PGDCA I SEMESTER EXAMINATION 2010-11

Course Code: PCA101 **Paper ID: 0121101**

Computer Fundamentals and MS-Office

Time: 3 Hours **Max. Marks: 75**

Note: Attempt six questions in all. Q. No. 1 is compulsory.

1. Answer any five of the following (limit your answer in 50 words). (3x5=15)
   a) What do you mean by digital computer?
   b) What is difference between hardware and software?
   c) Convert decimal 89 to its equivalent binary number.
   d) Convert the fractional binary number (0.1101) to its equivalent decimal number.
   e) How will you open an existing word document?
   f) Write down the steps involved in copying data with drag and drop in excel worksheet.
   g) What are the various chart options available in MS-Excel?
   h) How can you create a new presentation in Power Point?

2.
   a) What do you understand by memory hierarchy? Explain it. (6)
   b) How the computers are classified on the basis of multiplicity of instructions stream and data streams? (6)

3.
   a) What is the difference between impact and non-impact printer? (6)
   b)
      i) Add (-14) and (+9) using binary number system. (3)
      ii) Convert the following hexadecimal number to their octal equivalent (D9)16 and (3F2)1 (1.5+1.5)

4.
   a) Multiply 89 and 14 using binary number system. (6)
   b) Divide 65 by 13 using binary division. (6)

5.
   a) What are BCD codes? Discuss their merits and demerits. What are their area of applications? (6)
   b) Describe the various options available in main menu bar of MS-Word. (6)

6.
   a) What are the various application of MS-Excel. (6)
   b) Write down the steps involved in printing a presentation. (6)

7.
   a) What do you mean by setting a slide show? (6)
   b) How can you design a form using form wizard? (6)

8. Write short notes on the following: (4x3=12)
   a) Compiler
   b) Interpreter
   c) VDU (Visual Display Unit)

PGDCA I SEMESTER EXAMINATION 2010-11

Course Code: PCA102 **Paper ID: 0121101**

Programming in 'C' Language

Time: 3 Hours **Max. Marks: 75**

Note: Attempt six questions in all. Q. No. 1 is compulsory.

1. Answer any five of the following (limit your answer in 50 words). (3x5=15)
   a) What is basic importance of C language?
   b) What is the largest permissible value of floating point constant? Compare with integer constant.
   c) How a for loop can be different with do-while loop?
   d) What is difference between array and string?
   e) What do you mean by function prototyping? Write down the advantages of function.
   f) What are input and output functions written in C for files?
   g) What is basic difference between call by value and call by reference?
   h) What is the difference between Standard Library function and user defined function?

2. What do you mean by operators? Explain different types of operators available in C with suitable examples. (12)

3.
   a) Write a program to generate Fibonacci series. The user enters the limit of series. (6)
   b) How a switch case statement can be differentiated from multi way if-else statement? (6)

4.
   a) What is purpose of keyword void in function declaration? What is the purpose of void in function definition? (6)
   b) Prepare a function program to sort an array of integers into ascending order. (6)

5.
   a) How are arrays usually processed in C? Can entire arrays be processed with single instructions, without using repetition? (6)
   b) Write an interactive C program to create a matrix of size M*N and find sum of each row. (6)

6.
   a) Differentiate between array of pointers and pointer to pointer with suitable examples. (6)
   b) What is difference between a union and structure? Write a structure definition having elements: name, rollno, class, sex and height for 50 students. (6)

7.
   a) What is meant by the storage class of a variable? Explain four storage class specifications included in C? (6)
   b) Explain user defined function and built in function with suitable examples. (6)

8. Write short notes on the following: (4x3=12)
   a) File handling
   b) Preprocessor Directives
   c) Control statements.

PGDCA I SEMESTER EXAMINATION 2010-11

Course Code: PCA103 **Paper ID: 0121101**

Data Base Management System

Time: 3 Hours **Max. Marks: 75**

Note: Attempt six questions in all. Q. No. 1 is compulsory.

1. Answer any five of the following (limit your answer in 50 words). (3x5=15)
   a) What are the attributes of primary key?
   b) Explain internal layer in data models.
   c) Write syntax to represent union and minus with their respective results.
   d) What are different data types in SQL?
   e) Define first normal form with appropriate examples.
   f) What do you mean by functional dependency?
   g) What are the conditions to occur dead-lock?
   h) What is concurrency and write the name of concurrency control technique?

