

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Scheme of teaching and examination

B.E. V Semester Computer Science & Engineering

S. No	Board of Study	Subject Code	Subject Name	Periods per week			Scheme of exam			Total Marks	Credit L+(T+P) / 2
				L	T	P	Theory / Practical				
							ESE	CT	TA		
1	Electronics & Telecomm.	328515(28)	Microprocessor & Interfaces	3	-	-	80	20	20	120	3
2	Comp Science & Engg	322512(22)	Analysis and Design of Algorithms	3	1	-	80	20	20	120	4
3	Comp Science & Engg	322513(22)	Operating System	3	1	-	80	20	20	120	4
4	Comp Science & Engg	322514(22)	Theory of Computation	3	1	-	80	20	20	120	4
5	Electronics & Telecomm.	322515(28)	Principles of Communication System	3	-	-	80	20	20	120	3
6	Comp Science & Engg	322516(22)	Database Management System	3	-	-	80	20	20	120	3
7	Comp Science & Engg	322521(22)	Principles of Communication Lab	-	-	4	40	-	20	60	2
8	Comp Science & Engg	322522(22)	Database Management System Lab	-	-	4	40	-	20	60	2
9	Comp Science & Engg	322523(22)	Software Technology Lab – 2 (Java)	-	-	4	40	-	20	60	2
10	Electronics & Telecomm.	322524(28)	Microprocessor & Interfaces Lab	-	-	4	40	-	20	60	2
11	Humanities	300525(46)	Personality Development	-	-	2	-	-	20	20	1
12	Comp Science & Engg	322526(22)	*Practical Training Evaluation and Library	-	-	1	-	-	20	20	1
TOTAL				18	3	19	640	120	240	1000	31

L-Lecture, T- Tutorial, P- Practical, ESE- End Semester Examination, CT- Class Test, TA- Teacher's Assessment

*** To be completed after IV Semester and before the commencement of V Semester**

CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSIT, BHILAI (C.G.)

Semester : V

Subject: **Microprocessor & Interfaces**

Total Theory Periods: 40

Total Marks in End Semester Examination: 80

Minimum number of Class tests to be conducted: 2

Branch: **AEI/CS/EI/EEE/ET&T/IT**

Code: **328515 (28)**

Total Tutorial Periods: Nil

UNIT – I

Microprocessor Architecture: Introduction to Microprocessors, Architecture of 8085, Pin Configuration and Function; internal register & flag register, Generation of Control Signals: Bus Timings: Demultiplexing of address / data bus; Fetch Cycle, Execute Cycle, Instruction Cycle, Instruction Timings and Operation Status, Timing Diagram.

UNIT – II

Instruction Set and Programming with 8085: Instruction for Data Transfer. Arithmetic and Logical Operations. Branching Operation: Machine Cycle Concept; Addressing Modes; Instructions Format: Stacks. Subroutine and Related Instructions. Elementary Concepts of Assemblers, Assembler Directives, Looping and Counting: Software Counters with Time Delays: Simple Programs using Instruction Set of 8085: Debugging: Programs Involving Subroutines. Programs for Code Conversion e.g. BCD to Binary, Binary to BCD. Binary to Seven-Segment LED Display. Binary to ASCII. ASCII to Binary: Program for Addition Subtraction: Programs for Multiplication and Division of Unsigned Binary Numbers.

UNIT – III

Data Transfer and Device Selection: Format of Data Transfer: Modes of Data Transfer: Type of I/O Addressing: Condition of Data Transfer: Microprocessor Controlled Data Transfer: Peripheral Controlled Data Transfer: Absolute and Linear Select Decoding: Memory and I/O Interfacing: Use of Decoders Selection: Memory organization and Mapping.

UNIT – IV

Interrupts: Restart Instruction; Hardware Implementation: Interrupt Processing; Multiple Interrupts and Priority Concepts: Interrupt Structure of 8085: Instructions related to interrupts: Pending Interrupts: Use of Interrupt and Handshaking Signals in Interfacing: Application of Interrupts and Illustrative Programs.

