

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR**  
**MCA I Year I Sem** **L**    **T**    **P**    **C**  
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**(17FHS101) TECHNICAL COMMUNICATION SKILLS**

**COURSE OBJECTIVES**

- 1 To develop awareness in students of the relevance and importance of technical communication and presentation skills.
- 2 To prepare the students for placements
- 3 To sensitize the students to the appropriate use of non-verbal communication
- 4 To train students to use language appropriately for presentations and interviews
- 5 To enhance the documentation skills of the students with emphasis on formal and informal writing

**COURSE OUTCOMES**

- CO1 Become effective technical communicators
- CO2 Be job-ready and able to face interviews confidently
- CO3 Sensitive use of non-verbal language suitable to different situations in professional life
- CO4 Learn and use keys words, phrases and sentence structures making a mark in interviews and presentation skills
- CO5 Effective writing skills with the ability to use different styles for different situations

UNIT 1: Basics of Technical Communication – Introduction – Objectives & Characteristics of Technical Communication – Importance and need for Technical communication - LSRW Skills – Barriers to effective communication

**UNIT II**

Informal and Formal Conversation - Verbal and Non-verbal communication –Kinesics, Proxemics, Chronemics, Haptics, Paralanguage

**UNIT III**

Written communication – Differences between spoken and written communication – Features of effective writing –Advantages and disadvantages of spoken and written communication- Art of condensation- summarizing and paraphrasing

**UNIT IV**

Presentation Skills – Nature and importance of oral presentation – Defining the purpose – Analyzing the audience - Planning and preparing the presentation, organizing and rehearsing the presentation – Individual and group presentations - Handling stage fright

**UNIT V**

Interview Skills – The Interview process –Characteristics of the job interview – Pre-interview preparation techniques – Projecting the positive image – Answering Strategies

**Text Books:**

1. Effective Technical Communication, Ashrif Rizvi, TataMcGrahill, 2011
2. Technical Communication by Meenakshi Raman & Sangeeta Sharma, 3<sup>rd</sup> Edition, O U Press 2015

**References:**

1. Communication Skills by Pushpalatha & Sanjay Kumar, Oxford University Press
2. Books on TOEFL/GRE/GMAT/CAT/ IELTS by Barron's/DELTA/Cambridge University Press. 2012.
3. Soft Skills for Everyone, Butterfield Jeff, Cengage Publications, 2011.
4. Management Shapers Series by Universities Press (India) Pvt Ltd., Himayatnagar, Hyderabad 2008.
5. Successful Presentations by John Hughes & Andrew Mallett, Oxford.
6. Winning at Interviews by Edgar Thorpe and Showick Thorpe, Pearson

University Updates

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**MCA I Year I Sem**

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**(17FBS101) PROBABILITY AND STATISTICS**

**Objectives:**

- To help the students in getting a thorough understanding of the fundamentals of probability and usage of statistical techniques like testing of hypothesis, ANOVA, Statistical Quality Control, curve fitting and Queuing theory.

**UNIT-I**

Basic Concepts of Probability - Conditional probability – Baye's theorem. Random variables – Expectation Discrete and continuous – Distribution – Distribution functions. Binomial and Poison distributions Normal distribution – Related properties.

**UNIT-II**

Test of hypothesis: Populations and samples- confidence interval of mean from normal distribution – Statistical hypothesis – Null and Alternative Hypothesis –Level of Significance –Test of significance –Test based on the normal distribution –Z-test for means and proportions: small samples –t-test for one sample and two sample problem and paired t-test, F-test and chi-square test (testing of goodness of fit and independence).

**UNIT-III**

Analysis of variance one way classification and two-way classification. Latin square Design and RBD.

**UNIT-IV**

Statistical Quality control : Concept of quality of a manufactured Defectives- Causes of variations- Random and assignable – the principle of Schwartz control charts for attribute and Variable quality characteristics- Constructions and operation of X-bar chart, R-chart , P-chart and C-chart.

**UNIT-V**

Curve fitting: The method of least squares- Inferences based on the least squares estimations-curve fitting regression-Multiple regression-correlation for univariate and bivariate distributions.

