

**OUTLINES OF TESTS,
SYLLABI AND COURSES OF READINGS
FOR
MASTER IN INFORMATION TECHNOLOGY
MSc. IT (PART-I)**

CHOICE BASED CREDIT SYSTEM

**MSc.IT- Ist Year (Ist & IInd Semester)
Session 2018-19**

**MATA GUJRI COLLEGE
SRI FATEHGARH SAHIB-140406**

MATA GUJRI COLLEGE, SRI FATEHGARH SAHIB
(An Autonomous College)
SYLLABUS
Choice Based Credit System
M Sc IT -I
FIRST YEAR-FIRST SEMESTER EXAMINATION
Session 2018-19

OUTLINE OF PAPERS AND TESTS

Code	Title of Paper	Schedule of Teaching (Hours/Week)			Total Hours	Credits	Marks	
		L	T	P			External	Internal
MS-111	Fundamentals of Information Technology	4	1	0	5	4	70	30
MS-112	Programming Fundamentals using "C" Language	4	1	0	5	4	70	30
MS-113	Web Designing	4	1	0	5	4	70	30
MS-114	Programming Lab-I based on MS-112	0	0	5	5	5	60	40
MS-115	Programming Lab-II based on MS-113	0	0	5	5		60	40
MS-116	Choice Based Course (CBC-I)	4	1	0	5	4	70	30
TOTAL		16	4	10	30	21	400	200

CBC-I: Any one of the following papers

1.	MS-116 C1	Workshop on Page Maker
2.	MS-116 C2	Workshop on Corel Draw

1. The breakup of marks for the Continuous assessment for theory papers will be as under:

i.	One or two tests out of which minimum one best will be considered for assessment.	15 Marks
ii.	Attendance	5 Marks
iii.	Class participation and behaviour	10 Marks

2. The breakup of for the Continuous Assessment for the practical will be as under:

i.	Lab Assignments (60% of Total marks)	24 Marks
ii.	Viva (30% of Total marks)	12Marks
iii.	Attendance/Class participation and behaviour (10 % of Total marks)	4 Marks

MS-111 Fundamentals of Information Technology

Maximum Marks: 70

Minimum Pass Marks: 35%

Time allowed: 3 Hrs.

Lectures to be delivered: 45-55

A) Instructions for paper-setters

The question paper will consist of three units I, II and III. Unit I and II will have four questions from the respective units of the syllabus carrying 20% marks each. Unit III will have 5-10 short answer type questions which cover the entire syllabus uniformly carrying 20% marks in all.

B) Instructions for candidates

1. Candidates are required to attempt two questions each from Unit I and II. Unit III is compulsory.
2. Use of non programmable scientific calculator is allowed.

UNIT-I

Computer Fundamentals: Block structure of a computer, characteristics of computers, generations of computers, classification of computers on the basis of size and logic. **Number System:** Bit, byte, binary, decimal, hexadecimal, and octal systems, conversion from one system to the other, **Binary Arithmetic:** Addition, subtraction and multiplication. **Representation of Information:** Integer and floating point representation, Complement schemes, Character codes (ASCII, EBCDIC, BCD, 8421, 2421, Excess-3, Gray, Hamming) **Memory types:** Magnetic core, RAM, ROM, Secondary, Cache, Bubble Memory. **I/O devices:** Light pen, joystick, Mouse, Touch screen; OCR, OMR, MICR. **Printers :** Impact, non-impact. **Storage devices:** floppy disk, hard disk, compact disk, tape

UNIT-II

Computer languages: Machine language, assembly language, higher level language, 4GL. **Introduction to:** Compiler, Interpreter, Assembler, System Software and Application Software. **Operating System:** classification—simple batch processing, Multiprogramming, Multitasking, parallel Systems, Distributed system, Real time system. **Computer Network and Communication:** Network types, network topologies, network communication devices, physical communication media. **Internet and its Applications:** E-mail, TELNET, FTP, World Wide Web, Internet chatting; Intranet, extranet.