UNIT – V

Architecture of Peripheral Interfacing Devices: Architecture, Pin Diagram and functioning of 8155/8156 (RAM), 8355/8755 (ROM), 8255 (PPI). Simple programs like Initialization and I/O operations of the ports, Timer operation of 8155.

Programmable Internal Timer 8253/8254: Block Diagram, Pin Configuration, Modes, Initialization Instruction, Interfacing and Simple Programmes to generate various types of signals.

Architecture, Pin diagram, description and initialization of Keyboard and display interface (8279), USART (8251)

Name of Text Books:

1. Microprocessor Architecture, Programming and Application by R. S. Gaonkar, Wiley Eastern
2. Digital Systems – From Gates to Microprocessors by Sanjay K. Bose, New Age International Publishers.

Name of Reference Books:

1. 8085 Microprocessor Programming & Interfacing – N.K. Srinath, PHI
2. Digital Computer Electronics – Malvino, TMH
3. Microprocessors: Theory and Applications – Intel and Motorola, Rafiquzzaman, PHI.
4. 0000 to 8085: Introduction to Microprocessor for Engineers and Scientists, Ghosh & Sridhar, PHI

**CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY,
BHILAI (C.G.)**

Semester – V

Subject: **Analysis & Design Of Algorithms**

Total theory periods- **40**

Total marks in end semester exam – **80**

Minimum number of class tests to be conducted – **02**

Branch-**Computer Science & Engineering.**

Code –**322512 (22)**

Total Tutorial Periods: **12**

UNIT-I-INTRODUCTION & ANALYSIS: -

Analyzing algorithms, Algorithm types, Recurrence Equations, Growth function: Asymptotic notation, Standard notation & common functions, Recurrence relation, different methods of solution of recurrence equations with examples.

UNIT-II-DYNAMIC PROGRAMMING & GREEDY PARADIGM: -

The basic dynamic programming paradigm, Dynamic programming solution to the optimal matrix chain multiplication and the longest common subsequence problems, Top down recursive algorithms, Greedy Paradigm: The basic greedy strategy & computing minimum spanning trees, Algorithms of Kruskal and Prim, Union to Find Algorithm & their applications, Disjoint Set, The relationship in Dijkstra's and Prim's algorithms, Use of greedy strategy in algorithms for the Knapsack problem and Huffman trees.

UNIT-III-DIVIDE AND CONQUER & BACKTRACKING PARADIGM: -

Introduction to Divide and Conquer paradigm, Quick and merge sorting techniques, Linear time selection algorithm, the basic divide and conquer algorithm for matrix multiplication, Backtracking & Recursive backtracking, Applications of backtracking paradigm. heaps and introduction to 2-3 trees, Algorithms for manipulating 2-3 trees, Representation of heaps using 2-3 trees, Red Black tree, Binary Search tree , heap sort, shell & bucket sort, Amortized Analysis.

UNIT-IV-GRAPH ALGORITHMS & STRING MATCHING ALGORITHMS: -

Representational issues in graphs, Depth first search & Breath first search on graphs, Computation of biconnected components and strongly connected components using DFS, Topological sorting of nodes of an acyclic graph & applications, Shortest Path Algorithms on Graphs: Bellman-Ford algorithm, Dijkstra's algorithm & Analysis of Dijkstra's algorithm using heaps, Floyd-Warshall's all pairs shortest path algorithm and its refinement for computing the transitive closure of a graph. The general string problem as a finite automata, Knuth Morris and Pratt algorithms, Linear time analysis of the KMP algorithm, The Boyer-Moore algorithm.

UNIT-V-NP-COMPLETE PROBLEMS:-

Solvable problems, Types of problems, The notion of a non deterministic algorithm and its basic relationship to backtracking. Polynomial time non deterministic algorithms for problems like satisfiability, clique problem, Hamiltonian path problems etc., The definition of NP-hardness and NP-completeness, The statement of Cook's theorem and a discussion of its implications, The notion of polynomial transformation and reductions, Reductions to show that the clique problem, vertex cover, subset sum and Hamiltonian cycle problems are NP-complete, Other models for computations.

