Post Graduate Diploma in Computer Applications – I Semester
INTERNAL ASSIGNMENT QUESTIONS
(November, 2017)

DIRECTOR
Prof. SHIVARAJ

PROF. G. RAM REDDY CENTRE FOR DISTANCE EDUCATION
(RECOGNISED BY THE DISTANCE EDUCATION BUREAU, UGC, NEW DELHI)
OSMANIA UNIVERSITY

Dear Students,

All the II semester students of PG Diploma in Computer Application has to write 2 Assignments for each paper and submit **Assignment** for each paper compulsorily. Each assignment carries **20 marks.** University Examinations will be held for **80 marks**. The concerned faculty evaluates these assignment scripts. The marks awarded to you will be forwarded to the Controller of Examination, OU for inclusion in the University Examination marks. If you fail to submit Internal Assignments before the stipulated date, the internal marks will not be added to University examination marks under any circumstances. **The assignment marks will not be accepted after the stipulated date.**

You are required to **pay Rs.300/- fee** towards Internal Assignment marks through DD (in favour of Director, PGRRCDE, OU) and submit the same along with assignment at the concerned counter **on or before 12th February, 2017** and obtain proper submission receipt.
ASSIGNMENT WITHOUT THE DD WILL NOT BE ACCEPTED

Assignments on Printed / Photocopy / Typed papers will not be accepted and will not be valued at any cost.   Only <u>hand written Assignments on A/4 size paper (one side only)</u> will be accepted and valued.

Methodology for writing the Assignments:

1. First read the subject matter in the course material that is supplied to you.
2. If possible read the subject matter in the books suggested for further reading.
3. You are welcome to use the PGRRCDE Library on all working days including Sunday for collecting information on the topic of your assignments.
    (10.30 am to 5.00 pm).
4. Give a final reading to the answer you have written and see whether you can delete unimportant or repetitive words.
5. The cover page of the each theory assignments must have information as given in FORMAT below.

FORMAT

    a. NAME OF THE COURSE   :

    b. NAME OF THE STUDENT   :

    c. ENROLLMENT NUMBER   :

    d. NAME OF THE PAPER   : _____

    e. DATE OF SUBMISSION   : _____

6. Write the above said details clearly on every assignment paper, otherwise your paper will not be valued.

7. Tag all the assignments paper-wise and submit.

8. Submit the assignments on or before **26.09.2016** at the concerned counter at PGRRCDE, OU on any working day and obtain receipt.

                                               Prof.Shivaraj

                                               DIRECTOR

PGDCA – I Sem.
ASSIGNMENT–I

Paper – I (CS801: Programming Methodology)

I. Answer all the following Questions.   **(Marks:5 * 4 = 20)**

1. Describe about all the basic data types, operators and the precedence of the operators in C Language.

2. (a) Write short notes on Loops.

    (i) If ..else (ii) do-while and while-do (iii) for   condition (iv) switch statement

    (b) What is the difference between recursion and iteration? Explain with an example?

3. What are the different types of parameter passing methods supported in 'C' ? Give examples.

4. Write short notes on the following :

    (i) Write a program to initialize the diagonal elements of an array to '1' and rest of the elements to '2'

    (ii) Write a function to find average of given numbers in C++.

5. (a) Distinguish between an array of pointers and pointers to an array.

    (b) Describe about file handling functions with an example.

Paper – II (CS802: Computer Organization)

I. Answer all the following questions.   **(Marks: 5 * 4 =20)**

1) (i) What are the different instructions of the different groups that are normally implemented in any computer system.

    (ii) Discuss about floating point and fixed point representation using example.

2. Differentiate between Hardwired Control and Micro Programmed Control.

3. Draw and explain the block diagram of a Computer with I/O processor. What are the various types of I/O channels ?

4. Explain about interactions between CPU and Memory.

5) Write brief notes about cache memory. Explain about memory interleaving.

Paper – III (CS803: IT Foundations)

I. Answer all the following questions.   **(Marks: 5 * 4 = 20)**

1. What is memory ? Explain different types of memories.

2. Explain different types of number systems

3. Explain different generations of computers.

4. Explain the following :

    (i) Instruction set   (ii)   Addressing modes

5. What is an operating system ? Explain the types of Operating Systems, What are the functions of Operating System.

Paper – IV (CS804: Business Information Systems)

I. Answer all the following Questions.   **(Marks: 5 * 4 = 20)**

1. Explain level numbers. What is importance of 66,77,88 level numbers with suitable examples.

2. Differentiate sequential file organization with indexed files with entries of environment and data divisions.

3. Discuss redefines and renames clause of COBOL

4. Write about sort utility of COBOL with suitable example of a program

5. Write complete program in COBOL to create a sequential file to store data about a student.

3

Paper – V (CS805: Operating Systems)

I. Answer all the following Questions. (Marks: 5 * 4 = 20)

1. Define the essential differences between the following types of Operating Systems.
   (i) Batch   (ii) Interactive   (iii) Timesharing   (iv) Realtime

2. (a) Briefly explain the characteristics used for the comparison of scheduling algorithm.