Text Books:

1. D. H. Sanders, “Computers Today”, McGraw Hill.

References:

1. David Cyganski, John A. Orr, “Information Technology Inside and Outside” Pearson Education .
2. V. Rajaraman, “Fundamentals of Computers” (2nd edition), Prentice Hall of India, New Delhi.
3. B. Ram, “Computer Fundamentals”, Wiley.
4. Pardeep K.Sinha & Priti Sinha, ”Computer Fundamentals”, Sixth Edition, BPB

MS-112 Programming Fundamentals using “C” Language

Maximum Marks: 70

Minimum Pass Marks: 35%

Time allowed: 3 Hrs.

Lectures to be delivered: 45-55

A) Instructions for paper-setters

The question paper will consist of three units I, II and III. Unit I and II will have four questions from the respective units of the syllabus carrying 20% marks each. Unit III will have 5-10 short answer type questions which cover the entire syllabus uniformly carrying 20% marks in all.

B) Instructions for candidates

1. Candidates are required to attempt two questions each from Unit I and II. Unit III is compulsory.
2. Use of non programmable scientific calculator is allowed

Unit-I

Problem Solving & Program Planning: Need for problem solving and planning a program; program design tools - algorithms, flow charts, pseudo codes and decision tables. Demonstration of problem solving and use of programming tools through extensive illustrative exercises.

Basics of C Language: General structure of a C program; phases in the development of a program ,C Character set, Identifiers and keywords, Data types, Declarations, Expressions, Statements and Symbolic Constants, Input-Output, Header Files, Pre processor directives, Operators, variables.

Control statements: Branching, looping using for, while and do-while Statements, Nested control structures, switch, break, continue statements, Functions: Definition, Call, prototypes, and passing arguments to functions, Storage classes

Unit-II

Arrays-One Dimensional and multidimensional arrays, passing arrays to functions, **Pointers**:pointer arithmetic, pointers to functions, pointer arrays and pointers to pointers. Dynamic memory management.

Structure: structure as function arguments, Arrays of structures, arrays in structures, union

File processing: opening and closing, data files, creation, processing & unformatted data files, random file access.

. Text Books:

1. Brain W. Kernigham and Dennis M. Richie: The C Programming Language, 2nd Ed., PHI.

References:

1. Stephen G. Kochan ,Programming in C, 4th Edition , SAMS Publishing.
2. E. Balagurusamy: Programming in ANSI C, 4th Edition TMH
3. Stephen Prata, C Primer Plus, 5th Edition ,SAMS

MS-113 Web Designing

Maximum Marks: 70

Minimum Pass Marks: 35%

Time allowed: **3 Hrs.**

Lectures to be delivered: 45-55

A) Instructions for paper-setters

The question paper will consist of three units I, II and III. Unit I and II will have four questions from the respective units of the syllabus carrying 20% marks each. Unit III will have 5-10 short answer type questions which cover the entire syllabus uniformly carrying 20% marks in all.

B) Instructions for candidates

1. Candidates are required to attempt two questions each from Unit I and II. Unit III is compulsory.
2. Use of non programmable scientific calculator is allowed

Unit-I

Introduction to Internet: WWW, Web pages, Web Browsers, URL, Introduction to HTML: HTML tags and attributes, paired and unpaired tags, Text-formatting tags-bold, italic, underline, strike, superscript, subscript, font face, font size, font color, marquee tag, **Creating external and internal links:** using images as links. **Ordered and unordered lists:** Lists, unordered Lists, Ordered Lists, Nested Lists. **Tables:** Table creation in HTML, Width of the Table and cells, cells spanning multiple row/columns, coloring cells, column specification, Presenting information in tables, table attributes. **Forms:** Introduction, form elements, Input elements, different control types created with input elements, button elements, text area element, drop down lists, action attributes and method attributes. Introduction to HTML 5.0

Unit-II

DHTML and Style Sheets: Defining styles, Elements of styles, linking a style sheet to an HTML Documents, In-Line Styles, External style sheets, Internal style sheets, Multiple Styles. Cascading style sheets.CSS: CSS Font Properties, CSS Text Properties, CSS Background Properties, CSS Border Properties, CSS Margin Properties.CSS List Properties. **Introduction to JavaScript:** Script tag, declaring variables in JavaScript, operators in JavaScript, arithmetic operators, assignment operators, comparison operators, logical operators, conditional operators, conditional statements, if statement, if-else statement, Dialog Boxes, User Define Function, Built-in Functions, Events.