Text Books:

1. Introduction to Algorithms (Second Edition); Cormen, Lelerson, Rivert; PHI.
2. Fundamentals of Algorithms, Sahni & Horowitz; Galgotia.

Reference Books:

1. The Design & Analysis of Computer Algorithms, Hopcroft – Aho – Ullman, AWL.
2. Handbook of Algorithms & Data Structures, G.H.Gonnet, AWL.
3. Introduction to Design & Analysis of Algorithms, Levitin, PE-LPE.

CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI (C.G.)

Semester – V

Subject: **Operating System**

Total Theory periods-40

Total marks in end semester exam – 80

Minimum number of class tests to be conducted – 02

Branch-**Computer science & engineering.**

Code –**322513 (22)**

Total Tutorial Periods: 12

UNIT –1 INTRODUCTION: -

Operation System objective and function, The Evolution of operating Systems, Batch, interactive, time sharing and real time systems, Protection. Operating System Structure, System Components, operating system service, System structure. Distributed Computing, The Key Architecture Trend; Parallel Computation, Input-Output Trends.

UNIT- 2 CONCURRENT PROCESSES:-

Process concept:- Introduction, Definitions of “Process”, Process States, Process State Transitions ,The process Control Block ,Operations on Processes, Suspend and Resume , interrupt Processing.

Mutual Exclusion, the Producer / Consumer problem, the critical section problem, semaphores, Classical problems in concurrency, inter process communication. Asynchronous Concurrent Process:- introduction, parallel Processing ,A Control Structure for indicating parallelism,

CPU scheduling: concepts, performance criteria, and scheduling Algorithms. Algorithm evaluation, Multiprocessor scheduling.

UNIT- 3 DEAD LOCKS:-

System model, Deadlock characterization. Prevention, Avoidance and Detection, Recovery from deadlock, combined approach.

UNIT- 4 MEMORY MANAGEMENT:-

Base machine, resident Monitor, multiprogramming with fixed partition, Multiprogramming with variable partitions, Paging, Segmentation, paged - segmentation, virtual Memory concepts, Demand paging, performance, page Replacement algorithms, Allocation of frames, Thrashing, cache memory organization impact on performance.

UNIT-5 I/O MANAGEMENT &DISK SCHEDULING:-

I/O Device and the organization of the I/O function, I/O Buffering, Disk I/O, Operating system Design issues. File system: File Concepts – File organization and Access mechanism, File Directories, File sharing, Implementation issues .

Case studies: Unix system, A virtual machine operating systems

Text Books:

1. Operating System concepts, Silberschatz A and Peterson, J.L, PE- LPE.
2. Operating System Design & Implementation, Tanenbaum, A.S., PHI.
3. Operating system concepts Galvin, Silberschatz John Weiley & Sons
4. Operating systems H.M.Deital Pearson Education

Reference Books :

1. Operating System Concept & Design, Milenkovic M, McGraw Hill.
2. Operation System, Stalling William, Maxwell MCMillan International Editions.

CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI (C.G.)

Semester – B.E. V

Subject: **Theory of Computation**

Total theory periods-**40**

Total marks in end semester exam – **80**

Minimum number of class tests to be conducted – **02**

Branch-**Computer Science & Engineering.**

Code –**322514 (22)**

Total Tutorial Periods: **12**

UNIT-1. THE THEORY OF AUTOMATA :

Introduction to automata theory, Examples of automata machine, Finite automata as a language acceptor and translator. Deterministic finite automata. Non deterministic finite automata, finite automata with output (Mealy Machine. Moore machine). Finite automata with λ moves, Conversion of NFA to DFA by Arden's method, Minimizing number of states of a DFA. Myhill Nerode theorem, Properties and limitation of FSM. Two way finite automata. Application of finite automata.

