APTITUDE

Semester: III **Hours:20**

Chapter No.	Topics	Hours Allotted
1	Simple & Compound interest	5
2	Allegation	4
3	Time and Work	5
4	Time and Distance	5
5	Log	1

Advanced Internet Technologies Lab

Semester: III | Hours: 120
Subject Code: CP0903L01 | Rev No: 0

Course Objectives:

At the end of the semester the Trainees are able to:

- Understand VBScript
- Understand ASP Objects
- Understand ASP Components
- Understand Web Page Design
- Solving using XML
- Design of projects
- Different types of commands of UNIX O/S.
- Working with Vi editor.
- And shell programming.

VBScript Examples

1. **Basics**
   Insert a script
   Write text using VBScript
   Format text with HTML tags
   A function in the head section
   A script in the body section

   Variables
   Insert a variable value in a text
   Create an array
   Procedures
   Sub procedure
   Function procedure

2. **Conditional Statements**
   If...then..else statement
   If...then..elseif statement
   Select case statement
   Random link

3. **Looping**
   For..next loop
   Looping through the HTML headers
   For..each loop
   Do...While loop

4. **Date and Time Functions**
   Display date and time
   Display the days
   Display the months
   Display the current month and day
   Add a time interval to a date
   Format date and time

5. **Other Built-in Functions**
   Uppercase or lowercase a string
   Remove leading or trailing spaces from a string
   Reverse a string
   Round a number
   Return a random number
   Return a random number between 0-99
   Return a specified number of characters from the left or right side of a string

ASP Examples

6. **Variables**
   Create a variable, Session variable, Application variable, Read the values
   Create an array
   Looping through HTML headers
   Time-based greeting using VBScript
   Procedures
   Call a procedure using VBScript in ASP
   Call a JavaScript procedure using VBScript in ASP

7. **Forms**
   Interact with a user in a form that uses the "get" method
   Interact with a user in a form that uses the "post" method
   Interact with a user in a form with radio buttons, Validating user Inputs
   Cookies
   Create a welcome cookie

8. **Response Object**
   Write text using ASP
   Format text with HTML tags
   Redirect the user to another URL
   Random links
   Controlling the buffer
   Clear the buffer
   End a script in the middle of processing
   Set a date/time when a page cached in a browser will expire
   Check if the user is still connected

9. **Request Object**
   Send extra information within a link
   A QueryString collection in its simplest use
   A form collection in its simplest use
   A form with radio buttons
   A form with checkboxes
   How to find the visitors' browser type.
   List all servervariables you can ask for

10.Session Object

Return session id number for a user
Get a session's timeout

11.Server Object

When was a file last modified?
Open a textfile for reading

12.FileSystem Object

Does a specified file exist?
Does a specified folder exist?
Does a specified drive exist?
Get the name of a specified drive
Get the name of the parent folder of a specified path
Get the file extension
Get the base name of a file or folder

13.TextStream Object

Read textfile
Read only a part of a textfile
Read one line of a textfile
Read all lines from a textfile
Skip a part of a textfile
Skip a line of a textfile
Return current line-number in a text file
Get column number of the current character in a text file

14.File Object

When was the file created?
When was the file last modified?
When was the file last accessed?
Return the attributes of a specified file

15.Components

AdRotator

Display a different image each time a user visits a page

Browser Capabilities

Find the type, capabilities, and version of each browser that visits your site

ContentRotator

Display a different content each time a user visits a page (ASP 3.0)

Content Linking

Navigate between pages in a text file

16.ADO

Create an ASP file to accept employee details and add the records into the database.
Create an ASP file to accept the department name from the user and display details of employees working for that particular department.

Create an ASP file to accept department name and revised salary and update the salary in the database and display the records.
Create an ASP file to display employee details from the database by invoking a stored procedure.

17.XML

Create an XML document describing student details and test for well - formed ness (include attributes for certain elements).
Create an XML document describing various products available in a stationery shop and test for well-formed ness (include attributes for certain elements).