Text Books:

1. Rick Dranell ,HTML 4.0 Unleashed , 2nd Edition ,Tech Media Publications.

References:

1. Stephanie, Cottrell, Bryant ,Teach Yourself HTML 4.0 with XML, DHTML and Java IDG Books
2. Phil Ballard ,Michael Moncur,JavaScript in 24 Hours,SAMS Teach Yourself 5th Edition
3. Elizabeth Castro,HTML and CSS: Visual QuickStart Guide 8th Edition

MS-114 Programming Lab-I (Based on MS-112)

Maximum Marks: 100*

Max. Time: 3 Hrs.

Minimum Pass Marks: 35%

Practical sessions to be conducted: 45-55

This laboratory course will mainly comprise of exercise based on subject MS-112
(Programming in C Language)

Implementation and Execution of:

1. Defining variables and assigning values to variables.
2. Arithmetic and relational operators.
3. Arithmetic expressions and their evaluation
4. Formatting input/output using printf and scanf
5. Control Statements
6. Array
7. Strings.
8. Structures.
9. Pointers.
10. Reading from a file and writing into a file.

***Maximum Marks for Continuous Assessment: 40**

Maximum Marks for Semester Examination: 60

MS-115 Programming Lab-II (Based on MS-113)

Maximum Marks: 100*

Max. Time: 3 Hrs.

Minimum Pass Marks: 35%

Practical sessions to be conducted: 45-55

This laboratory course will mainly comprise of exercise based on subject MS-113 (HTML, DHTML, JAVASCRIPT)

Implementation and Execution of:

1. Basic HTML Tags
2. Creating external and internal links
3. Ordered and unordered lists
4. Table
5. Design a FORM in HTML
6. Implementation of CSS
7. DHTML(Layer/DIV)
8. Variables in JavaScript
9. Operators in JavaScript
10. Conditional Statements
11. User Define Function
12. Built-in Functions
13. Events

***Maximum Marks for Continuous Assessment: 40**

Maximum Marks for Semester Examination: 60

MS-116 C1: Workshop on Page Maker**Maximum Marks: 100*****Max. Time: 3 Hrs.****Minimum Pass Marks: 35%****Practical sessions to be conducted: 45-55**

Basics of page layout and design, Creating simple documents like flyers, small adverts, leaflets, newsletters, etc., Working environment, Introduction to the Toolbox, Creating a new document, Defining document size, page margins, etc., Setting document preferences, Setting page options, Navigating the Document, Zooming Keyboard Shortcuts, Saving PageMaker files, Document magnification and changing views, Using column guides and custom guide lines to help you position content and Setting, the zero point, Using x and y references, Using the proxy box, Using the Control Palette.

Creating Text: Creating text on the page, Importing text prepared in a word processor, Setting Text properties: font, size, style, Colour, leading, spacing, kerning, Tracking and expert Tracking Breaking Text, Baseline Shift, Character Scaling, Sub/Super Script, Caps and Small Caps, Changing Case, Flowing text from one text block to another, Editing text on the page and with the Story Editor, Checking Spelling, Applying Stroke and Fill

Creating Frames and Blocks: Frames vs. Blocks, Text Blocks, Threading Text, Threading Text Automatically, Deleting Blocks, Cutting and Pasting Blocks, Text Frames, Linking Text

Frames, Frame Options Frame Shapes, Separating Frames **Working with Paragraphs:** Introduction to Paragraph Formatting, Justification, Indents, Space Above and Below, Orphan and Widow Control, Keeping Lines Together, Column and Rule Breaks, Rules Above and Below, Advanced Rules, Balancing Columns, Align Paragraph to Grid **Tabs and Indents:** Setting Indents, Creating Hanging Indents, Setting Tabs **Paragraph Styles:** Intro Paragraph Styles, Creating Styles, Mixed Styles, Style Tags, Next Style, Importing Styles

Miscellaneous Text: Bullets and Numbers, Special Characters, Drop Caps, Inline Graphics

Fills and Outlines and Color: Outline and Stroke, Transparent Stroke, Basic Fills, Color Fills, Types of Color, Creating Spot Color, Creating CMYK colors, Creating RGB Colors, Setting a Tint, Using the Color Pallet, Creating Deleting and Editing Colors, Creating Default Colors, Importing Colors, Importing Colors with EPS files, Introduction to color palette, Control Pallet Basics. **Working with Graphics:**Place vs. Cut and Paste, Cutting and Pasting, Linking and Embedding, Placing and Linking Images, Resizing images, Replacing Images, Inserting Into Frames, Working with Graphic Frames, Separating Content from Frame, Cropping and Panning Cropped Images, Creating a Key line, Drawing lines and shapes, Setting stroke and fill colors, Creating borders for pictures, Choosing colors, Defining color.

