

Programme : Bachelors of Computer Application (BCA)
Semester : III

Subject Code : 3.1

Subject: Computer Architecture & operating System

Attempt any TWO assignments from the following

Assignment no. 1

Explain the computer instruction format with the help of diagram. Discuss various instruction formats.

Assignment no. 2

Write short notes on the following:

- a) RISC
- b) Page replacement algorithm

Assignment no. 3

Explain types of files used in data processing application.

Assignment no. 4

Discuss memory hierarchy. Explain virtual memory in detail.

Assignment no. 5

What is meant by a system call? How does an application program use these calls during execution?

Assignment no. 6

Explain different modes of transfer in detail.

Assignment no. 7

short notes on the following:

- a) Segmentation
- b) Protection Mechanism

Assignment no. 8

1. What do you understand by Virtual memory? Discuss its advantages and disadvantages.
2. How virtual memory can be realized?

Assignment no. 9

Explain the Direct Memory Transfer (DMA) technique in detail.

Assignment no. 10

What do you mean by peripherals? Explain the working of magnetic disk in detail.

Subject Code: 3.2

Subject: Object Oriented Programming with C++

Attempt any TWO assignments from the following

Assignment no. 1

What is friend function? What are the merits and demerits of using friend functions?

Assignment no. 2

Discuss manipulators in C++

Assignment no. 3

How a class is defined as abstract? What is its use?

Assignment no. 4

What are types of derivation? What is the importance of protected members in derivation?

Assignment no. 5

What are constructor and destructor? Explain the use.

Assignment no. 6

Explain the function with syntax and also differentiate between inline function and macro.

Assignment no. 7

Short notes on the following:

1. Visibility Mode
2. Default arguments for function
3. Overloading operators
4. Object Oriented Programming

Assignment no. 8

Write down the short note:

1. Virtual Function
2. Arrays in C++
3. Constructor & Destructor
4. Manipulators

Assignment no. 9

Describe operator overloading through example.

Assignment no. 10

A. Write down the characteristics of object oriented programming.

B. Write a program in C++ to implement hybrid inheritance.

Subject Code: 3.3

Data Base Design

Attempt any TWO assignments from the following

Assignment no. 1

What is DBMS? Discuss Advantage of DBMS over file system

Assignment no. 2

What is data model? Discuss any two data model in detail.

Assignment no. 3

Write short notes on following

1. Domain
2. ERD
3. Database users.

Assignment no. 5

a) Define the following:

- b) Tuple
- c) DBMS
- d) Schema
- e) Entity

Assignment no. 6

Write short notes on following

- a) File processing and DBMS
- b) Time Stamps

Assignment no. 7

Explain Codd's 12 rule

Assignment no. 8

Write short notes on following

- a) Average Function
- b) MVT

Assignment no. 9

Draw E-R diagram for Railway Reservation System. State the necessary assumptions.

Assignment no. 10

Write short notes on following

- a) Function of DBA
- b) Distributed Database

Subject Code: 3.4

Management Accounting & Control

Attempt any TWO assignments from the following

Assignment no. 1

Discuss the accounting concepts in detail

Assignment no. 2

a) What is Idle Time Variance?

b) Calculate Labour Variances and Idle Time Variances from the following data During the first week of September,2010, M/s DPS and Co.employed 5 Men, 11 Women and 17 Children by paying wages @ Rs.26, 20.50 and 15.60 per hour respectively and the production of finished product during the week of 43 Hours was 1600 Units. Two Hours were lost due to Idle Time.
Standards provide that during a week of 40 hours, 6 men, 12 women and 20 Children are employed at wage rates of Rs.25, 20 and 15 per hour respectively for the production of 2000 Units.

Assignment no. 3

Write short notes on the following

1. Deferred Revenue Expenditure with two examples.
2. Contingent Liability
3. Cost Classifications
4. Flexible Budget and Fixed Budget.

Assignment no. 4

Write short notes on the following

1. Deferred Revenue Expenditure with two examples.
2. Contingent Liability

Assignment no. 5

Write short notes on the following

1. Money Measurement Principle
2. Difference between Trading Account and Trial :Balance

Assignment no. 6

Explain the different rules for journalizing the transaction with appropriate illustrations.

Assignment no. 7

Distinguish between allocation, apportionment and absorption of overheads.

Assignment no. 8

What do understand by budgeting? Mention the types of budget that the management of a big industrial concern would normally prepare?

Assignment no. 9

What are the characteristics of management accounting?

Assignment no. 10

a) What is Margin of Safety?

b) Calculate Profit Volume Ratio, Break Even Sales, Break Even Volume and Margin of Safety from the following data.

Selling Price : Rs.60

Variable Cost Per Unit : Rs.45

Fixed Cost : Rs.6,00,000

Present Production and Sales: 50,000 Units

Subject Code: 3.5

Human Resource Management

Attempt any TWO assignments from the following

Assignment no. 1

Scope of HRM and it Functions?

Assignment no. 2

Discuss the social objectives of H.R.M. in the present context.

Assignment no. 3

Roll of the HR Manager

Assignment no. 4

What is job analysis? Describe the various components of Job analysis.

Assignment no. 5

How will you identify the training needs of an organization? Which methods of training are likely to be more effective?

Assignment no. 6

Write a short note on the following:

- a) Managing employee relations
- b) Grievance Handling Procedure

Assignment no. 7

Write a short note on the following:

- c) Importance of Collective Bargaining
- d) Types of Selection Tests

Assignment no. 8

What are the common problems that the interviewer encounters? How can they be overcome?

Assignment no. 9**Write a note on**

- a) Training
- b) Development Programme

Assignment no. 10**Write a note on**

- a) Performance Appraisal
- b) Job evaluation

Subject Code: 3.6

Computer Oriented Decision Models

Attempt any TWO assignments from the following

Assignment no. 1

What is simulation? What are the applications of Simulation?

Assignment no. 2

Write a Critical Path Method (CPM) and Project Evaluation and Review Technique (PERT)

Assignment no. 3

Explain the concept, scope and tools of operation research as applicable to business and industry

Assignment no. 4

Solve the following LPP BY SIMPLEX METHOD

Maximize $Z = 3x + 5y + 4z$

Subject to the constraint:

$$2x + 3y \leq 8$$

$$2y + 5z \leq 10$$

$$3x + 2y + 4z \leq 15$$

$$x, y, z \geq 0$$

Assignment no. 5

Define the following terms in LPP.

- a) Basic variables
- b) Basic solution
- c) Basic feasible solution
- d) Degenerate solution

Assignment no. 6

Define the following terms

- a) Linear programming
- b) Objective function
- c) A feasible solution Decision tree

Assignment no. 7

Write a note on operation research.

Assignment no. 8

Compare CPM and PERT explaining similarities and mentioning where they mainly differ.

Assignment no. 9

Write the steps involve in solving the assignment problem by Hungarian method . Also explain the application of assignment method

Assignment no. 10

Determine an initial basic feasible solution to the following transportation problem by using VOGEL APPROXIMATION METHOD

	D1	D2	D3	D4	SUPPLY
S1	21	16	15	3	11
S2	17	18	14	23	13
S3	32	27	18	41	19
DEMAND	6	10	12	15	

Subject Code: 3.7

Subject: Computer Lab 3

Attempt any TWO assignments from the following

Assignment no. 1

Write a C++ programme to simulate saving account processing in a bank. The program should be capable at handling at handling 5 customers.

Assignment no. 2

Write a short note on significance of constructors in OOP classes.

Assignment no. 3

Distinguish between the following two statements:

- Sum S (13, 10, 30)
- Sum S = sum (13, 10, 30)