UNIT-2. REGULAR EXPRESSIONS :

Regular expression, Properties of Regular Expression. Finite automata and Regular expressions. Regular Expression to DFA conversion & vice versa. Pumping lemma for regular sets. Application of pumping lemma, Regular sets and Regular grammar. Closure properties of regular sets. Decision algorithm for regular sets and regular grammar.

UNIT-3. GRAMMARS.

Definition and types of grammar. Chomsky hierarchy of grammar. Relation between types of grammars. Role and application areas of grammars. Context free grammar. Left most linear & right most derivation trees. Ambiguity in grammar. Simplification of context free grammar. Chomsky normal form. Greibach normal form, properties of context free language. Pumping lemma from context free language. Decision algorithm for context free language.

UNIT-4. PUSH DOWN AUTOMATA AND TURING MACHINE.

Basic definitions. Deterministic push down automata and non deterministic push down automata. Acceptance of push down automata. Push down automata and context free language. Turing machine model. Representation of Turing Machine Construction of Turing Machine for simple problem's. Universal Turing machine and other modifications. Church's Hypothesis. Post correspondence problem. Halting problem of Turing Machine

UNIT-5 COMPUTABILITY

Introduction and Basic concepts. Recursive function. Partial recursive function. Partial recursive function. Initial functions, computability, A Turing model for computation. Turing computable functions, Construction of Turing machine for computation. Space and time complexity. Recursive enumerable language and sets.

Text Books :

- (1) Theory of Computer Science (Automata Language & Computation), K.L.P. Mishra and N. Chandrasekran, PHI.
- (2) Introduction to Automata theory. Language and Computation, John E. Hopcroft & Jeffery D. Ullman, Narosa Publishing House.

Reference Books :

- (1) Theory of Automata and Formal Language, R.B. Patel & P. Nath, Umesh Publication.
- (2) An Introduction and finite automata theory, Adesh K. Pandey, TMH.
- (3) Theory of Computation, AM Natrajan. Tamararasi, Bilasubramani, New Age International Publishers.

CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY

BHILAI (C.G.)

Semester : V
Subject: **Principles of Communication Systems**
Total Theory Periods: **40**
Total Marks in End Semester Examination: **80**
Minimum number of Class tests to be conducted: **Two**

Branch: **CSE/IT**
Code: **322515 (28)**
Total Tutorial Periods: **Nil**

UNIT – I : Amplitude Modulation System

Need for Modulation, Amplitude Modulation, Amplitude Modulation Index, Modulation Index for Sinusoidal AM, Frequency spectrum for Sinusoidal AM, Average power for Sinusoidal AM, Effective voltage and current for sinusoidal AM, Balanced Modulator, The Square law demodulator, Nonsinusoidal modulation, DSBSC Modulation, SSB modulation and generation, VSB, FDM.

UNIT – II : Angle Modulation System

Phase and frequency modulation and their relationship. Frequency deviation, spectrum of FM Signal, BW of FM Signal, Effect of modulation on BW, constant BW, FM phasor diagram, Narrow band F.M. Armstrong and Parameter variation methods of FM generation and FM demodulators.

UNIT – III : Digital Communication

Sampling theorem, Pulse Modulation: PAM, PPM, PWM. Quantization of Signals, Quantization error, Pulse Code Modulation (PCM) and the system, Time division multiplexing (TDM), DPCM, DM, ADM, PSK FSK and DEPSK.

UNIT – IV : Elements of Information Theory

Average Information, Entropy, Information Rate. Communication Channel. Discrete and Continuous channel, Shannon-Hartley Theorem and its Implications, Channel capacity, Gaussian channel. Bandwidth s/N trade off.

UNIT – V : Advanced Communication Techniques

Satellite Communication: Components and Block diagram of Satellite communication system, Transponders, Up-link and Down-link budget calculations.

Fiber Optic Communication: Principles of light propagation in optical fiber, Losses in fibers, Dispersion, Connectors and splices, Fiber optic communication link.