**TEXT BOOKS:**

1. Probability & Statistics for engineers by Dr.J.Ravichandran WILEY-INDIA publishers.
2. Probability & statistics by E.Rukmagadachari &E.keshava Reddy, Pearson publisher.

**REFERENCES:**

1. Probability & Statistics by T.K.V.Iyengar, B.Krishna Gandhi and S.Ranganatham and M.V.S.S.N.Prasad, S.Chand publications.
2. Mathematical Statistics by B.Rama Bhupal Reddy Research India Publications (DELHI), 2016).
2. Stastical methods by S.P.Gupta, S.Chand Publications.
3. Probability & Statistics for Science and Engineering by G.Shankarrao, Universities Press.
4. Probability & Statistics for Engineering and Sciences by Jay L.Devore, Cengage.
5. Probability & Statistics by R.A.Johnson and Gupta C.B.

**Outcomes:**

- The student will be able to analyze the problems of engineering & industry using the techniques of testing of hypothesis, ANOVA, Statistical Quality Control, curve fitting and Queuing theory and draw appropriate inferences.

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**(17FHS102) ACCOUNTING AND FINANCIAL MANAGEMENT**

**Objective:** The objective of the course is to familiarize the student with the fundamentals of Accounting principles and Financial Management for making sound financial decisions.

**UNIT- I: Introduction to Accounting:** Definition of Accounting- Accounting concepts –Principles- Double entry system of accounting- classification of accounts- Books of accounts – Journal entries- Ledger books – preparation of financial statements and accounts-Trial Balance- Trading account-Profit and Loss account - Balance sheet(Simple problems with adjustments) .

**UNIT- II: Cost Accounting and Marginal Costing:** Nature- importance- Scope- difference between financial accounting and cost accounting- principles-Absorption costing- Marginal Costing - Concept of Break Even Analysis - Margin of Safety and P/V ratio- Break Even Point-Determination of BEP- Cost-Volume-Profit Analysis – managerial applications of BEP and application of marginal costing techniques (Simple problems).

**UNIT- III: Financial Analysis and Interpretations:** Funds flow and cash flow statements meaning-importance-statement of changes in working capital - sources and application of funds - Funds Flow and Cash flow analysis-Financial analysis through Ratios–liquidity ratios- solvency ratios – Profitability ratio, Activity ratio (Simple problems).

**UNIT- IV: Financial Management:** Definition-objectives- finance functions-importance-Profit and wealth maximization- Sources of capital- concept of Leverage and types of Leverage- Over Capitalization and Under Capitalization- Time Value of money -Present value of Money and Future Value of Money.

**UNIT- V: Capital Budgeting and Budgeting Techniques:** Definition- Features- Significance-methods of evaluation of capital budgeting proposals - Payback Period-Accounting Rate of Return (ARR)- Net Present Value Method (NPV) and Internal Rate of Return (IRR)- (Simple problems).

**Learning Outcome:** After completion of this course, the student will be able to understand the basic accounting principles, gets exposure to the fundamental concepts, techniques and tools of Financial Management, also enables to prepare and analyze financial statements of business enterprises for taking sound financial decisions.

**TEXT BOOKS:**

1. M.N.Arora, Accounting for Management, , HPH, 2012.
2. T.S.Reddy and Y.Hari Prasad Reddy, Accounting and Financial Management, Margham Publications.

**REFERENCES:**

1. Khan M.Y, Jain P.K, Management Accounting, 5<sup>th</sup> Edition , Tata McGraw Hill, 2012.
2. S.N.Maheshwari, Financial Accounting, 4<sup>th</sup> Edition,Vikas Publications, 2012.
3. Khan M.Y, Jain P.K, Financial Statement Analysis, PHI, 2009.
4. I.M.Pandey, Financial Management,10<sup>th</sup> Edition,Vikas Publications, 2011.
5. Financial Management, 7<sup>th</sup> Edition, TMH, 2011.

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**(17F00101) MATHEMATICAL FOUNDATIONS FOR COMPUTER SCIENCE**

**Course Objective**

- Apply logical reasoning to solve a variety of problems.
- Understand and apply methods of discrete mathematics such as proofs, counting principles, number theory, logic and set theory to mathematical problems in a creative way.
- To apply the abstract concepts of graph theory in modelling and solving non-trivial problems in different fields of study.

