(PGDCA 01)

PG DIPLOMA DEGREE EXAMINATION, DECEMBER – 2016
COMPUTER APPLICATIONS
Information Technology

Time : 3 Hours   **Maximum Marks: 70**

__Answer Any Five questions__

__All questions carry equal marks__

Q1) How does IT support various functionalities at different organization levels?

Q2) Write a short note on URL, Internet and Intranet.

Q3) Write about various types of printers.

Q4) Explain telecommunication applications.

Q5) Write about Database management systems.

Q6) Write a note on Strategic hardware issues.

Q7) Explain the concept of Extranet.

Q8) Write a short note on Modem and Router.

Q9) Explain different types of network topologies.

Q10) Define application software. Explain its types.

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(PGDCA 02)

Total No. of Questions : 10]   [Total No. of Pages : 01

PG DIPLOMA DEGREE EXAMINATION, DECEMBER – 2016
COMPUTER APPLICATIONS
Programming with C++

Time : 3 Hours   **Maximum Marks: 70**

Answer Any Five questions
All questions carry equal marks

Q1) State the advantages of OOP over procedure oriented programming.

Q2) Explain the concept of function overloading with suitable examples.

Q3) What is a constructor? Explain different types of constructor.

Q4) Write a program to implement multiple inheritance.

Q5) What is a virtual function? Illustrate with the help of a program.

Q6) Explain binary operator overloading using member function with a sample program.

Q7) What is a reference variable? State its purpose clearly and also state how is it different from a pointer.

Q8) Write a note on call by value and call by reference with proper illustrative programs.

Q9) Explain exception handling mechanism in C++.

Q10) Explain any 5 string handling functions in C++.

(PGDCA 03)

Total No. of Questions : 10] [Total No. of Pages : 01

PG DIPLOMA DEGREE EXAMINATION, DECEMBER – 2016
COMPUTER APPLICATIONS
Paper – III : Computer Organization

Time : 3 Hours Maximum Marks: 70

Answer Any Five questions

All questions carry equal marks

Q1) Explain some basic aspects of computer performance.

Q2) Explain bus inter connection scheme with a diagram.

Q3) How are data written on a magnetic disk?

Q4) Explain in detail the input-output devices of a computer.

Q5) Explain Redundant Array of Independent Disks.

Q6) How the conversion can be done between Different Bit Lengths?

Q7) Explain the terms track, cylinder and sector.

Q8) What is the sign – extension rule for twos complement numbers?

Q9) Explain the addition of positive numbers with an example.

Q10) Explain about the Read only memories in detail.

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(PGDCA 04)

Total No. of Questions : 10]   [Total No. of Pages : 01

P.G. DIPLOMA DEGREE EXAMINATION, DECEMBER – 2016
COMPUTER APPLICATIONS
Data Structures

Time : 3 Hours   **Maximum Marks: 70**

Answer Any Five questions
All questions carry equal marks

Q1) Convert the given expression into postfix and prefix notations using stack ab+[c(d-e)/f/g^h]k.

Q2) Explain quick sort using the following input: 10, 8, 9, 6, 12, 15, 13, 2, 18.

Q3) Explain any 2 searching techniques.

Q4) Define Stack and state the operations performed on stack.

Q5) Define list and write an algorithm to implement DLL.

Q6) Explain tree traversal algorithms.

Q7) Write a program for matrix addition.

Q8) Explain Recursion and write a program to implement recursion.

Q9) Explain the uses of pointer and write a program using pointers.

Q10) State the advantages and dis-advantages of linked lists.

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(PGDCA 05)

Total No. of Questions : 10]   [Total No. of Pages : 01

P.G. DIPLOMA DEGREE EXAMINATION, DECEMBER – 2016
COMPUTER APPLICATIONS
Operating System

Time : 3 Hours   **Maximum Marks: 70**

Answer Any Five questions

All questions carry equal marks

Q1) Define Operating System. Explain its types.

Q2) What is scheduling? Explain any 3 process scheduling algorithms with an example.

Q3) Use the following input sequence of page numbers: 5, 3, 0, 1, 6, 7, 0, 1, 8, 5, 3, 1 consider the frame size as 3 and Calculate the number of page faults using LRU algorithm.

Q4) Explain the concept of paging.

Q5) What is a scheduler? Explain different types of schedulers.

Q6) Explain deadlock and its prevention in detail.

Q7) Briefly describe the working of semaphores.

Q8) Define process? Explain different states of a process.