Manipulating with the Control Palette: Introduction, Positioning, Scaling, Magic Scale, Rotating, Skew, Mirror, Anchoring the Proxy Button, Removing Transformations. **Arranging Objects:**Order, Align, Distribute, Grouping, Masking, Text Wrap, Irregular Text Wrap, Locking Position, Image Control, Bitmap Effects, Non Printing Items.

***Maximum Marks for Continuous Assessment: 30**

Maximum Marks for Semester Examination: 70**Text Book:** Ellenn Behoriam, Erika Kendra, Adobe PageMaker 7, Prentice Hall**References:** Dinesh Maidasani, L Adobe PageMaker 7, Laxmi Publications
Marc Campbell, Adobe PageMaker 7, Firewall Media

MS-116 C2: Workshop on Corel Draw

Maximum Marks: 100*

Max. Time: 3 Hrs.

Minimum Pass Marks: 35%

Practical sessions to be conducted: 45-55

The practical in lab will be implemented based on the following concepts:

1. Creating new Document, working with Templates, Import and Export.
2. Tools of Corel draw: Working with text and lines, Artistic text, Paragraph text, Fitting text to a path, Applying effects to text.
3. Working with shapes and objects.
4. Creating Graphical special effects.
5. Working with curves, Colours and Bitmaps.
6. Working with tables.

***Maximum Marks for Continuous Assessment: 30**

Maximum Marks for Semester Examination: 70

Textbooks:

1. CorelDRAW X5 The Official Guide by Gary David Bouton, McGraw Hill Professional.

Reference Books:

1. CorelDRAW X3 Unleashed by DeAnn Blascoe and Tony Severenuk, Foster D. Coburn III.
2. CorelDRAW 12: The Official Guide by Steve Bain, Nick Wilkinson, McGraw Hill Professional.
3. CorelDRAW X4 The Official Guide by Tony Severenuk, Pearson.

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Session 2018-19
OUTLINE OF PAPERS AND TESTS

Code	Title of Paper	Schedule of Teaching (Hours/Week)			Total Hours	Credits	Marks	
		L	T	P			External	Internal
MS-121	Object Oriented programming Using C++	4	1	0	5	4	70	30
MS-122	Visual Programming	4	1	0	5	4	70	30
MS-123	Database Management System	4	1	0	5	4	70	30
MS-124	Programming Lab-III based on MS-121	0	0	5	5	5	60	40
MS-125	Programming Lab-IV based on MS-122	0	0	5	5			
MS-126	Choice Based Course (CBC-II)	4	1	0	5	4	70	30
TOTAL		16	4	10	30	21	400	200

CBC-II: Any one of the following papers

1.	MS-126 C1	System Analysis & Design
2.	MS-126 C2	Principles & Practices of Management

Note:

1. The breakup of marks for the Continuous assessment for theory papers will be as under:

i.	One or two tests out of which minimum one best will be considered for assessment.	15 Marks
ii.	Attendance	5 Marks
iii.	Class participation and behaviour	10 Marks

2. The break up of for the Continuous Assessment for the practical will be as under:

Lab Assignments (60% of Total marks)	24 Marks
Viva (30% of Total marks)	12Marks
Attendance/Class participation and behaviour (10 % of Total marks)	4 Marks

MS-121 Object Oriented programming Using C++**Maximum Marks: 70**Time allowed: **3 Hrs.****Minimum Pass Marks: 35%****Lectures to be delivered: 45-55****A) Instructions for paper-setters**

The question paper will consist of three units I, II and III. Unit I and II will have four questions from the respective units of the syllabus carrying 20% marks each. Unit III will have 5-10 short answer type questions which cover the entire syllabus uniformly carrying 20% marks in all.