   (b) Define and compare the multilevel feedback scheduling algorithm.

3. Define the term "Deadlock". Explain the necessary conditions to characterize a deadlock with an example.

4. What is paging ? What is the hardware support required for paging ? Describe this with the help of a diagram.

5. What is Critical Section ? Explain at least two classic problems of synchronization.

PGDCA – I Sem.
ASSIGNMENT–II
Paper – I (CS801: Programming Methodology)

I. Answer all the following Questions. (Marks:5 * 4 = 20)

1. Discuss the important features of OOPs. Explain the organization of data and functions in OOP.

2. (a) What do you understand by a class and object of a class with a programming example.

   (b) Write a program to explain the concept of class templates and explain the program. How the concept of class templates are used ?

3. (a) What is meant by operator overloading ? Write a C++ program to overload a binary operator like multiply (*).

   (b) What is inline function ? What are the advantages and disadvantages of in line functions with an example program.

4. (a) Write short notes on the following :
   (i) Template function   ii) Friend class

   (b) (i) Explain class template with the help of a simple program.

   (ii) Write any program to explain the concept of derived class and explain.

5. (b) (i) What are the different types of inheritance used in c++ programs. Explain with simple

   program.

   (ii) Write any program to explain the concept of derived class and explain.

Paper – II (CS802: Computer Organization)

I. Answer all the following questions. (Marks: 5 * 4 =20)

1. a) Explain about
   (i) Asynchronous data transfer   (ii) Daisy-Chain Priority Schemes
   (iii) Explain all instruction formats   (iv) Micro-program sequences

2. a) (i) Explain how information recorded on a magnetic tape.
   (ii) Explain CRC logic.
   b) Write short notes on
   (i) Digital audio tape   (ii) Any two addressing mode type instructions   (iii) VDU (iv) Cache Memory

3. Briefly explain the following:
   i) Opcode & Operand   ii) Privileged and Normal instructions
   iii) Half Adder & Full Adder   iv) Horizontal and Vertical format of control word

4. Write short notes on
   (i) Instruction formats (ii) e-mail   (iii) Reports in database   (iv) Domain Names

5. Write short notes on
   (i) Parallel bus standards   (ii) DAT Storage media   (iii) Ferrite Core memory

Paper – III (CS803: IT Foundations)

I. Answer all the following questions.   **(Marks: 5 * 4 = 20)**

1. Explain different types of Internal and External DOS Commands.

2. (i) Explain the features of word processing.

   (ii) Explain about Mail Merge features.

3. Explain about the following :

   (i) Explain the features of MS-Excel and explain different graphs in Excel

   (ii) Explain different types of functions in MS-Excel with examples.

4. Explain the following :

   (i) Explain how to create Table in MS-Access.

   (ii) Explain about ISO / OSI architectrure

5. Explain about the following

   (i) Explain different types of networks.

   (ii) Explain about IP address and DNS.

Paper – IV (CS804: Business Information Systems)

I. Answer all the following Questions.   **(Marks: 5 * 2 = 10)**

1. Write the OCCURS CLAUSE in COBOL

2. Differentiate System Approach and System Analysis.

3. Explain major steps in SDLC. What is the role of System Analysis ?

4. Explain briefly various elements to be considered in designing information system.

5. What is testing ? Explain in detail of various testing of information system.

Paper – V (CS805: Operating Systems)

I. Answer all the following Questions.   **(Marks: 2 * 5 =10)**

1. What constitute a state of the system ? what is a safe state ? Describe an algorithm to check whether a given state is safe or not ?

2. Discuss the (i) Continuous   9ii) Linked and (iii) Indexed disk block allocation methods. Discuss their merits and demerits.

3. Define the term process. Explain the different states of process list at least six components of a process control Block.

4. (a) Define the term "Memory Fragmentation". Identify the differences between "Internal

   Fragmentation" and "External Fragmentation".

   (b) Compare the following Page Replacement algorithms using one example.

   (i) FIFO   (ii) LRU   (iii) Optimal Page Replacement.

5. State the Producer-Consumer problem. Give a solution to the problem using Semaphores.

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*Note:
   1) **Each paper carries 20 marks.**
   2) **Submit the answer sheets on or before 12th   February, 2017.**
   3) **Practical Internal exams are from 8th & 9th April, 2017.**
   4) **The cover page of the assignments must have the following information:**

Name	: _____	Enrollment Number	: <u>94-</u>_____.
Semester	: _____	Subject Code	: _____
Subject	: _____	Date of Submission	: _____