Q9) What is a Thread? Explain different types of threads.

Q10) How is security implemented in OS?

(PGDCA 06)

Total No. of Questions : 10]   [Total No. of Pages : 01

P.G. DIPLOMA DEGREE EXAMINATION, DECEMBER – 2016
COMPUTER APPLICATIONS
Database Management System

Time : 3 Hours   **Maximum Marks: 70**

Answer Any Five questions
All questions carry equal marks

Q1) Explain different data models.

Q2) Illustrate the steps in database design.

Q3) What is an ER diagram? Draw the symbols used to represent an ER diagram and state their purpose.

Q4) What is the importance of Database Recovery? Discuss different recovery procedures.

Q5) Explain any 3 PC-FOCUS command.

Q6) Write a short note on: Primary, Secondary, Candidate and surrogate keys.

Q7) What is normalization? Explain any 3 normal forms.

Q8) Write a short note on Relational algebra.

Q9) Explain SET operators in SQL with suitable examples.

Q10) Explain different types of locking protocols.

P.G. DIPLOMA DEGREE EXAMINATION, DECEMBER – 2016

COMPUTER APPLICATIONS

Paper – VII : Accounts & Finance

Time : 3 Hours   Maximum Marks: 70

Answer Any Five questions
All questions carry equal marks

Q1) Bring out the limitations of ratio analysis.

Q2) What do you mean by double entry system?

Q3) Explain the components of working capital.

Q4) Classify costs with example.

Q5) What are the uses for the preparation of ratio analysis?

Q6) Difference between funds flow and cash flow statement.

Q7) Explain the methods of preparing trial balance.

Q8) Enter the following transaction in the journal of Nayar and them into ledger account:

2010	Dec 1	commenced with business with cash	45,000
	Dec 4	purchased goods for cash	2,500
	Dec 5	paid for wages	500
	Dec 9	goods sold for cash	8,000
	Dec 11	purchased goods from Lalita	7,000
	Dec 15	goods sold to Shekhar	500

Dec 23 received cash from Shekhar   1,200

Q9) From the following transactions in three column cash book:

2004 Dec 1 cash in hand 14,000 balance at bank 10,000

Dec 3 cash sales 6,000

Dec 5 paid into bank 7,000

Dec 7 received a cheque from Suresh 2,000

Dec 8 paid into bank Suresh cheque 2,000

Dec 10 paid to Amar by cheque 980 in full settlement of his account 1,000

Dec 11 withdraw from bank for office use 1,000

Dec 12 goods purchased from Naveen 5,000

Dec 13 purchased of furniture 3,000

Dec 14 received a cheque from John for Rs. 10,000 and paid into bank for same day

Dec 17 paid commission to Rama 500

Dec 20 drew a cheque for Rs. 800 for personal use

Dec 24 paid salaries 2,000

Q10) On 31st March 2011, the following trial balance as extracted from the books of Ajay:

Particulars	Debit	Credit
Capital		90,000
Plant and machinery	80,000	
Sales		4,07,000
Purchases	2,60,000	
Returns	6,000	5,750
Opening stock	30,000	

Discount	350	800
Bank charges	75	
Debtors	45,000	
Creditors		25,000
Salaries	26,800	
Wages	40,000	
Carriage inwards	750	
Carriage outward	1,200	
Bad debts provision		525
Rent	10,000	
Advertisement	2,000	
Cash	900	
Bank	6,000	
Furniture	20,000	
Total	5,29,075	5,29,075

Adjustments:

a) Closing stock 35,000.

b) Plant and machinery @ 15% and furniture @ 10%.

c) Interest on capital 10%.

d) Transfer 15% of profit to general reserve.

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(PGDCA 08)

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P.G. DIPLOMA DEGREE EXAMINATION, DEC. – 2016
COMPUTER APPLICATIONS
Computer Graphics

Time : 3 Hours   **Maximum Marks: 70**

Answer any 5 questions
All questions carry equal marks

Q1) Explain the features of Computer Graphics and state its applications.

Q2) Discuss the various video display devices with a neat diagram.

Q3) Explain Cyrus-beck algorithm for line clipping.

Q4) Explain graphical input devices in detail.

Q5) Define clipping ? Explain Cohen-Sutherland line clipping algorithm.

Q6) Explain 3D viewing functions.

Q7) Explain about solid area scan conversion.

Q8) Explain any 2 polygon clipping algorithm.

Q9) Explain depth-sorting algorithm for visible surface detection.

Q10) Elaborate about 3D graphics.

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