B) Instructions for candidates

1. Candidates are required to attempt two questions each from Unit I and II. Unit III is compulsory.
2. Use of non programmable scientific calculator is allowed

Unit-I

Evolution of OOP: Procedure Oriented Programming, OOP Paradigm, Advantages and disadvantages of OOP over its predecessor paradigms. Characteristics of Object Oriented Programming: Abstraction, Encapsulation, Data hiding, Inheritance, Polymorphism, Code Extensibility and Reusability, User defined Data Types. **Introduction to C++:** Identifier, Keywords, Constants, variables, expressions, manipulators. **Operators:** Arithmetic, relational, logical, conditional and assignment. Input and output statements, stream I/O, Conditional and Iterative statements, breaking control statements. **Storage Classes:** Automatic, Static, Extern, Register. **Arrays:** Arrays as Character Strings, Structures, Unions. **Pointers:** Pointer Operations Pointer Arithmetic, **Functions:** Prototyping, Definition and Call, Parameter Passing: by value, by address and by reference, recursion, function overloading.

Unit-II

Classes and Objects: Class Declaration and Class Definition, Defining member functions, making functions inline, nesting of member functions, friend functions and friend classes. **Constructors:** properties, types of constructors (Default, parameterized and copy), **Destructors:** properties, Rules for constructors and destructors. Dynamic memory allocation using new and delete operators. **Inheritance:** types of inheritance: Single, Multiple, Multilevel and Hybrid. **Polymorphism:** Methods of achieving polymorphic behaviour, **Operator overloading:** overloading binary operator, overloading unary operators, rules for operator overloading, Function overloading: early binding, late binding. **Files and streams:** Classes for file stream operations, opening and closing of files, stream state member functions, binary file operations, structures and file operations, classes and file operations.

Text Books:

- 1 .Robert Lafore, "Object Oriented Programming in C++", Galgotia Publications

References:

1. Bjarne Strastrup, "The C++ Programming Language", Addison- Wesley Publication Co., 4th Edition
2. E. Balagurusamy, " Object Oriented Programming with C++", Tata McGraw-Hill, 6th Edition
3. Schildt, "The Complete Reference C++", Tata McGraw-Hill,4th Edition

MS-122 Visual Programming

Maximum Marks: 70

Minimum Pass Marks: 35%

Time allowed: **3 Hrs.**

Lectures to be delivered: 45-55

A) Instructions for paper-setters

The question paper will consist of three units I, II and III. Unit I and II will have four questions from the respective units of the syllabus carrying 20% marks each. Unit III will have 5-10 short answer type questions which cover the entire syllabus uniformly carrying 20% marks in all.

B) Instructions for candidates

1. Candidates are required to attempt two questions each from Unit I and II. Unit III is compulsory.
2. Use of non programmable scientific calculator is allowed

Unit-I

Introduction to Visual Basic.NET: Integrated Development Environment, Main Menu, toolbars, toolbox, solution window, Visual Basic.NET forms, adding controls using toolbox, setting the properties of controls, Creating and saving project in Visual Basic.NET.

Events in Visual Basic .NET: Click event, KeyDown event, MouseDown event. **Variables,** String variables, Dim statement, Conditional operators in Visual Basic.NET, Conditional statements in Visual Basic.NET, If statement, select case statement, Iterative statements in Visual Basic.NET, Introduction to Loops, For Loop, Do Loop, MsgBox in VB.NET

Unit-II

Menus in Visual Basic.NET: Adding Menus to Form, Adding code to Menus, Adding sub-menus to forms, Adding shortcut to menus, Adding Checkbox, Combobox and Option button in Visual Basic.Net form, show and hide controls in form, Insert images into picture box, creating multiple forms.

Introduction to Arrays: assigning values to an array, **Strings:** Trim method, InStr method, Substring method, Equals, Replace and Insert Methods, Difference between char and chars in VB.NET, **Introduction to functions:** how to create functions in Visual Basic.NET, passing parameters to functions, techniques of passing parameters-ByVal and ByRef, Connecting with databases.

