15,000
Furniture	800	Carriage Outwards	200
Creditors	1,600	Salaries	2,000
Premises	13,000	Sales	18,000
Bad debts	80	Rent received	800
Cash	40	Discount allowed	180
Drawings	900	Loan	4,000
Overdraft at bank	905	Reserve for bad debts	100
Debtors	1,500	Expenses	705

Adjustments :

a) Make Provision for bad debts @3%.

b) Salary due Rs. 200.

c) Stock on 31-1-2004 Rs. 3,500.

d) Write off 10% from furniture for depreciation.

e) Due from tenants rent Rs. 100.

(PGDCA 08)

PG DIPLOMA EXAMINATION, MAY – 2015

COMPUTER APPLICATIONS

Paper – VIII : Computer Graphics

Time : 3 Hours **Maximum Marks : 75**

Answer any Five questions. ***(5 x 15 = 75)***

All questions carry equal marks.

1) Explain line drawing algorithms in detail.

2) Discuss about translation transformation in detail.

3) Explain clipping algorithms in detail.

4) Write and explain about graphical Input devices.

5) Discuss about the event handling in detail.

6) Explain about Solid area scan Conversion.

7) Discuss about the fundamentals of Raster graphics.

8) Write about the principles and applications of Computer Assisted Animation.

9) Discuss about Raster display Hardware.

10) Explain the realism in 3D graphics.

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