Text Books:

1. Electronic Communications by Roddy & Coolen, PHI.
2. Electronic Communication System by Kenedy & Davis, TMH

Reference Books:

1. Principles of Communication system by H.Taub and K.L. Shiling.
2. An Introduction to the Principle of Communication Theory by J.C. Hancock, Mc-Graw Hill.
3. Signal Processing, Modulation and Noise-by Betts, English University Press, London.
4. Communication System-by A.B. Carlson, Mc-Graw Hill.

CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI (C.G.)

Semester – V
Subject: **Database Management System**
Total theory periods-**40**
Total marks in end semester exam – **80**
Minimum number of class tests to be conducted – **02**

Branch-**Computer Science & Engineering.**
Code –**322516 (22)**
Total Tutorial Periods: **Nil**

UNIT-I INTRODUCTION TO DATA BASE: -

Advantages of DBMS, Type of Data Models, Schema and instances, DBMS Architecture and Data Independence, Entity- Relationship Model, Attributes and Keys, Relationship Types, Weak Entity set, Strong Entity Set, Enhanced E-R Modeling, Specialization and Generalization, Record Storage and Primary File Organizations: Introduction, Secondary Storage Devices, Buffering of Blocks, Structure of Files: Types of Single –Level ordered indexes, Multilevel indexes, Dynamics Multilevel indexes using B-trees and B⁺- Trees.

UNIT-II THE RELATIONAL DATA MODEL:-

Relational data model concepts, constraints, relational algebra, relational calculus, Tuple relational calculus SQL: DDL, DML, DCL, Types of constraints, Defining different constraints on a table, Defining & Dropping integrity constraints in the alter table command, View, Index.

UNIT-III DATABASE DESIGN:-

Functional Dependencies and Normalization for Relational Databases: Informal design guidelines for relation schemes, Functional dependencies, Normal forms based on primary keys, General definitions of second and third normal forms, Boyce- Codd normal form, problem related with normal forms & solutions. Multivalued & Join Dependencies, 4th & 5th Normalization.

UNIT-IV QUERY & TRANSACTION PROCESSING:-

Query Processing : Query processing stages, Query interpretation, Query execution plan, Table scans, Fill factor, Multiple index access, Methods for join tables scans, Structure of a query optimizer. Transaction Processing: Types of failures, ACID property, schedules and recoverability, serializability of schedules, Levels of transaction consistency, Deadlocks, Nested transaction, Transaction benchmarking.

UNIT –V CRASH RECOVERY:-

Failure classification, Different type of Recovery techniques & their comparative analysis, deferred update, immediate update, Shadow paging, Check points, On-line backup during database updates, Concurrency Control: Different type of concurrency control techniques & their comparative analysis, Locking techniques, Time- stamp ordering, Multi-version techniques, Optimistic techniques, Multiple granularity. Integrity, Security, Non-procedural and procedural integrity constraints, Integrity constraints specifications in SQL.

Text Books:

1. Database system concept, Korth & Sudarshan, MH.
2. Database Design Fundamentals, Rische, PHI.

Reference Books:

1. Principles of Database Systems", 2nd Edn., Ullman, J.O, Galgotia Publications.
2. Introduction to Database Systems, C.J.Date, Pearson Education.
3. Fundamentals of Database Systems, Elmasri & Navathe, Pearson Education.

**CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI
(C.G.)**

Semester – V

Branch-**Computer Science & Engineering.**

Subject: **Principle of Communication Lab**

Code – **322521 (22)**

Total Practical Periods- **50**

Total marks in end semester exam – **40**

Minimum number of class tests to be conducted – **02**

List of Experiments to be performed

1. To study Amplitude Modulation on trainer kit.
2. To study Demodulation on Trainer kit.
3. To study Frequency Modulation and to trace the frequency modulated waveform on CRO using Trainer Kits.
4. To study Frequency Demodulation using Trainer Kits.
5. To generate SSB-SC signal and to study its characteristics.
6. To generate DSB-SC signal using Balanced Modulator and to study its characteristics.
7. To design a square Law modulator using FET and to study its characteristics.
8. To design a ring modulator and to study its characteristics.
9. To design a square Law detector using diode and to study its V-I characteristics.
10. To perform Experiment with data modulation techniques and to study the waveforms.
11. To perform experiment with adaptive Delta modulation techniques and to study the waveforms.
12. To study Signal sampling and reconstruction techniques.
13. To study the TDM pulse Amplitudes Modulation/Demodulation and to draw their waveforms.
14. To study ASK Modulation and demodulation.
15. To study FSK Modulation and Demodulation.