18.Formatting XML Documents

Display the data in the above generated XML documents by formatting it using CSS
Display the data in the above generated XML documents by formatting it using XSL (use For – each, Value-of, Apply-template statements)
Display the data in the above generated XML documents by formatting it using XSL after sorting the data
Display the data in the above generated XML documents by formatting it using XSL (use filter criteria on elements)
Display the data in the above generated XML documents by formatting it using XSL (use filter criteria on attributes of elements)
Display the data in the above generated XML documents by formatting it using XSL (use conditional IF statement)
Display the data in the above generated XML documents by formatting it using XSL (use conditional Choose statement)
Display the data in the above generated XML document using DSO (Single record data binding)
Display the data in the above generated XML documents using DSO (Table data binding)

19.DTD

For the above-generated XML documents, create an internal DTD and check for validity.
For the above generated XML documents, create an external DTD and check for validity (try with different options for attributes).

20.XML Schema

For the above-generated XML documents, create an XML schema document and check for validity (Make use of all the schema elements and various options available).

LINUX Commands

1. Write the syntax, description and options of the following LINUX commands.
   -- man, ls, date, time, cal, history, uname, clear, who am i, tar, find.
2. Write the syntax, description and options of the following LINUX commands.
   -- cp, cd, rm, mkdir, rmdir, sort, mv, wc, cat, more, du,
3. Write the syntax, description and options of the command chmod.
4. Demonstrate the usage of redirection, pipes and filters.
5. Use commands to perform the following operations.
   a. Create the files named f1,f2,f3 using cat command
   b. Write some contents to f1 and f2.
   c. Store the contents of the two files in f3.
   d. Display the contents of all three files.
   e. Display the contents of only f1 and f2 using a single command.
6. Use commands to perform the following operations.
   a. Create the file 'ITCENTRE' inside 'NTTF' directory
   b. Copy the file to 'NTTF1' directory.
   c. Move the file from 'NTTF1' to 'NTTF2' directory
   d. Rename the 'ITCENTRE' file to 'IT'
   e. Delete the 'IT' file.
7. Use commands to perform the following operations
   a. Display the path of the working directory
   b. Display all the terminal number
   c. Display the name of your system
   d. Write some contents into a file and sort it.
   e. Create more than one file in a directory and delete all the files using a single command
8. Do the following using bc command
   a. Add, subtract, multiply and divide two numbers
   b. Write a function to find the product of three numbers
   c. Find the square root of a number
   d. Demonstrate all the possible loops
   e. Give demo on ibase and obase instructions

Semester: III Hours: 120
Subject Code: CP0903L01 Rev No: 0

LINUX C PROGRAMS

9. Write a LINUX c program to search for an element in an array
10. Write a c program to convert temperature in Fahrenheit to Celsius
    i.(F= (1.8*c) +32)
11. Write a c program to find the sum of two matrices.
12. Write a c program to check whether the given number is palindrome or not.
13. Write a c program to reverse a string (without using any string function)

LINUX SHELL SCRIPTS

14. Write a shell script to do the basic arithmetic operations (+, -, *, / and %) on two integers. Program should continue as long as the user wants.
15. Write a shell script to print the factorial of a number (use while statement)
16. Write a shell script to print numbers from 1 to 10 (use until statement) for the first choice and sum of first ten numbers for the second choice.
17. Write a shell script to find the sum of odd numbers and even numbers separately from the list of numbers entered through the keyboard.(use array)
18. Write a shell script to create a directory and store two files in it. Also copy the content of the second file to a third file. Remove the directory if desired.
19. Write a shell script to execute any ten LINUX commands based on user's choice (use Case statement). Program should continue as long as the user wants.
20. Write a shell script to print the multiplication table of a number if it is an odd number and square of the number if it is even (use functions).