**Course Outcomes**

- Able to apply mathematical concepts and logical reasoning to solve problems in different fields of Computer science and information technology.
- Able to apply the concepts in courses like Computer Organization, DBMS, Analysis of Algorithms, Theoretical Computer Science, Cryptography, Artificial Intelligence

**Unit – I**

**Sets and Propositions:** Introduction, Combination of Sets, Finite and Infinite Sets, Uncountably Infinite Sets, Mathematical Induction, Principle of Inclusion and Exclusion, Multisets, Propositions, Logical Connectives, Conditional and Biconditionals, Well-Formed Formulas, Tautologies, Logical Equivalences.

**Relations and Functions:** Introduction, Properties of Binary Relations, Closure of Relations.

**Unit – II**

**Groups:** Introduction, Groups, Subgroups, Generators and Evaluations of Powers, Cosets and Lagranges's Theorem, Permutations Groups and Burnside's Theorem, Codes and Group Codes, Isomorphisms and Automorphisms, Homomorphisms and Normal Subgroups.

**Unit – III**

**Permutations, Combinations, and Discrete Probability:** Introduction, the Rules of Sum and Product, Permutations, Combinations, Generation of Permutations and Combinations, Discrete Probability, Conditional Probability.

**Recurrence Relations and Recursive Algorithms:** Introduction, Recurrence Relations, Linear Recurrence Relations with Constant Coefficients, Homogeneous Solutions, Particular Solutions, Total Solutions.

**Unit – IV**

**Graphs:** Introduction, Basic Terminology, Multigraphs and Weighted Graphs, Digraphs and Relations, Representation of Graphs, Operations on Graphs, Paths and Circuits, Graph Traversals, Shortest Paths in Weighted Graphs, Eulerian Paths and Circuits, Hamiltonian Paths and Circuits.

**Unit – V**

**Trees:** Trees, Rooted Trees, Path Lengths in Rooted Trees, Prefix Codes, Binary Search Trees, Spanning Trees and Cut sets, Minimum Spanning Trees, Kruskal's Algorithm, Prim's Algorithm.

**Discrete Numeric Functions:** Introduction, Manipulation of Numeric Functions, Asymptotic Behavior of Numeric Functions.

**Text Books:**

1. C L Liu and D Mohapatra "Elements of Discrete Mathematics", Tata Mcgraw Hill, 2009.

**Reference Books:**

1. Discrete and Combinatorial Mathematics, Fifth Edition, R. P. Grimaldi, B.V. Ramana, Pearson
2. Discrete Mathematics Theory and Applications, D.S Malik and M.K. Sen, Cengage Learning

3. J .L.Mott, A.Kandel, T.P .Baker, Discrete Mathematics for Computer Scientists and Mathematicians, second edition 1986, Prentice Hall of India
4. C.L.Liu, Elements of Discrete Mathematics, Second Edition 1985, McGraw-Hill Book Company. Reprinted 2000
5. Discrete Mathematics, Norman L. Biggs, Second Edition, OXFORD Indian Edition.
6. K.H.Rosen, Discrete Mathematics and applications, 5<sup>th</sup> Edition 2003, TataMcGraw Hillpublishing Company
7. Graph Theory with Applications to Engineering & Computer Science: Narsingh Deo, PHI (2004)  
“Discrete Mathematical Structures” Jayant Ganguly, Sanguine.

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**(17F00102) INTRODUCTION TO PROBLEM SOLVING AND PROGRAMMING**

**Course Objectives:**

- To understand the various steps in Program development.
- To understand the basic concepts in C Programming Language.
- To learn how to write modular and readable C Programs
- To understand the basic concepts such as Abstract Data Types, Linear and Non Linear Data structures.
- To understand the notations used to analyze the Performance of algorithms.
- To understand and analyze various searching and sorting algorithms.