Text Books:

1. Shirish Chavan ,Visual Basic.Net, , Pearson.

References:

1. David I. Schneider An Introduction to Programming using Visual Basic.Net, 5th Edition, PHI.
2. Kant, Visual Basic.Net A Beginners Guide, 2nd Edition, TMH
3. Duncan Mackenzie, Kent Sharkey ,Teach Yourself Visual Basic .NET in 21 Days,2ndEdition,SAMS

MS-123 Database Management System**Maximum Marks: 70**Time allowed: **3 Hrs.****Minimum Pass Marks: 35%****Lectures to be delivered: 45-55****A) Instructions for paper-setters**

The question paper will consist of three units I, II and III. Unit I and II will have four questions from the respective units of the syllabus carrying 20% marks each. Unit III will have 5-10 short answer type questions which cover the entire syllabus uniformly carrying 20% marks in all.

B) Instructions for candidates

1. Candidates are required to attempt two questions each from Unit I and II. Unit III is compulsory.
2. Use of non programmable scientific calculator is allowed

Unit-I

Traditional file processing system: Characteristics, limitations, Database: Definition, composition. **Database Management System:** Definition, Characteristics, advantages over traditional file processing system, Users of database, DBA and its responsibilities, Database schema, instance. **DBMS architecture,** data independence, mapping between different levels.

Database languages: DDL, DML, DCL. Database utilities, Data Models, Keys: Super, candidate, primary, unique, foreign. **Entity relationship model:** concepts, mapping cardinalities, entity relationship diagram, weak entity sets, strong entity set, aggregation, generalization, converting ER diagrams to tables. Overview of Network and Hierarchical model. **Relational Data Model:** Concepts, Constraints: Entity, Referential and Domain Integrity, Relational algebra: Basic operations, additional operations.

Unit-II

Database Design: Functional dependency, composition, problems arising out of bad database design, normalization, multi-valued dependency, Database design process, data base protection, database integrity. **Database concurrency:** Definition and problems arising out of concurrency. **Database security:** Authentication, authorization, methods of implementing security. **Query Based:** Working with database and tables, queries in Access, Applying integrity constraints, Introduction to forms, sorting and filtering controls, Reports and Macro: creating reports, using Macros.

Text Book:

1. B.P. Desai, "Database management system" ,11th Edition, BPB publications

Reference:

1. C.J. Date, "An Introduction to Data Base Systems", 3rd Ed., Narosa Publishers
2. Jeffrey D. Ullman, "Principles of Database Systems", 2nd Ed., Galgotia Pub.
3. D. Kroenke., "Database Processing", Galgotia Publications.
4. Henry F. Korth, "Database System Concepts", McGraw Hill. Inc.

MS-124 Programming Lab-III (Based on MS-121)

Maximum Marks: 100*

Max. Time: 3 Hrs.

Minimum Pass Marks: 35%

Practical sessions to be conducted: 45-55

This laboratory course will mainly comprise of exercise based on subject (MS-121 Object Oriented programming Using C++)

Implementation and Execution of:

1. Defining variables and assigning values to variables.
2. Arithmetic and relational operators.
3. Arithmetic expressions and their evaluation
4. Formatting input/output using cin and cout
5. Control Statements
6. Array
7. Strings.
8. Structures.
9. Pointers.
10. Classes and Objects
11. Constructors
12. Destructors
13. Inheritance
14. Polymorphism
15. Operator overloading
16. Function overloading
17. . Files and streams:

***Maximum Marks for Continuous Assessment: 40**

Maximum Marks for Semester Examination: 60

MS-125 Programming Lab-IV (Based on MS-122)

Maximum Marks: 100*

Max. Time: 3 Hrs.

Minimum Pass Marks: 35%

Practical sessions to be conducted: 45-55

This laboratory course will mainly comprise of exercise based on subject MS-122(Visual Programming)

Implementation and Execution of:

1. Adding controls using toolbox
2. Setting the properties of controls
3. Creating and saving project in Visual Basic.NET
4. Adding Menus to Form
5. Conditional statements
6. Events in Visual Basic .NET
7. Strings
8. Functions
9. Connectivity with database

***Maximum Marks for Continuous Assessment: 40**

Maximum Marks for Semester Examination : 60

MS-126 C1- System Analysis and Design

Maximum Marks: 70

Minimum Pass Marks: 35%

Time allowed: 3 Hrs.