Reference Books:

1. ASP - Beginning ASP , Wrox Publications
2. Professional ASP - Wrox
3. XML - XML Step-by-Step Microsoft edition
4. A Complete Reference: UNIX
5. A Complete Reference: LINUX

SQL Server 2005 Lab

Sem: III | Hours: 120
Subject Code: CP0903L02 | Rev No: 5

Course Objectives:

At the end of the semester the Trainees are able to understand

- Client Server applications
- Working with SQL-SERVER-2005
- Creating Databases, tables, views, indexes etc.
- Creating Stored Procedure and Triggers etc.
- Bulk Copy Utility
- Data transformation services

Program list

1. Working with VB program, using DAO, ADO
2. Writing a Basic select statement
3. Write a query to perform Arithmetic Operations
4. Write a query to perform Relational operators
5. Write a query to perform Logical operators
6. Write a query to perform Special operators
7. Generate query using String functions
8. Generate query using Date functions
9. Generate query using Mathematical Functions
10. Generate query using Aggregate functions
11. Generate query using TOP keyword
12. Generate query to handling Results with Condition
13. Generate query to limiting Result Sets using condition clauses
14. Generate query Grouping Result Sets CUBE operator
15. Generate query to perform ROLLUP Operator
16. Generate query to perform GROUP BY
17. Generate query to perform COMPUTE
18. Generate query to perform COMPUTE BY Clauses
19. Perform demo on joins Cross Join
20. Perform demo on joins Natural Join
21. Perform demo on joins Equi Join
22. Perform demo on joins Self Join
23. Perform demo on joins Outer Join
24. Perform demo on Sub queries with IN, EXISTS
25. Perform demo on Nested sub queries
26. Perform demo on Correlated Sub queries
27. Perform demo on Sub query Restrictions
28. Perform demo on sub queries with Operators
29. Demo on database and files Creating Databases
30. Demo on database and files Modify Databases
31. Demo on database and files Viewing a Database
32. Demo on database and files Renaming a Database
33. Demo on database and files Deleting Database
34. Demo on database and files
35. Demo on database and files groups
36. Creating Tables and Enforcing Data Integrity
37. Creating tables with different Data types
38. Creating tables with User Defined Data Types
39. Dropping User Defined Data Types

Sem: III Hours: 120
Subject Code: CP0903L02 Rev No: 5

40. Creating tables with constraints
41. Creating tables with different types of Constraints
42. Creating Triggers
43. Creating Rules and Defaults
44. Demo on Data Manipulation Language with different types Inserting values
45. Demo on Data Manipulation Language with different types updating values
46. Demo on Data Manipulation Language with different types Deleting Rows
47. Demo on Truncating a Table
48. Demo on Deleting a Table
49. Write a query to creating Views
50. Write a query to retrieve Results from Views
51. How to Altering Views
52. Write a query to Dropping Views
53. Write a query to Renaming Views
54. Write a query to Manipulating Data through Views
55. Write a query to Implementing Indexes with different types of indexes
56. Write a query to Clustered Index
57. Write a query to Non clustered Index
58. Write Program on batches
59. Write programs to declare different types of variables with different data types
60. Write program to Printing Messages
61. Write program to Implementing Stored Procedures
62. Write program on Types of Stored Procedures
63. Write program on Types of Parameters
64. Write program to Creating Stored Procedures
65. Write program to Rules Specific to Stored Procedures
66. Demo on Execution of a Stored Procedure in Normal Mode.
67. Demo on execution of stored procedure with Automatic mode
68. Demo on Altering a Stored Procedure
69. Demo on how to Viewing a Stored Procedure
70. Demo on Deleting a Stored Procedure
71. Demo on Transactions
72. Demo on Controlling the Transaction
73. Demo on Explicit Transaction
74. Demo on Auto Commit Transactions
75. Demo on Implicit Transactions
76. Demo on BCP
77. Demo on DTS

Reference Books:

1. SQL Server 2000 - Black Book
2. SQL Server – Patrick Paul
3. SQL Server 2000 - Mike Gunderloy , Jospeh L. Jorden
4. www.msdn.microsoft.com

Microprocessor and Interfacing Lab

Semester: III | Hours: 80
Subject Code: CP0903L03 | Rev. No: 5

Course Objectives:

At the end of the semester the Trainees are able to understand

- Functional details of 8085.
- Using 8085 Microprocessor kit.
- Instruction set of 8085.
- Writing programs in 8085.
- Interfacing devices with 8085.
- Projects based on 8085.