**Course Outcomes:**

- Able to design the flowchart and algorithm for real world problems
- Able to learn and understand new programming languages
- Able to construct modular and readable programs
- Able to write C programs for real world problems using simple and compound data types
- Adapt programming experience and language knowledge to other programming language contexts
- Employee good programming style, standards and practices during program development

**UNIT I**

**INTRODUCTION OF COMPUTER PROBLEM-SOLVING**

Introduction – The Problem-solving Aspect – Top-down Design – Implementation of Algorithms - Program Verification – The Efficiency of Algorithms – The Analysis of Algorithms.

FUNDAMENTAL ALGORITHMS – Introduction – Exchanging the Values of Two Variables – Counting – Summation of a Set of Numbers – Factorial Computation – Sine Functional Computation – Generation of the Fibonacci Sequence – Reversing the Digits of an Integer – Base Conversion – Character to Number Conversion.

**UNIT II**

**FACTORING METHODS**

Finding the Square Root of a Number – The Smallest Divisor of an Integer – The Greatest Common Divisor of Two Integers – Generating Prime Numbers – Computing the Prime Factors of an Integer – Generation of Pseudo-random Numbers – Raising a Number to a Large Power – Computing the nth Fibonacci Number.

**UNIT III**

**OVERVIEW OF C LANGUAGE**

Features – Components – Structure – Process of Executing a ‘C’ Program - Data Types – Variables – Constants – Operators - Type Modifiers – Expressions – Type Definitions using typedef – Control Statements – Conditional Statements – Loops – Infinite Loops – Nested Loops – Break Statement – Continue Statement – exit() Function – goto Statement – Introduction to Arrays – One-dimensional Array – Strings – Two-dimensional Array

**UNIT IV**

**FUNCTIONS** - Introduction to Functions – Function Declaration and Prototypes – Definition – Storage Classes – Scope and Lifetime of Declaration – Passing Parameters of Functions – Command Line Arguments – Recursion in Function.

**STRUCTURES** – Definition – Bit Fields – Giving Values to Members – Structure Initialization – Comparison of Structures Variables – Arrays of Structures – Array within Structures – Structures within Structures – Passing Structures to Functions – Structure Pointers.

UNIONS – Definition and Declaration – Accessing a Union Member – Union of Structures – Initialization of a Union Variable – Use of Union – Use of User-defined Type Declarations.

#### **UNIT V**

POINTERS – Introduction to Pointers – Pointer Notation – Declaration and Initialization – Accessing a Variable through a Pointer – Difference between Array and Pointer – Pointer Expressions – Pointers and One-dimensional Arrays – malloc Library Function – calloc Library Function – Pointers and Multi-dimensional Arrays – Arrays of Pointers – Pointer to Pointers – Pointers and Functions – Functions with a Variable Number of Arguments.

FILE HANDLING IN 'C' – File – Defining and Opening a File – Closing a File – Input/Output Operations on Files – Functions for Random Access to Files – Example Programs.

#### **TEXT BOOKS:**

1. R. G. Dromey, How to Solve it by Computer, Pearson Education, 2007.
2. ISRD Group, Programming and Problem Solving Using C, Tata McGraw-Hill.

#### **REFERENCE BOOKS:**

1. Herbert Schildt, Osborne, C- The Complete Reference, Mcgraw Hill, Inc.
2. Brian W. Kerningham and Dennis Ritchie, C Programming Language (ANSI C), Pearson Edition.
3. B.S. Gottfried, Programming with C, Schaum Series, TMH.
4. Alfred V. Aho, Foundations of Computer Science(C Edition).



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**(17FHS103) ENGLISH LANGUAGE COMMUNICATION SKILLS LAB**

**COURSE OBJECTIVES**

- 1 To facilitate computer-aided multi-media instruction enabling individualized and independent language learning
- 2 To sensitise the students to the nuances of English speech sounds, word accent, intonation and rhythm
- 3 To provide opportunities for practice in using English in day to day situations
- 4 To improve the fluency in spoken English and neutralize mother tongue influence
- 5 To train students to use language appropriately for debate, group discussion and public speaking

**COURSE OUTCOMES**

- CO1 Better Understanding of nuances of language through audio- visual experience and be independent learners
- CO2 The significance of paralinguistic features will be understood by the students and they will try to be intelligible.
- CO3 Become good at Inter-personal skills
- CO4 Achieve neutral accent and be free from mother tongue influence
- CO5 Being an active participant in debates and group discussion, showing ability to express agreement, argument to summarize ideas to elicit the views of others and present own ideas;

