

MCS Syllabus First semester

PROFESSIONAL COMMUNICATION

MCA -111

Unit-I

Basics of Technical Communication L T P 3 1 0

Technical Communication: features; Distinction between General and Technical communication; Language as a tool of communication; Levels of communication: Interpersonal, Organizational, Mass communication; The flow of Communication: Downward, Upward, Lateral or Horizontal (Peer group); Importance of technical communication; Barriers to Communication.

Unit - II

Constituents of Technical Written Communication Words and Phrases: Word formation. Synonyms and Antonyms; Homophones; Select vocabulary of about 500-1000 New words; Requisites of Sentence Construction: Paragraph Development: Techniques and Methods -Inductive, Deductive, Spatial, Linear, Chronological etc; The Art of Condensation- various steps.

Unit - III

Forms of Technical Communication Business Letters: Sales and Credit letters; Letter of Enquiry; Letter of Quotation, Order, Claim and Adjustment Letters; Job application and Resumes. Official Letters: D.O. Letters; Govt. Letters, Letters to Authorities etc. Reports: Types; Significance; Structure, Style & Writing of Reports. Technical Proposal; Parts; Types; Writing of Proposal; Significance. Technical Paper, Project. Dissertation and Thesis Writing: Features, Methods & Writing.

Unit - IV

Presentation Strategies Defining Purpose; Audience & Locale; Organizing Contents; Preparing Outline; Audio-visual Aids; Nuances of Delivery; Body Language; Space; Setting Nuances of Voice Dynamics; Time- Dimension.

Unit - V

Value- Based Text Readings Following essays form the suggested text book with emphasis on Mechanics of writing,

- (i) The Aims of Science and the Humanities by M.E. Prior
- (ii) The Language of Literature and Science by A.Huxley
- (iii) Man and Nature by J.Bronowski
- (iv) The Mother of the Sciences by A.J.Bahm
- (v) Science and Survival by Barry Commoner
- (vi) Humanistic and Scientific Approaches to Human Activity by Moody E. Prior
- (vii) The Effect of Scientific Temper on Man by Bertrand Russell.

Text Book 1.

Improve Your Writing ed. V.N. Arora and Laxmi Chandra, Oxford Univ. Press, New Delhi . Technical Communication – Principles and Practices by Meenakshi Raman & Sangeeta Sharma, Oxford Univ. Press 2007, New Delhi.

Reference Books

1. Effective Technical Communication by Barun K. Mitra, Oxford Univ. Press, 2006, New Delhi
2. Business Correspondence and Report Writing by Prof. R.C. Sharma & Krishna Mohan, Tata McGraw Hill & Co. Ltd., New Delhi.
3. How to Build Better Vocabulary by M.Rosen Blum, Bloomsbury Pub. London.
4. Word Power Made Easy by Norman Lewis, W.R.Goyal Pub. & Distributors; Delhi. Developing Communication Skills by Krishna Mohan, Meera Banerji- Macmillan India Ltd. Delhi.
- 5 Manual of Practical Communication by L.U.B. Pandey & R.P. Singh; A.I.T.B.S. Publications India Ltd.; Krishan Nagar, Delhi.

Accounting MCA-112

Unit I (6 Sessions)

L T P 3 1 0

Overview: Accounting concepts, conventions and principles; Accounting Equation, International Accounting principles and standards; Matching of Indian Accounting Standards with International Accounting Standards.

Unit II (12 Sessions)

Mechanics of Accounting: Double entry system of accounting, journalizing of transactions; preparation of final accounts, Profit & Loss Account, Profit & Loss Appropriation account and Balance Sheet, Policies related with depreciation, inventory and intangible assets like copyright, trademark, patents and goodwill.

Unit III (12 Sessions)

Analysis of financial statement: Ratio Analysis- solvency ratios, profitability ratios, activity ratios, liquidity ratios, market capitalization ratios ; Common Size Statement ; Comparative Balance Sheet and Trend Analysis of manufacturing, service & banking organizations.

Unit IV (10 Sessions)

Funds Flow Statement: Meaning, Concept of Gross and Net Working Capital, Preparation of Schedule of Changes in Working Capital, Preparation of Funds Flow Statement and its analysis ; Cash Flow Statement: Various cash and non- cash

transactions, flow of cash, preparation of Cash Flow Statement and its analysis.