SIMPLE PROGRAMS

1. Write a program to load data 05H into Accumulator and data 02H into Register B.
2. Write a program to load data 05H into Accumulator and then transfer the same data to register B & register H
3. Write a program to load register B with 50H & register L with 20H & add the two. Place the final result in register D
4. Write a program to add 2 data bytes of FF H and FF H
5. Write a program to perform 16 bit addition on following data 1234 H & 4321 H. Store the answer in H & L registers.
6. Write a program to add 2 nos. stored at memory location C000 H & C020 H. The sum should be stored at C040 H
7. Write a program to subtract 32H from 20H. Store the result in register C
8. Write a program to find 1's complement of A0 H. The data must be loaded in register B & so should the 1's complement
9. Write a program to find 2's complement of 20 H data. Assume suitable registers
10. write a program find 16 bit 2's complement of 4340 H
11. Write a program to add BCD numbers. 06 & 09.Assume suitable registers. Result should be in BCD format.
12. Write a program to add two 4 –digit BCD nos. Assume data already exists in BC and DE register pair.
13. Write a program to shift eight-bit data two bits left. Assume that data in register B
14. Write a program to shift 16 bits of number, 1 bit left. The number is stored in memory locations C201 H & C202 H. The result is to be stored in memory locations C203 H & C204 H
15. Write a program to mask least significant 4 bits of an 8 bit data. Data is stored at location C300H
16. Write a program to mask most significant 4 bit of an 8 bit number available in register B. Store the result in register C.
17. Register B=75 H is interpreted as tracked BCD .Unpack the BCD digit and store them in D&E registers.
18. Write a program to combine the bit patterns of register C & register B. Store the result in register D
19. Write a program to set D6 & D7 bits of data .Data is stored at locations C200H.Store the result at C201H
20. Write a program to find the greater no. out of the given 2 nos. The two nos. are stored at locations C200 & C201.Store the result in Accumulator.

LOOPING

21. Write a program to find the sum of first 10 successive numbers from 1 to 10.
22. Write a program to find the square of a number .The no is 09; the result should be in BCD format.
23. Write a program to add 10 data bytes. Data is stored in memory locations starting from C200. The result is 8 bits only. Store the result at C300 location.
24. Write a program to add 1st 10 even hex. Numbers store the result in register D.

BLOCK TRANSFER

25. Write a program to transfer 16 bytes of data stored in location at C25F to new memory locations starting from C300 onwards.
26. Write a program to transfer a block of data consisting of 256 bytes, is stored in memory starting at C000. This block is to be shifted in memory from C050 onwards. Do not shift the block or part of the block anywhere else in the memory
27. Write a program to transfer a block of data. The data is stored in memory from C55O to C55f. The data is to be stored from C570 to C57F in reverse order.
28. A system is designed to monitor the temperature of a furnace. Temperature readings are recorded in 16 bits and stored in memory locations starting at 1000. The high order byte is stored 1st and then the lower byte is stored. All the temperature higher byte readings are constant. Write a program to transfer lower order reading to consecutive memory locations starting at 2000 and discard higher order bytes.
29. Write a program to count number of '1' and '0' bits in a register. Assume data is in C register and store no. of 1 in D register, 0 in E register.
30. Write a program to search a byte in a 10-byte array, Assume byte is FF H and will exist only once. If it is present. Store corresponding memory address at memory location C300 and C301. The starting Address of array is C200
31. Write a program to find the largest no. in a given array of 16 elements. The array is stored in memory from C200 onwards. Store the result at the end of the array.
32. Write a program to find the smallest number in a given array. The array is stored in memory from C200 onwards. Store the result in memory location C300 .The length of the array is store at a first element of an array and then data array starts.
33. Write a program to arrange data in descending order. The number of data bytes is stored at the starting address of data array. Array starts from C200 onwards

CODE CONVERSIONS

34. Write a program to convert a given binary number to BCD code and BCD to binary code.
35. Write a program to count number from 00 to 99.