**UNIT- I**

Phonetics – Introduction to Sounds of Speech – Vowels – Consonants – Phonetic Transcription & Orthographic Transcription

**UNIT – II**

Syllabification – Word Stress – Rules of word stress – Intonation – Falling tone and Rising tone

**UNIT – III**

Situational Dialogues – Role-play – Expressions in various situations – Self Introduction – Introducing others – Greetings – Apologies – Requests – Giving directions -Social and Professional etiquettes – Telephone Etiquettes

**UNIT – IV**

JAM – Describing Pictures, Photographs, Products, and Process – Talking about Wishes-Information Transfer.

**UNIT – V**

Debates - Group Discussions-1

### **MINIMUM REQUIREMENT FOR ELCS LAB:**

The English Language Lab shall have two parts:

1. Computer Assisted Language Learning (CALL) Lab:  
The Computer aided Language Lab for 60 students with 60 systems, one master console, LAN facility and English language software for self- study by learners.
2. The Communication Skills Lab with movable chairs and audio-visual aids with a P.A. system, Projector, a digital stereo-audio & video system and camcorder etc.

System Requirement (Hardware component):

Computer network with LAN with minimum 60 multimedia systems with the following specifications:

- i) P – IV Processor
  - a) Speed – 2.8 GHZ
  - b) RAM – 512 MB Minimum
  - c) Hard Disk – 80 GB
- ii) Headphones of High quality

### **SUGGESTED SOFTWARE:**

1. Walden Infotech English Language Communication Skills.
2. Clarity Pronunciation Power – Part I (Sky Pronunciation)
3. Clarity Pronunciation Power – part II
4. LES by British council
5. TOEFL & GRE (KAPLAN, AARCO & BARRONS, USA, Cracking GRE by CLIFFS)
6. *DELTA's key to the Next Generation TOEFL Test: Advanced Skills Practice.*
7. Lingua TOEFL CBT Insider, by Dreamtech
8. English Pronunciation in Use (Elementary, Intermediate, Advanced) CUP
9. Cambridge Advanced Learners' English Dictionary with CD.

### **REFERENCE BOOKS:**

1. A Textbook of English Phonetics for Indian Students 2<sup>nd</sup> Ed T. Balasubramanian. (Macmillan), 2012.
2. A Course in Phonetics and Spoken English, [Dhamija Sethi](#), Prentice-Hall of India Pvt.Ltd
3. Speaking English Effectively, 2<sup>nd</sup> Edition Krishna Mohan & NP Singh, 2011. (McMillan).
4. A Hand book for English Laboratories, E.Suresh kumar, P.Sreehari, Foundation Books,2011
5. English Pronunciation in Use. Intermediate & Advanced, Hancock, M. 2009. CUP
6. Basics of Communication in English, Soundararaj, Francis. 2012.. *New Delhi: Macmillan*
7. Spoken English (CIEFL) in 3 volumes with 6 cassettes, OUP.
8. English Pronouncing Dictionary, Daniel Jones Current Edition with CD.Cambridge, 17<sup>th</sup> edition, 2011.

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**(17F00103) COMPUTER PROGRAMMING LAB**

**Course Objective**

- To work with the compound data types
- To explore dynamic memory allocation concepts
- Able to design the flowchart and algorithm for real world problems
- Able to write C programs for real world problems using simple and compound data types
- Employee good programming style, standards and practices during program development

**Course Outcomes**

- Able to have fundamental concept.
- Able to write, compile and debug programs in C language.
- Able to formulate problems and implement algorithms in C.
- Able to effectively choose programming components that efficiently solve computing problems in real-world.
- Able to use different data types in a computer program.
- Able to design programs involving decision structures, loops and functions.

- Week-1**
- 1) Write a C program to make the following exchange between the variables a-> b -> c->d -> a
  - 2) Write a C program to carry out the arithmetic operations addition, subtraction, multiplication, and division between two variables
  - 3) Write a C program for printing prime numbers between 1 and n.

