Course Code : PGDCA
Course Title : Computer Fundamentals \& Programming in C
SLM Code : C-101
Assignment No. : PGDCA-1/ C-101 /A-2017-2018

Attempt all questions.
All questions carry equal marks.
Total Marks : 20
Q. 1 What is the computer fundamental? Characteristics of Computer.
Q. 2 What is Punched Cords? What is Card Readers? What are key punching Machines?
Q. 3 What are output devices? Meaning of Hard copy and Soft copy.
Q. 4 Define the types Off line Printers, Chain Printer.
Q. 5 What are primary memories? Deference Between Hard Disk and CD-Rom?

Course Code : PGDCA
Course Title : Data Structure Through C
SLM Code : C-104
Assignment No. : PGDCA-1/ C-104/A-2017-2018

Attempt all questions.
All questions carry equal marks.
Total Marks : 20
Q.1. Write a concept of data structure. What are Arrays, Stacks, Queues \& Linked list ?
Q.2. What are operations on a Doubly Linked list ? Describe different types of Linked list.
Q.3. What are Trees? What are the binary Trees? Write some Binary Trees.
Q.4. What are the circular linked linear list? Write 2 Advantages and 2 Disadvantages of circular lists.
Q.5. What is the Priority Queue ? Give one example of Priority Queue using Array.

| Course Code | $:$ | PGDCA |
| :--- | :--- | :--- |
| Course Title | $:$ | Internet \& E-Commerce |
| SLM Code | $:$ | C-117 |
| Assignment No. | $:$ | PGDCA-3-A/C-117 /A-2017-2018 |

Attempt all questions.
All questions carry equal marks.
Total Marks: 20
Q.1. What were the main forces that led to the commercialization of the Internet? Summarize your answer in about 100 words.
Q.2. Describe the Secure HTTP (S-HTTP).
Q.3. Describe the advantages and disadvantages of electronic cash.
Q.4. What is Payment Cards?
Q.5. What is E-Banking?

Course Code : PGDCA
Course Title : DBMS
SLM Code : C-109
Assignment No. : PGDCA-3-B/C-109 /A-2017-2018

Attempt all questions.
All questions carry equal marks.
Total Marks : 20
Q.1. Define the concept of DBMS. Explain the application of DBMS.
Q.2. (a) What is lock? What are the various types of locks used for concurrency control?
(b) What do you mean by functional dependency?
Q.3. What is the purpose of normalization? Explain 3NF, 4NF and BCNF with suitable example.
Q.4. (a) What are the various states through which a transaction passes through in its life time? Briefly discuss all the states.
(b) Describe the term E-R diagram. Draw an E-R diagram for library system.
Q.5. (a) Discuss the problem which may arrive during concurrency control and recovery in distributed database which are not encountered in centralized data base environment.
(b) Explain the following in details :
(i) Difference between generalization and aggregation with diagram.
(ii) Define serializability of schedule with example.

Course Code : PGDCA
Course Title : Operating System with Unix \& Shell programming
SLM Code : C-110
Assignment No. : PGDCA-4/ C-110 /A-2017-2018

Attempt all questions.
All questions carry equal marks.
Total Marks : 20
Q.1. (a) What are the five major activities of an Operating System regard to process management and three major activities of an Operating System in regard to the memory management.
(b) Define the essential properties of time sharing system and real time system.
Q.2. (a) What do you mean by File Manager ? Explain various methods of allocation.
(b) Explain the concept of directory structure.
Q.3. Define the architecture of UNIX, also describe its features in details.
Q.4. (a) Write a shell script to find if a file exist in a directory or not.
(b) Differentiate between C.P. and MV Command with example.
Q.5. Write a shell script to check whether the input year is a leap year or not using logical operator.

| Course Code | $:$ | PGDCA |
| :--- | :--- | :--- |
| Course Title | $:$ | System analysis \& design |
| SLM Code | $:$ | C-111 |
| Assignment No. | $:$ | PGDCA-5-A/ C-111 /A-2017-2018 |

Attempt all questions.
All questions carry equal marks.
Total Marks : 20
Q.1. What is the system ? Explain in detail about open system, closed system, isolated system with examples.
Q.2. Explain the term Process Modeling. Explain and discuss the E-R-diagram with the help of data modeling.
Q.3. (a) Define and explain the procedure for cost/benefits determination.
(b) What is structured analysis ? How is it different from the traditional approach ?
Q.4. (a) Explain the waterfall model of SDLC in detail.
(b) Describe feasibility study. Why is it necessary in project development?
Q.5. Briefly describe the followings terms :-
(a) Software Quality
(b) Project Planning
(c) Computer Aided Software Engineering (CASE)

Course Code : PGDCA
Course Title : Visual Basic
SLM Code : C-112
Assignment No. : PGDCA-5-B/ C-112 /A-2012-2013

Attempt all questions.
All questions carry equal marks.
Total Marks : 20
Q.1. Explain visual basic's integrated development environment. Discuss the various data types supported by visual basic.
Q.2. (a) Explain the nested FOR NEXT LOOP in VISUAL BASIC.
(b) Differentiate between parent and child forms.
Q.3. Write a program in VB to create a file. Containing the records of students and to arrange these records in the alphabetical order.
Q.4. what is object-oriented programming? How does visual basic support OOP paradigm?
Q.5. (a) Explain the mechanism of implementing error handling features in an Application.
(b) Write a program in Visual Basic to create a simple paint brush or to create a Text editor.

Course Code : PGDCA
Course Title : Mathematics \& Graph theory
SLM Code : C-113
Assignment No. : PGDCA-6/ C-113 /A-2017-2018

Attempt all questions.
All questions carry equal marks.
Total Marks : 20
Q.1. Prove that simple graph with n vertices must be connected if it has mine then
$\left[\left(\mathrm{Cn}^{-1}\right)\left(\mathrm{n}^{-2}\right) / 2\right]$ edger.
Q.2. (a) Prove that
(a) ${ }^{n} C_{r}+{ }^{n} C_{r-1}={ }^{n+1} C_{r}$
(b) Show that the sum of the degree of all vertices of a graph is twice the no of edger in the graph. Every binary tree has an add no. of vertices.
Q.3. (a) Set A, B, and, as
$\mathrm{A}=\{1,2,3,4,5,6,9,19,15\}$
$B=\{1,2,5,22,33,99\}$
and $\mathrm{C}=\{2,5,11,19,15\}$
and AABUC and AUBUC
(b) What is Demaganis Law ? Explain with example.
Q.4. Solve the eq using matrix method
$3 x+2 y+2 z=11$
$x+4 y+4 z=17$
$6 x+2 y+6 z=22$
Q.5. (a) Find the universe of the matrix.
$\left[\begin{array}{lll}1 & 2 & 2 \\ 2 & 5 & 4 \\ 2 & 6 & 7\end{array}\right]$
(b) Consider the posed $\mathrm{A}=\{\mathrm{a}, \mathrm{b}, \mathrm{c}, \mathrm{d}, \mathrm{e}, \mathrm{f}, \mathrm{g}, \mathrm{h}\}$ where Hares diagram is shown in the following figure. Find all upper and lower bounds of the following subset of A,
(i) $\mathrm{B}_{1}=\{\mathrm{a}, \mathrm{b}\}$
(ii) $\mathrm{B}_{2}=\{\mathrm{c}, \mathrm{d}, \mathrm{e}\}$ and lows bonds and upper bonds