Semester: III Hours: 80
Subject Code: CP0903L03 Rev. No: 5

INTERFACING PROGRAMS

36. Write a program to interface traffic light kit to 8085 kit for the specification given in the manual.
37. Write a program to run a stepper motor in forward and reverse directions with appropriate delay.
38. Write a program to perform A/D conversion using interrupt method.
39. Write a program to generate a Stair case wave form with a step height of 1V

KEYBOARD INTERFACING

40. Write a program to interface a 3*8 keyboard using 8255.
41. Write a program to display the code of the key pressed and display it on the data field.

SEVEN SEGMENT DISPLAY

42. Write a program to display the numbers 0-9 on the seven –segment display.
43. Write a program to display NTTF.

References:

1. Fundamentals of Microprocessor & Microcomputers – B RAM
2. Microprocessor interface & Application – Ramesh Gaonkar
3. Intel Processor manual

Operating System

Semester: III | Hours: 80
Subject Code: CP0903T01 | Rev No: 6

Course Objectives:

At the end of the semester the Trainees are able to understand

- The internal structure of Operating System and RTOS.
- The way Operating System and RTOS functions.
- Different algorithms/system programs of Operating System.
- Memory Management done by the Operating System.
- File System Management and Disk Scheduling Algorithms.

Chapter No.	Topics	Hours allotted
1	**Introduction Operating systems**	**8**
	Single user and Multi-user systems	
	Simple Batch systems and Time – sharing system	
	Multiprogramming, multitasking	
	Real Time systems	
	Distributed systems	
	SPOOLING	
	Functions of Operating Systems	
2	**Process concept**	**7**
	Process states	
	Process scheduling	
	Cooperating process	
	Threads	
	Inter process Communication	
3	**CPU scheduling**	**9**
	Scheduling criteria	
	Scheduling Algorithms	
	Multiple Processor scheduling	
4	**Process synchronization**	**6**
	The critical section problem	
	Semaphores	
	Critical regions	
	Monitors	
5	**Deadlocks**	**10**
	Methods for handling Deadlocks	
	Dead Lock prevention	
	Deadlock avoidance	
	Deadlock detection	
	Recovery from Deadlock	
6	**Memory Management**	**10**
	Logical Vs Physical Address	
	Swapping	
	Contiguous allocation	
	Paging	
	Segmentation	
	Segmentation with Paging	

7	**Virtual Memory**	**8**
	Demand paging	
	Page Replacement	
	Page Replacement Algorithms	
	Thrashing	
8	**File System Interface and Implementation**	9
	File concept	
	Access methods	
	Directory structure and implementation	
	Protection	
	Allocation Methods	
	Free Space Management	
9	**Secondary Storage Structure**	10
	Disk Structure	
	Disk scheduling	
	Disk management	
	Disk Reliability	
	Swap Space management	
10	**Real-Time Operating Systems**	3
	Define Real-Time	
	What is RTOS?	
	Basic Requirements of an RTOS	
	RTOS functionality and characteristic	
	Difference between OS and RTOS	

Reference Books:

1. Operating system concepts : Galvin
2. Operating System concept : Silberschatz - Galvin
3. Modern operating system : Tanenbaum.
4. Real-time systems design and analysis :Phillip.A.Laplante, second edition.
5. Real time systems : Jane.W.S.Liu,Pearson education,2105.

