

## Subject : Object Oriented Programming with C++

Day : Tuesday

Date : 10/06/2014

S.D.E.



Time : 02.00 PM TO 05.00 PM

Max Marks : 80 Total Pages : 1

## N.B.

- 1) Attempt any **FIVE** questions from Section – I and any **TWO** questions from Section – II.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SAME** answer book.

## SECTION – I

- Q.1 What is meant by polymorphism? Explain how polymorphism is achieved at compile time? (10)
- Q.2 a) Explain different operators in C++. (05)  
b) Illustrate if else statement. (05)
- Q.3 Define and explain following in brief any **TWO**: (10)  
a) Object  
b) Protected scope  
c) Virtual function
- Q.4 Write a C++ program to read “student.txt” file containing roll numbers and names. Search the student file for a specific roll no. Display the result accordingly. (10)
- Q.5 What is meant by derivation? Explain its types. (10)
- Q.6 Compare procedural programming and object oriented programming. (10)
- Q.7 Write short notes on any **TWO**: (10)  
a) Friend function  
b) Scope resolution operator  
c) While loop

## SECTION – II

- Q.8 Write a program to declare a class book having data members as title and author. Accept this data for 5 books and display this accepted data. Use array of objects. (15)
- Q.9 Consider a class “game” which has no-of-play and names of players. The number of players can vary for each game object. Define the class with an appropriate dynamic constructor to initialize the object and accept players name. Also write a member function to display details. (15)  
Eg. Game Chess (2), Game cricket (11),  
Chess.Display () Cricket.Display ()
- Q.10 Write a C++ program to overload binary + operator to perform on “matrix” object ( n x n). (15)

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**Subject : Computer Architecture & Operating System**

Day : Monday

Date : 09/06/2014

**S.D.E.**   
18968

Time : 02.00 PM TO 05.00 PM

Max Marks : 80 Total Pages : 1

**N.B.**

- 1) Attempt any **FIVE** questions from Section – I and any **TWO** questions from Section – II .
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in the **SAME** answer book.

**SECTION – I**

- Q.1 What is Operating System? Explain various functions performed by Operating System. (10)
- Q.2 Explain in brief various addressing modes. (10)
- Q.3 What is RISC? Explain with its characteristics. (10)
- Q.4 Describe concept of memory management without swapping. (10)
- Q.5 Differentiate hardwired control and micro-programmed control. (10)
- Q.6 What is virtual memory? Explain working of virtual memory with neat diagram. (10)
- Q.7 Write short note on any **TWO**: (10)
- a) Evolution of operating system
  - b) Priority interrupt
  - c) File system

**SECTION – II**

- Q.8 What is deadlock? Explain mechanism for handling deadlock. (15)
- Q.9 What is process in operating system? Explain various operating system services for process management. (15)
- Q.10 Explain the following: (07)
- a) Address sequencing (08)
  - b) Semaphore

**Subject : Database Design**

Day : Wednesday  
Date : 11/06/2014



Time : 02.00 PM TO 05.00 PM  
Max Marks : 80 Total Pages : 1

N.B.:

- 1) Attempt **ANY FIVE** questions from Section-I and attempt **ANY TWO** questions from Section-II.
- 2) Answers to both the sections should be written in the **SAME** answer book.
- 3) Figures to the right indicate **FULL** marks.

**SECTION-I**

- Q.1** Define database. Explain the advantages of database over traditional file processing system. [10]
- Q.2** Explain in detail the life cycle of DBMS application. [10]
- Q.3** What is data model? Distinguish between hierarchical, network and relational data model. [10]
- Q.4** What is functional dependency? Explain with an example. [10]
- Q.5** What is concurrency control? Explain its importance. [10]
- Q.6** Define transactions? Explain the different states of transaction. [10]
- Q.7** Explain log based recovery mechanism. [10]

**SECTION-II**

- Q.8** Draw an E-R diagram for college management system. Clearly indicate the entities, attributes, relationships and the key constraints. [15]
- Q.9** What is normalization? Explain 1 NF, 2 NF & 3 NF with an example. [15]
- Q.10** Write short notes on: [15]
- a) Types of attributes
  - b) Database administrator
  - c) Deadlock