- Week-2**
- 1) Write a C program to construct a multiplication table for a given number.
  - 2) Write a program to reverse the digit of a given integer.
  - 3) Write a C program to find the sum of individual digits of a positive integer.
  - 4) Write a C program to calculate the factorial of a given number

- Week-3**
- 1) Fibonacci sequence is defined as follows: the first and second terms in the sequence are 0 and 1. Subsequent terms are found by adding the preceding two terms in the sequence. Write a C program to generate the first n terms of the sequence.

- 2) Write a program to calculate tax, given the following conditions:
  - a) If income is less than 1,50,000 then no tax.
  - b) If taxable income is in the range 1,50,001 – 300,000 then charge 10% tax
  - c) If taxable income is in the range 3,00,001 – 500,000 then charge 20% tax
  - d) If taxable income is above 5,00,001 then charge 30% tax

- Week-4**
- 1) Write a program to print the calendar for a month given the first Week- day of the month.

Input the first day of the month (Sun=0,Mon=1,Tue=2,Wed=3,.....) :: 3

Total number of days in the month : 31

Expected output

Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	-	-	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
25	26	27	28	29	30	31

- 2) Write a C program to find the roots of a quadratic equation

- Week-5**
- 1) Write a program to print the Pascal triangle for a given number

- 2) Write a C program to find the GCD (greatest common divisor) of two given integers
- 3) Write a C program to construct a pyramid of numbers.
- 4) Write C code to define a function `cash_dispen`, which takes an amount as its input, and returns the number of 1000, 500, 100, 50, 20, 10, 5, 2, 1 rupee denomination that make up the given amount

**Week-6**

- 1) Write C code to reverse the contents of the array. For example, [1,2,3,4,5] should become [5,4,3,2,1]
- 2) Write a C program that uses functions to perform the following:
  - i) Addition of Two Matrices
  - ii) Multiplication of Two Matrices
- 3) Write a program that will search and find out the position where the given key element exist in a user chosen array and print it as output.

**Week-7**

- 1) Write C code to compute the frequency table of survey responses given by 20 users. The survey responses range from 1 to 5 and are stored in an array. For example, 10 responses are stored in the array [1,1,5,2,3,3,5,5,2,2]. The frequency table will be as shown below:
  - a. 1 = 2
  - b. 2 = 3
  - c. 3 = 2
  - d. 4 = 0
  - e. 5 = 3

- 2) Write a program to define a function to sort an array of integers in ascending order by using exchange sort.

**Week-8**

- 1) Write a C program to check whether a given string is a palindrome or not, without using any built-in functions.
- 2) Write a C program to determine if the given string is a palindrome or not by using string functions.
- 3) Write a function that accepts a string and delete the first character.
- 4) Write a function that accepts a string and delete all the leading spaces.

**Week-9**

Write a program to accept a string from user and display number of vowels, consonants, digits and special characters present in each of the words of the given string.

**Week-10**

- 1) Write a C program to define a union and structure both having exactly the same numbers using the `sizeof` operators print the `sizeof` structure variables as well as union variable
- 2) Declare a structure `time` that has three fields `hr`, `min`, `secs`. Create two variables, `start_time` and `end_time`. Input their values from the user. Then while `start_time` is not equal to `end_time` display GOOD DAY on screen.

**Week-11**

- 1) Write a program to read in an array of names and to sort them in alphabetical order. Use sort function that receives pointers to the functions `strcmp`, and `swap`, sort in turn should call these functions via the pointers.
- 2) Write a program to read and display values of an integer array. Allocate space dynamically for the array using the `malloc()`.
- 3) Write a program to calculate area of a triangle using function that has the input parameters as pointers as sides of the triangle.

**Week-12**

- 1) Two text files are given with the names `text1` and `text2`. These files have several lines of text. Write a program to merge (first line of `text1` followed by first line of `text2` and so on until both the files reach the end of the file) the lines of `text1` and `text2` and write the merged text to a new file `text3`.
- 2) Write a program to split a given text file into `n` parts. Name each part as the name of the original file followed by `.part<n>` where `n` is the sequence number of the part file.