Database Management System with SQL Server 2005

Semester: III | Hours: 80
Subject Code:CP0903T02 | Rev No: 6

Course Objectives

At the end of the semester the Trainees are able to:

- Understand the Database concepts
- Design the database with planning and coding
- Normalize the database
- Administration of data and data base
- Solve queries related to the database

Chapter No.	Topics	Hours Allotted
1	**Introduction to Database System** Database Applications Purpose of Database system File System versus a DBMS Basic concepts and definitions • Data • Data versus Information • Metadata	**4**
2	**Data Models** • Entity-Relationship Model • Object Oriented Model • Network Model • Hierarchical Model • Relational Model	**9**
3	**SQL** • Introduction to SQL • Simple SQL commands • DDL,DML,DCL • Aggregate functions • Null values • Nested sub queries • Identity column • Constraints • Views • Index • Joined Relation • User defined datatype • Declarative Referential Integrity • Rules • Triggers	**30**
4	**Database Design and the ER Model** • Entity-Relationship Model • Constraints • Entity-Relationship Diagram • Entity-Relationship Design issues • Weak Entity sets • Attributes and types of attributes • Examples on E-R diagram • Reduction to Relational Schemas	**12**

Semester: III Hours: 80
Subject Code:CP0903T02 Rev No: 6

5	**Database Design, Development and Normalization** • Three schema architecture for database development • What is Normalization o First Normal form o Second Normal form o Third Normal form o Boyce-codd Normal Form	**7**
6	**DATA ADMINISTRATION** • Database Administrator • Concurrency control • Database Recovery • Database Security	**6**
7	**Introduction to** • Data Warehousing • Data Mining	**6**
8	**USING BCP AND DTS** • Bulk Copy Utility • Requirement for BCP • Interactive for BCP • BCP- The Utility • Data Transformation Services • DTS User Interface • Planning to use the Import and Export Wizard	**6**

Reference:

1. Fundamentals of Database Management Systems – Navathe, Elmasri
2. Database System Concepts
   -Abraham SilbersChatz, Henry F. Korth, S.Sudarahan
3. SQL Server 2000 - Mike Gunderloy, Joseph L. Jorden
4. Database Management System -Raghu Ramkrishnan, Johannes Gehrke
5. Modern Database Management
   -Fred R. McFadden, Jeffrey A. Hpffer, Mary B. Prescott
6. www.msdn.microsoft.com.

Advanced Internet Technologies

Sem: III | Hours : 80
Subject Code: CP0903T03 | Rev No :0

Course Objectives:

At the end of the semester the student would be able to:

- Understand VBScript
- Understand ASP and applications
- Understand Web Page Design
- Solving using XML
- Design of projects

Chapter No.	Breakup of Topics	Hours Allotted
1.	**VBScript** **Introduction** • Introduction to Scripting languages, • its uses **Basics** • Data Types, • Operators, • Variables, • Arrays, • Procedures **Conditional and Looping Statements** • If-Then-Else, • For-Next, • Select-Case, • Do-Loop, • While-wend	10
	Functions **Date and Time Functions** Date, Dateadd, Datediff, Datepart, DateSerial, DateValue, Day, Hour, Minute, Month, Monthname, Now, second, Weekday, WeekDayname, Year **Mathematical Functions** Abs, Atn, Cos,Exp, Log, Rnd, Randomize, Round, Sin, Sgn, Sqr, Tan **Text Manipulation Functions** Filter, InStr, InStrRev, Join, LCase ,Left, Len, LTrim, Mid, Replace, RTrim, Space, Split, String, strReverse, Trim, UCase	

Sem: III Hours : 80
Subject Code: CP0903T03 Rev No :0

2.	**ASP** **Basics of ASP** • Introduction to ASP, ASP Engine, IIS, Running ASP using IIS • ASP Variables • **Procedures** • Calling procedures in ASP, Calling vbscript procedure	**08**
3.	**Forms** • Get method • Post method • Request. form • Request. Querystring • Form Validation	**05**
4.	**Cookies** • Introduction • Creating a Cookie • Retrieving a Cookie value • Removing a Cookie • Cookie with Keys	**04**
5.	**ASP Objects** • Application Object • Response Object • Request Object • Session Object • Server Object • FileSystem Object • TextStream Object • File Object • Using Global.asa file	**15**
6.	**ASP Components** • AdRotator • Browser Capabilities • ContentRotator • Content Linking • PageCounter	**07**
7.	**ADO** • Introduction to ADO • DSN Connection and DSN-less Connection • Connection, Command, Recordset ,Error ,Record, Field, Parameter,	**11**