(Along with the above experiments, Simulators may be used to give idea about various communication techniques.)

List of Equipments/Machine Required:

Discrete components, Function Generator, Power supply, CRO, Communication trainer kits, Modulated Signal Generator, Transmission Line, COMMSIM Software.

Recommended Books:

Radio Communication By G.K. Mithal, Khanna Publishers.

**CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY,
BHILAI (C.G.)**

Semester – V
Subject: **Database Management System Lab**
Total Practical Periods- 50
Total marks in end semester exam - 40
Minimum number of class tests to be conducted – 02

Branch-**Computer Science & Engineering.**
Code –**322522 (22)**

Practical List :-

Schema for table creation
Employee (person name, street, city)
Works (person Name, company name, salary)
Company (company name, city)
Manages (person name. Manager name)

1. Creating tables, Renaming tables.
2. Data constraints(Primary key, Foreign key, Not Null), Data insertion into a table.
3. Viewing data from tables.
4. Filtering table data.
5. Creating table from another table.
6. Inserting data into a table from another table.
7. Delete, alter, and update operations.
8. Grouping data, aggregate functions
9. Oracle functions (mathematical, character functions)
10. Subqueries
11. Set operations.
12. Joins.
13. PL/SQL (Anonymous block, control structure)
14. PL/SQL (Procedures)
15. Triggers
16. Cursors

Text Books:

1. SQL & PL/SQL, Ivan Bayross, SPD.
2. Database Design Fundamentals, Rishe, PHI.

Reference Books:

1. Principles of Database Systems”, 2nd Edn., Ullman, J.O, Galgotia Publications.
2. Introduction to Database Systems , C.J.Date, Pearson Education.
3. Fundamentals of Database Systems , Elmasri & Navathe, Pearson Education.

**CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI
(C.G.)**

Semester – V

Subject: **Software Technology Lab-2 (Java)**

Total Practical Periods- **50**

Total marks in end semester exam – **40**

Minimum number of class tests to be conducted – **02**

Branch-**Computer Science & Engineering.**

Code –**322523 (22)**

List of Experiment to be performed

1. Write a program to check whether a number is a Armstrong number or not.
2. Write a program to sort a stream of Strings.
3. Write a program to perform multiplication of two matrices.
4. Write a program to find the volume of a box having its side w,h,d means width ,height and depth. Its volume is $v=w*h*d$ and also find the surface area given by the formula $s=2(wh+hd+dw)$.use appropriate constructors for the above.
5. Develop a program to illustrate a copy constructor so that a string may be duplicated into another variable either by assignment or copying.
6. Create a base class called shape. It contains two methods getxyvalue() and showxyvalue() for accepting co-ordinates and to display the same. Create the subclass called Rectangle which contains a method to display the length and breadth of the rectangle called showxyvalue().Use overriding concept.
7. Write a program that creates an abstract class called dimension, creates two subclasses, rectangle and triangle. Include appropriate methods for both the subclass that calculate and display the area of the rectangle and triangle.
8. Write a program which throws Arithmetic Exception. Note the output, write another class (in a different file) that handles the Exception.
9. Create a user defined Exception class which throws Exception when the user inputs the marks greater than 100.
10. Write a program in which a Mythread class is created by extending the Thread class. In another class, create objects of the Mythread class and run them. In the run method print "CSVТУ" 10 times. Identify each thread by setting the name.
11. Write a program using InetAddress class and also show the utility of URL and URL Connection classes.
12. Write a program which illustrates capturing of Mouse Events. Use Applet class for this.
13. Write a program using RMI in which a simple remote method is implemented.
14. Write a servlet program using HttpServlet class. Also give the appropriate HTML file which posts data to the servlet.
15. Write a JDBC program for Student Mark List Processing.
16. Design a text editor which is having some of the features of notepad.