2. What do you mean by data independence and explain physical data independence and logical data independence? (12)

3.
   a) What is referential integrity and entity integrity? (4)
   b) What are different SQL operators? Explain generalization and aggregation. (8)

4. What is the difference between 2nd normal form and 3rd normal form with examples? (12)

5. What are the recovery algorithm from transaction failure and explain log based recovery in detail? (12)

6. Explain time stamp protocols and validation based protocol of concurrency control. (12)

7. What do you mean by data base management system also explain its architecture. (12)

8. What is multi-value dependency and explain 5th normal form with example. (12)

PGDCA I SEMESTER EXAMINATION 2010-11

Course Code: PCA104 **Paper ID: 0121101**

Software Engineering

Time: 3 Hours **Max. Marks: 75**

Note: Attempt six questions in all. Q. No. 1 is compulsory.

1. Answer any five of the following (limit your answer in 50 words). (3x5=15)
   a) Define software crisis. What are the possible solutions to the present software crisis?
   b) What do you understand by Life Cycle Model of software development?
   c) Discuss the term cohesion and coupling in context of software design?
   d) What do you understand by alpha testing and beta testing?
   e) Explain the structured approach to top-down and bottom-up design.
   f) Define product and process in context of software engineering.
   g) Distinguish between 'Error' and 'Failure'
   h) Compare ISO and SEI CMM models.

2. What do you understand by software development process? What problems might occur, if a software development organization does not use any specific development process? (12)

3. Perform a comparative study between Waterfall Model and Spiral Model. (12)

4.
   a) Compare the Object-Oriented and Function–Oriented approaches to software design. (6)
   b) Discuss the role of management in software development. (6)

5. Define the term risk in software development. What are the risk management activities that are performed? (12)

6.
   a) A software fails even after it has passed from acceptance testing. Do you agree? Justify. (6)
   b) Explain the significance of bath tub curve of software reliability with the help of suitable diagram. (6)

7. Distinguish between software verification and software validation. When is each of these performed in software life cycle? Can one be used in place of the other? Justify your answer. (12)

8. Distinguish between (any two) (6x2=12)
   a) Test Case and Test Suit
   b) Top down and Bottom up Integration
   c) Black-Box and White-Box Testing.

PGDCA FIRST SEMESTER EXAMINATION 2010-11

Course Code: PCA105 **Paper ID: 0111119**

Foundation English

Time: 3 Hours **Max. Marks: 75**

Note: Attempt six questions in all. Q. No. 1 is compulsory.

1. Answer any five of the following (limit your answer in 50 words). (3x5=15)
   a) Write whether the nouns underlined are countable or uncountable:
      i) Do you take onion? Give me one onion.
      ii) Let me enjoy this music.
      iii) How many dogs do you have?
   b) Define adjective. Give two examples.
   c) What is homophone? Give two examples.
   d) What is prefix? Give two examples.
   e) What are the 7c's of communication?
   f) What is a report? Why a report is written?\
   g) What are the central components of a paragraph?
   h) Write a note on the importance and need of oral communication.

2. Identify the subject and the predicate parts in the following sentences: (12)
   a) Mangoes are fruits.
   b) My branch is electrical.
   c) Information technology is a new subject.
   d) This is the last sentence of the exercise.
   e) The degradation of standards has affected education.
   f) There is a lady waiting for you.

3. Substitute one word for the parts underlined in the sentences given below: (12)
   a) She must consult a doctor who treats mental ailments.
   b) A lizard is an animal that creeps on the ground.
   c) There is something which cannot be explained.
   d) King Henry was an absolute ruler.
   e) One who knows many languages?
   f) He delivered his first speech in public.

4. Write a note on the process of communication. (12)

5. Write a note on the structure of a report. (12)

6. Write a paragraph on any one of the following topics (Word limit 200) (12)
   a) God lives in small things
   b) We live in deeds, not in years.

7. Write an application for a job. (Any job of your choice) (12)

8. What is communication? Write a note on the importance of communication. (12)