Advanced Internet Technologies

Sem: III | Hours : 80
Subject Code: CP0903T03 | Rev No :0

8.	**XML** • Introduction to XML & its applications, Structure of XML document , Namespaces • XML Elements, Attributes • XML CSS ,XSL, XPATH • XML DSO External, Internal • DataIslands • Simple Row Data Binding, Table Data Binding	**06**
9.	**DTD** • Introduction to DTD • Declaration of elements, Attributes, Entities • Types of DTD • Limitations of DTD	**06**
10.	**XML Schema** • Introduction to XML Schema, Features **Data Types** • Primitive • Derived • Atomic • List • Union • Namespace & its types **User Defined DataTypes** • Simple Types XSD Elements, Attributes • Complex Types • Named and Anonymous types	**08**

References Books:

1. ASP - Beginning ASP , Wrox Publications
2. Professional ASP – Wrox
3. XML - XML Step-by-Step Microsoft edition

Organizational Behavior and Principles of Management

Semester: III Hours:80
Subject Code: CP0903T04 Rev No:4

Course Objective:

At the end of the semester the Trainees are able to

- Understand Organizational Behavior
- Learn Motivation factors
- Improve Leadership qualities
- Improve Management skills
- Development of Conflict Management

Chapter No	Topics	Hours Allotted
1	**Introduction to OB** Organizational Behavior Nature Of Organization, Concepts, Features Understanding of Human Behavior Management Functions, Management Roles, Management Skills Challenges & opportunities for OB OB Model Organizational Goals Types Of Organization	 2 2 2 2 3 2 2 **15**
2	**Perception** Concept of Perception Perception process Factors influencing Perception Self Concept, Beliefs, Expectations, Inner reads, Response salience Perceptual defense, External factors Managerial implications	 1 1 1 1 1 **05**
3	**Personality** Concept of Personality Theories of Personality Psycho-Analytical theory The ID, The Ego Super Ego Socio-Psychological personality theory Trait theory Self theory Self image, Ideal self Looking glass self, Real self Determinates of personality Personality and behavior Self concept and self esteem Need patterns, Machiavellianism, Locus of control, Tolerance of Ambiguity, Type A and B Introversion and extroversion, Work-ethic orientation	 1 1 1 1 1 1 1 1 1 1 **10**

Semester: III Hours:80
Subject Code: CP0903T04 Rev No:4

4	**Motivation** Definition of Motivation Theories of Motivation Maslow's need hierarchy Herzberg's Motivation Model McClelland's need theory Motivational pattern in Indian Organizations	 1 1 1 1 1	**05**
5	**Leadership** Concept of Leadership Theories of leadership Trait theory Behavior theory Situational theory Leadership Styles, Motivational styles, Power Styles Orientation Styles consideration and Initiating Styles based on authority Managerial grid 10 Tri dimensional Grid	 1 1 1 1 1 1 1 1 1 1	**10**
6	**Transactional Analysis** Ego states Transactions Stroking Application of Transactional Analysis	1 1 1 1 1	**05**
7	**Conflict** Inter-personal Conflict, Vertical Conflict Horizontal conflict Group Conflict Intra group conflicts Inter Group conflicts	 1 1 1 1	**05**
8	**Challenges and Opportunities** Reasons for Organizational change, Change in environment Change in managerial personnel Deficiency in existing organizations To avoid developing inertia, Objectives and process of change Objectives of change process , Planning for change Accessing change forces, Implementing change Organizational development Need and steps of OD Limitations of OD End result variables Intervening variables OD Interventions	 1 1 1 1 1 1 1 1 1 1	**10**