Reference Books:

1. Java complete reference - Naughton schildt (TMH)
2. Java programming – E Balagurusamy
3. Java 2 Black book – Steven Holzner
4. Java Examples in a nutshell – O' Reilly

**CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY,
BHILAI (C.G.)**

Semester : V

Subject: **Microprocessor & Interfaces Lab**

Total Practical Periods: **50**

Total Marks in End Semester Examination: **40**

Branch: **Computer Science & Engineering.**

Code: **328524 (28)**

Programmes to be executed (but should not be limited to):

1. **REVERSING AN ARRAY:** A Block of 16 bytes are residing at locations starting from BLOCK 1 WAP to transfer the block in reverse order at locations starting from BLOCK 2.
2. **SORTING IN ASCENDING ORDER:** A block (16 bytes are residing at locations starting from DATA: Write a program to arrange the word in the same location in ascending order
3. **BINARY ADDITION:** 16 bytes are residing at location starting from DATA WAP: to add all bytes and store the result location SUM and SUM + 1
4. **BCD ADDITION:** 16 BCD NUMBER are residing at location starting from DATA WAP to add all bytes and store the result location SUM and SUM + 1
5. **MULTIPLICATION:** Two bytes are residing at location DATA 1 and DATA 2 Write a program to multiply the two bytes and store the result at location PROD 1 and PROD 2 .
6. **BINARY TO BCD:** A binary number is residing at location BIN > WAP to convert the binary number in to its equivalent BCD and store the result at BCD and BCD + 1
7. **BCD TO BINARY:** A BCD number is residing at location BCD ; Write a program to convert the BCD number into its equivalent binary and store the result at BIN
8. **MULTIBYTE ADDITION:** Two 10 bytes are residing at location starting from DATA 1 and DATA 2 respectively, Write a program two add them up and store the result at location starting from RESULT (result space 11 bytes)
9. **MULTIBYTE BCD ADDITION:** Two 6 digits BCD numbers are residing at location starting from DATA 1 and DATA 2 respectively. Write a program to add them up and store the result at locations starting from RESULT (Result space 7 bytes)
10. **RST 6.5:** A block of 16 bytes is residing at location starting from ; DATA Reverse the block and store the bytes at REVERSE whenever the RST 6.5 key is pressed.
11. **EDITING OF ASCII STRING:** A string of ASCII characters is residing at locations starting from READ which contain " I \$ WILL \$ BE \$ AN \$ ENGINEER ". Edit string in such a way that it should contain " I \$ will \$ be \$ Engineer ". Keep the edited string in the same locations. Product the string from further editing. (\$ stands for a blank)
12. **SIGNED BINARY ADDITION:** A block of 16-signed binary numbers is residing at locations NUMBERS. Add them up and store the result (in signed binary) at locations from RESULT.

13. **ASCII CODE CONVERSION:** A string of 16 ASCII characters are residing at locations starting from DATA. The string consists of codes for capital letters, small letters and BCD digits (0-9) . Convert the ASCII characters. In such a way that the codes for capital letters be converted into corresponding codes for small letters, codes for small letters into that of capital letters and codes for BCD digits into that of BCD numbers and store them at the same locations.
14. **PARITY CHECK:** A block of 32 bytes is residing at DATA count the number (BCD) of times even and odd PARITY bytes are appearing consecutive memory locations. Keep the count at MATCH.
15. **SERIES GENERATION:** Two BCD numbers a and b are residing at locations DATA 1 and DATA 2 respectively. Write a program to form a series in BCD with the elements of a. $a + 2b$, $a + 4b$, $a + 6b$, Stop the generation of the series whenever any element of the series in BCD with the elements of the series exceeds (99). Store the result at locations starting from RESULT. Count the number (BCD) of elements in the series and store it at NUMBER.