SUGGESTED READINGS

- 1) Narayanswami - Financial Accounting: A Managerial Perspective (PHI, 2nd Edition).
- 2) Mukherjee - Financial Accounting for Management (TMH, 1st Edition).
- 3) Ramchandran & Kakani - Financial Accounting for Management (TMH, 2nd Edition).
- 4) Ghosh T P - Accounting and Finance for Managers (Taxman, 1st Edition).
- 5) Maheshwari S.N & Maheshwari S K – An Introduction to Accountancy (Vikas, 9th Edition)
- 6) Ashish K. Bhattacharya- Essentials of Financial Accounting (PHI, New Delhi)
- 7) Ghosh T.P- Financial Accounting for Managers (Taxman, 3rd Edition)
- 8) Maheshwari S.N & Maheshwari S K – A text book of Accounting for Management (Vikas, 1st Edition)
- 9) Gupta Ambrish - Financial Accounting for Management (Pearson Education, 2nd Edition)
- 10) Chowdhary Anil - Fundamentals of Accounting and Financial Analysis (Pearson Education, 1st Edition).

MCA-113 : COMPUTER CONCEPTS AND PROGRAMMING IN C

Unit – I L T P 3 1 0

UNIT 1:

Introduction to any Operating System [Unix, Linux, Windows], Programming Environment, Write and Execute the first program, Introduction to the Digital Computer; Concept of an algorithm; termination and correctness. Algorithms to programs: specification, top-down development and stepwise refinement. Introduction to Programming, Use of high level programming language for the systematic development of programs. Introduction to the design and implementation of correct, efficient and maintainable programs, Structured Programming, Trace an algorithm to depict the logic, Number Systems and conversion methods

UNIT 2:

Standard I/O in “C”, Fundamental Data Types and Storage Classes: Character types, Integer, short, long, unsigned, single and double-precision floating point, storage classes, automatic, register, static and external, Operators and Expressions: Using numeric and relational operators, mixed operands and type conversion, Logical operators, Bit operations, Operator precedence and associativity,

UNIT 3:

Conditional Program Execution: Applying if and switch statements, nesting if and else,

restrictions on switch values, use of break and default with switch, Program Loops and Iteration: Uses of while, do and for loops, multiple loop variables, assignment operators, using break and continue, Modular Programming: Passing arguments by value, scope rules and global variables, separate compilation, and linkage, building your own modules.

UNIT 4:

Arrays: Array notation and representation, manipulating array elements, using multidimensional arrays, arrays of unknown or varying size, Structures: Purpose and usage of structures, declaring structures, assigning of structures, Pointers to Objects: Pointer and address arithmetic, pointer operations and declarations, using pointers as function arguments, Dynamic memory allocation, defining and using stacks and linked lists.

UNIT 5:

Sequential search, Sorting arrays, Strings, Text files, The Standard C Preprocessor: Defining and calling macros, utilizing conditional compilation, passing values to the compiler, The Standard C Library: Input/Output : fopen, fread, etc, string handling functions, Math functions : log, sin, alike Other Standard C functions.

References :

1. V. Rajaraman, "Fundamentals of Computers", PHI
2. Peter Norton's, "Introduction to Computers", TMH
3. Hahn, "The Internet complete reference", TMH
4. Peter Norton's, "DOS Guide", Prentice Hall of India
5. Gottfried, "Programming in C", Schaum's Series, Tata McGraw Hill
6. Kernighan, Ritchie, "The C Programming Language", PHI
7. Yashwant Kanitkar, "Working with C", BPB
8. Yashwant Kanitkar, "Pointer in C", BPB
9. Yashwant Kanitkar, "Let us C", BPB
10. Bajpai, Kushwaha, Yadav, "Computers & C Programming", New Age
11. E. Balagurusamy, "Programming in ANSI C", TMH

MCA-114 : DISCRETE MATHEMATICS

Unit-I:

Set Theory: Definition of sets, countable and uncountable sets, Venn Diagrams, proofs of some general identities on sets Relation: Definition, types of relation, composition of relations, Pictorial representation of relation, equivalence relation, partial ordering relation. Function: Definition, type of functions, one to one, into and onto function, inverse function, composition of functions, recursively defined functions. Notion of

Proof: Proof by counter-example, the contra-positive, proof by contradiction, inductive proofs.

Unit-II:

Algebraic Structures: Definition, Properties, types: Semi Groups, Monoid, Groups, Abelian group, properties of groups, Subgroup, cyclic groups, Cosets, factor group, Permutation groups, Normal subgroup, Homomorphism and isomorphism of Groups, example and standard results, Rings and Fields: definition and standard results.