Reference Books:

1. Computer Science, A Structured Programming Approach Using C by Behrouz A. Forouzan & Richard F. Gilberg, Third Edition, Cengage Learning
2. C Programming A Problem-Solving Approach, Behrouz A. Forouzan & E.V. Prasad, F. Gilberg, Third Edition, Cengage Learning
3. Programming with C RemaTheraja, Oxford
4. "C Test Your Skills", Kamthane, Pearson Education
5. Programming in C: A Practical Approach, Ajay Mittal, Pearson
6. Problem solving with C, M.T.Somasekhara, PHI
7. C Programming with problem solving, J.A. Jones & K. Harrow, Dreamtech Press
8. Programming withc, Byron S Gottfried, Jitender Kumar Chhabra, TMH, 2011

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**(17F00104) IT WORKSHOP**

**Course Objectives:**

- To provide Technical training to the students on Productivity tools like Word processors, Spreadsheets, Presentations
- To make the students know about the internal parts of a computer, assembling a computer from the parts, preparing a computer for use by installing the operating system
- To learn about Networking of computers and use Internet facility for Browsing and Searching

**Preparing your Computer**

**Task 1:** Identify the internal parts of a computer of a computer, and its peripherals. Represent the same in the form of diagrams including Block diagram.

**Task 2:** Disassemble and assemble the PC back to working condition. Students should be able to trouble shoot the computer and identify working and non-working parts. Student should identify the problem correctly by various methods available. Students should record the process of assembling and trouble shooting a computer.

**Task 3:** Student should install Linux on the computer. Student may install another operating system (including proprietary software) and make the system dual boot or multi boot. Students should record the entire installation process.

**Task 4:** Students should record the various features that are supported by the operating system installed and submit it.

**Networking and Internet**

**Task 5:** Students should connect two computers directly using a cable or wireless connectivity and share information. Students should connect two or more computers using a switch/hub and share information. Crimping activity, logical configuration etc should be done by the student. The entire process has to be documented.

**Task 6:** Student should access the Internet for Browsing. Students should search the Internet for required information. Students should be able to create e-mail account and send email. If Intranet mailing facility is supported in the organization, then students should share the information using it. If the operating system supports sending messages to multiple users (LINUX supports it) in the same network, then it should be done by the student. Students are expected to submit the information about different browsers available, their features and search process in different languages.

**Task 7:** Students should download freely available Antivirus software, install it and use it to check for threats to the computer being used. Students should submit information about the features of the antivirus used, installation process, about virus definitions, virus engine etc.

**Productivity tools**

**Task 8: Word Processor:** Students should be able to create documents using the word processor tool. Some of the tasks that are to be performed are inserting and deleting the characters, words and lines, Alignment of the lines, Inserting header and Footer, changing the font, changing the colour, including images and tables in the word file, making page setup, copy and paste block of text, images, tables etc, linking the images which are present in other directory, formatting paragraphs, spell checking, etc. Students should be able to prepare project cover pages etc at the end of the task. Students should submit a user manual of the word processor considered.

**Task 9: Spreadsheet:** Students should be able to create, open, save the application documents and format them as per the requirement. Some of the tasks that may be practiced are Managing the worksheet environment, creating cell data, inserting and deleting cell data, format cells, adjust the cell size, applying formulas and functions, preparing charts, sorting cells. Students

should submit a user manual of the Spreadsheet application considered.

**Task 10: Presentations :** creating, opening, saving and running the presentations; Selecting the style for slides, formatting the slides with different fonts, colours; creating charts and tables, inserting and deleting text, graphics and animations; bulleting and numbering; hyperlinking, running the slide show, setting the timing for slide show. Students should submit a user manual of the Presentation tool considered.

**References:**

1. “Introduction to Computers”, Peter Norton, Mc Graw Hill
2. “LaTeX Companion” – Leslie Lamport, PHI/Pearson.
3. “MOS study guide for word, Excel, Powerpoint & Outlook Exams”, Joan Lambert, Joyce Cox, PHI.
4. “Introduction to Information Technology”, ITL Education Solutions limited, Pearson Education.
5. “Networking your computers and devices”, Rusen, PHI
6. “Trouble shooting, Maintaining & Repairing PCs”, Bigelows, TMH.

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