List of Equipments/Machine Required:

8085 based microprocessor kit, MASM assembler, 8085 simulator, PCs.

Recommended Books:

8085 Microprocessor Programming & Interfacing – N.K. Srinath, PHI

CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI

Semester : B.E. V

Subject : **Personality Development**

No. of Periods : 2 pds/week

Total Marks in End Semester Exam. : NIL

Minimum number of class tests to be conducted : Two

Branch : **Common to All Branches**

Code : **300525 (46)**

Tutorial Periods : NIL

Teacher's Assessment : 20 Mks

Objective: The course is introduced to develop one's outer and inner personality tremendously and enrich the abilities to enable one to meet the challenges associated with different job levels. Personality Development is essential for overall development of an individual apart from gaining technical knowledge in the subject.

Unit – I

Personality concepts:

- What is Personality – **its physical and psychic aspects. How to develop a positive self-image. How to aim at Excellence. How to apply the cosmic laws that govern life and personality.**
- How to improve Memory. **How to develop successful learning skills. How to develop and effectively use one's creative power.**
- **How to apply the individual MOTIVATORS that make you a self-power personality.**

Unit – II

Interpersonal Skills:

- **Leadership:** Leaders who make a difference, Leadership: your idea, What do we know about leadership? If you are serious about Excellence. Concepts of leadership, Two important keys to effective leadership, Principles of leadership, Factors of leadership, Attributes.
- **Listening:** Listening skills, How to listen, Saying a lot- just by listening, The words and the music, How to talk to a disturbed person, Listening and sometimes challenging.
- **How to win friends** and influence people, How to get along with others. How to develop art of convincing others. How can one make the difference. How to deal with others particularly elders. Conflicts and cooperation.

Unit – III

Attitudinal Changes:

- **Meaning of attitude**, benefits of positive attitudes, how to develop the habit of positive thinking.
- **Negative attitude and wining:** What is FEAR and how to win it. How to win loneliness. How to win over FAILURE. How to win over PAIN. How to win over one's ANGER and others anger. How to overcome CRITICISM. What is stress and how to cope up with it? What is crisis and how to manage it.
- How to apply the **character MOTIVATORS** that elevate you and your personality to the top, the art of self motivation.
- How to acquire **mental well-being.**
- How to acquire **physical well-being.**
- How to formulate effective **success philosophy.**

Unit –IV

Decision Making:

How to make your own LUCK. How to plan goals/objectives and action plan to achieve them. How to make RIGHT DECISION and overcome problems. How to make a Decision. Decision making : A question of style. Which style, when ? People decisions : The key decisions. What do we know about group decision making ? General aids towards improving group decision making. More tips for decisions of importance.

Unit – V

Communication Skills:

- **Public Speaking:** Importance of Public speaking for professionals. The art of Speaking - Forget the fear of presentation, Symptoms of stage fear, Main reason for speech failure, Stop failures by acquiring Information; Preparation & designing of speech, Skills to impress in public speaking & Conversation, Use of presentation aids & media.
- **Study & Examination:** How to tackle examination, How to develop successful study skills.
- **Group discussions:** Purpose of GD, What factors contribute to group worthiness, Roles to be played in GD.

Reference Books:

1. How to develop a pleasing personality by Atul John Rego, Better yourself books, Mumbai, 2000.
2. How to Succeed by Brain Adams, Better Yourself books, Mumbai, 1969.
3. Basic Managerial skills for all by E. H McGrawth, Prentice Hall India Pvt Ltd, 2006.
4. The powerful Personality by Dr Ujjwal Patni & Dr Pratap Deshmukh, Medident Publisher, 2006.
5. Great Words win Hearts by Dr Ujjwal Patni, Fusion Books, 2006.
6. Personality : Classic Theories & Modern Research; Friedman ; Pearson Education 2006.
7. How to win friends and influence people by Dale Carnegie, A.H. Wheeler 2006.