Organizational Behavior and Principles of Management

Semester: III Hours:80
Subject Code: CP0903T04 Rev No:4

9	**Principles of Management** Concept of Management Management functions/principles Planning objectives Policies, procedures, rules Budgets Planning, Steps in planning, Organizing, Staffing, Leading, Controlling Establishing standards Measurement of performance Correction of deviations Principles of management Classical management theory Scientific management Taylor's concept of management Principles of scientific management	 1 2 1 2 2 1 1 1 1 1 1 1	**15**

Reference Books:

1. Organizational behavior – K Aswathappa Himalaya publications
2. Organizational behavior – Stephen P Robheins
3. Essentials of Management - Koontz and Weihrich Tata McGraw Hill

Microprocessor and Interfacing

Semester: III | Hours: 80
Subject Code: CP0905T05 | Rev. No: 4

Course Objectives:

At the end of the semester the Trainees are able to understand

- The Architecture of 8085
- Instruction set of 8085
- Write programs using 8085
- Interfacing devices with 8085
- Design projects based on 8085
- Introduction to embedded systems

Chapter No.	Topics	Hours allotted
1	**Introduction to Microprocessors & Computers**	
	Historical background-Mechanical age, Electrical age Microprocessors age, Programming Advancements	**2**
	Microprocessors, Microcomputer, Assembly language	**3**
	Microprocessor Architecture & Microcomputer system	**3** **8**
2	**Architecture**	
	Architecture of 8085	**2**
	Study of functional units	**1**
	Pin diagram and function of various control signals	**1**
	Registers & stack –GPR, SPR, flags	**1**
	Multiplexing & Demultiplexing of AD_7 –AD_0	**2**
	Generation of Control signals	**2**
	Buffers and Latches for 8085	**2** **11**
3	**Instruction set of 8085**	
	Addressing Modes & examples	**2**
	Opcode, Operand ,Instruction & Data format	**1**
	Instruction set classification with examples	**10**
	Instruction cycle, Timing diagram for the machine cycles(OF,MR,MW,IOR,IOW)	**4**
	Memory Mapped I/O & I/O Mapped I/O	**1**
	Memory Interfacing –Basic concept, Absolute Decoding, Partial Decoding	**3**
	I/O Interfacing	**2**
	Programming examples	**2** **25**
4	**Interrupts**	
	Polling & Interrupts	**1**
	8085 Interrupts -Hardware, Software , Vectored & Non Vectored Interrupts	**2**
	Interrupt Structure of 8085	**1**
	Response for Non Vectored Interrupt	**1**
	Response for RST Instruction	**1**
	Instructions related to Interrupts	**1**
	Example of a Control System using Interrupt	**1** **8**
5	**Peripheral IC's & Interfacing**	
	PPI 8255	**4**

	PIT 8253/8254	**4**	
	Data Transfer Scheme, Synchronous Data Transfer, Asynchronous Data Transfer, Interrupt Driven Data Transfer Multiple Interrupts	**2**	**10**
6	**Microprocessor Application**		
	Delay Subroutine, Calculation of delay time	**3**	
	7-segment LED display, Display of decimal number(0-9), Display of alphanumeric characters.	**2**	
	Interfacing Stepper Motor	**1**	
	Microprocessor based Traffic Control	**1**	
	Square wave ,Triangle wave ,Stair case wave generation using µp	**2**	
	Pulse generation using SODpin, Printer Interface	**1**	**10**
7	**Introduction to Microcontroller**		
	Introduction to Embedded System		
	Difference between Microprocessor & Microcontroller	**1**	
	Architecture of 8051	**2**	
	Pin description of 8051	**2**	
	Memory Organization	**3**	**8**

References:

1. Fundamentals of Microprocessor & Microcomputers – B RAM
2. Microprocessor Interface & Application – Ramesh Gaonkar
3. Intel Processor Manual
4. Microprocessor & Application – Douglas V Hall