Lectures to be delivered: 45-55

A) Instructions for paper-setters

The question paper will consist of three units I, II and III. Unit I and II will have four questions from the respective units of the syllabus carrying 20% marks each. Unit III will have 5-10 short answer type questions which cover the entire syllabus uniformly carrying 20% marks in all.

B) Instructions for candidates

1. Candidates are required to attempt two questions each from Unit I and II. Unit III is compulsory.
2. Use of non programmable scientific calculator is allowed

Unit-I

Systems concepts: Definition and characteristics of a system, Elements of a system, Types of systems. **The system development life cycle:** Introduction to various phases. **The role of the Systems Analyst:** Qualifications of a systems analyst, various roles of the systems analyst. **Systems analysis:** Initial investigation, needs identification, determining the user's information requirements, Information-gathering tools. **Structured analysis tools:** Data flow diagram, Data dictionary, Decision tree, Structured English, Decision tables. **Feasibility study:** Feasibility considerations, Steps in Feasibility analysis.

Unit-II

Systems Design: The process and stages of systems design, Input/output and forms design, Database design. **Implementation and software maintenance:** Conversion, Post-implementation review. Software maintenance: maintenance or enhancement, Primary activities of a maintenance procedure. **Hardware and software selection:** Procedure and major phases in selection.

Text Book:

1. E. M. Awad: Systems Analysis and Design, Galgotia Publications (P) Ltd.

Reference:

1. Kenneth E. Kendall, Systems Analysis and Design ,Pearson , 9th Edition .
2. Alan Dennis, Systems Analysis and Design: An Object-Oriented Approach with UML ,5th Edition ,Wiley.
3. Kenneth Kendall, Julie Kendall, Systems Analysis and Design,Global Edition, Pearson Education.

MS-126 C2- Principles & Practices of Management**Maximum Marks: 70****Time allowed: 3 Hrs.****Minimum Pass Marks: 35%****Lectures to be delivered: 45-55****A) Instructions for paper-setters**

The question paper will consist of three units I, II and III. Unit I and II will have four questions from the respective units of the syllabus carrying 20% marks each. Unit III will have 5-10 short answer type questions which cover the entire syllabus uniformly carrying 20% marks in all.

B) Instructions for candidates

1. Candidates are required to attempt two questions each from Unit I and II. Unit III is compulsory.
2. Use of non programmable scientific calculator is allowed

Unit-I

Introduction to management: Definition and Nature of management, Functions of management and manager. **Management:** Science or art, Levels of management, Fayol's general principles of management. **Planning:** Nature and purpose of planning, Planning versus forecasting, Types of plans, Steps in planning, Planning process. **Decision making:** characteristics and importance, programmed and non-programmed decisions, Steps in the process of decision making. **Organizing:** Concept, Nature, Purpose and Process of Organizing, formal and informal organizations. Span of Management: Meaning, factors determining an effective span. **Departmentation:** Need and Importance, Bases of Departmentation . Concept of Delegation and its importance, Factors affecting delegation.

Unit-II

Staffing: Definition, Manpower Planning, Process of Staffing. Brief introduction to the concept of Recruitment and Selection. **Motivation:** Need and Role of Motivation, Types of Motivation/Motivators. Theories of Motivation: Maslow's hierarchy of needs theory, Herzberg's Hygiene theory, McClelland theory. **Leadership:** Definition and Characteristics, Leadership Theories: Trait approach to leadership, Behavioural approach, Situational or Contingency approach to leadership. Leadership styles: Autocratic style, Democratic style, Paternalistic approach, Laissez faire. **Communication:** Meaning, Characteristics, Importance. Elements of communication, the communication process, Types of communication, Formal and Informal Communication. Barriers and breakdowns in Communication, Making Communication Effective. **Controlling:** Nature and significance of controlling, Basic Control Process.

Text Books:

L. M. Prasad, Principles & Practice of Management. Sultan Chand & Sons.

References :

1. Koontz H. and Weihrich H., Essentials of Management, Tata McGraw- Hill Publishing Co. Ltd., New Delhi, 12th Edition.
2. Stoner J., Management, Prentice-Hall of India Ltd., New Delhi, 6th Edition.
3. Anupam Karmakar, Principles and Practices of Management and Business Communication, Pearson.