Unit-III:

Posets, Hasse Diagram and Lattices: Introduction, ordered set, Hasse diagram of partially, ordered set, isomorphic ordered set, well ordered set, properties of Lattices, and complemented lattices. Boolean Algebra: Basic definitions, Sum of Products and Product of Sums, Form in Boolean Algebra, Logic gates and Karnaugh maps. Graphs: Simple graph, multi graph, graph terminology, representation of graphs, Bipartite, Regular, Planar and connected graphs, connected components in a graph, Euler graphs, Hamiltonian path and circuits, Graph coloring, chromatic number, isomorphism and Homomorphism of graphs. Tree: Definition, Rooted tree, properties of trees, binary search tree, tree traversal.

Unit-IV:

Propositional Logic: Proposition, First order logic, Basic logical operation, truth tables, tautologies, Contradictions, Algebra of Proposition, logical implications, logical equivalence, predicates, Universal and existential quantifiers.

Unit-V:

Combinatorics: Basic Counting Technique, Pigeon-hole Principle, Recurrence Relation, Generating function, Polya's Counting Theorem

Text books and Supplementary reading:

1. Discrete Mathematics and Its Applications, By Kenneth H Rosen, McGraw Hill, Sept.2002.
2. Discrete Mathematical Structures with Applications to Computer Science, By J. P. Tremblay, R. Manohar, McGraw Hill Pub, 1975.
3. Graph Theory With Applications to Engineering and Computer Science, By Prentice Hall, Englewood Cliffs, N. J, 1974
4. Combinatorics: Theory and Applications, By V. Krishnamurthy, East-West Press Pvt. Ltd., New Delhi, 1986.

MCA-115 : ORGANISATIONAL BEHAVIOUR

Unit 1

UNIT I (8 Sessions)

Concept, Nature, Characteristics, Conceptual Foundations and Importance, Models of Organizational Behaviour, Management Challenge, A Paradigm Shift, Relationship with

Other Fields, Organisational Behaviour: Cognitive Framework, Behaviouristic Framework and Social Cognitive Framework.

UNIT II (10 Sessions)

Perception and Attribution: Concept, Nature, Process, Importance. Management and Behavioural Applications of Perception. Attitude: Concept, Process and Importance, Attitude Measurement. Attitudes and Workforce Diversity. Personality: Concept, Nature, Types and Theories of Personality Shaping, Personality Attitude and Job Satisfaction. Learning: Concept and Theories of Learning.

UNIT III (10 Sessions)

Motivation: Concepts and Their Application, Principles, Theories, Employee Recognition, Involvement, Motivating a Diverse Workforce. Leadership: Concept, Function, Style and Theories of Leadership- Trait, Behavioural and Situational Theories. Analysis of Interpersonal Relationship, Group Dynamics: Definition, Stages of Group Development, Group Cohesiveness, Formal and Informal Groups, Group Processes and Decision Making, Dysfunctional Groups.

UNIT IV (12 Sessions)

Organisational Power and Politics: Concept, Sources of Power, Distinction Between Power, Authority and Influence, Approaches to Power, Political Implications of Power: Dysfunctional Uses of Power. Knowledge Management & Emotional Intelligence in Contemporary Business Organisation Organisational Change : Concept, Nature, Resistance to change, Managing resistance to change, Implementing Change, Kurt Lewin Theory of Change. Conflict: Concept, Sources, Types, Functionality and Dysfunctionality of Conflict, Classification of Conflict Intra, Individual, Interpersonal, Intergroup and Organisational, Resolution of Conflict, Meaning and Types of Grievance and Process of Grievance Handling. Stress: Understanding Stress and Its Consequences, Causes of Stress, Managing Stress. Organisational Culture : Concept, Characteristics, Elements of Culture, Implications of Organisation culture, Process of Organisational Culture.

Suggested Reading:

1. Newstrom John W. - Organizational Behaviour: Human Behaviour at Work (Tata Mc Graw Hill, 12th Edition)
2. Luthans Fred - Organizational Behaviour (Tata Mc Graw Hill)
3. Mc Shane L. Steven, Glinow Mary Ann Von & Sharma Radha R. - Organizational Behaviour (Tata Mc Graw Hill, 3rd Edition)
4. Robbins Stephen P. - Organizational Behaviour (Pearson Education, 12th Edition)
5. Hersey Paul, Blanchard, Kenneth H and Johnson Dewey E. - Management of Organizational Behavior: Leading Human Resources (Pearson Education, 8th Edition)
6. Greenberg Jerald and Baron Robert A. - Behavior In Organisations: Understanding and Managing the Human Side of Work (Prentice Hall of India)
7. Davis, Keith - Human Behaviour at Works – Tata Mc Graw Hill, New Delhi.
8. Pareek, Udai - Behavioural Process in Organization (Oxford 4 IBH, New Delhi).