



MANONMANIAM SUNDARANAR UNIVERSITY,
TIRUNELVELI-12

SYLLABUS

UG - COURSES – AFFILIATED COLLEGES

Course Structure for B. Sc. Computer
(Choice Based Credit System)

(with effect from the academic year 2021-2022 onwards)



Semester-V				
Part	Subject Status	Subject Title	Subject Code	Credit
III	CORE	RELATIONAL DATABASE MANAGEMENT SYSTEM	CMCS51	4
III	CORE	DATA COMMUNICATION AND COMPUTER NETWORKS	CMCS52	4
III	CORE	PHP AND MY SQL	CMCS53	4
III	Major Practical - V	PHP LAB	CMCSP5	2
III	Major Practical - VI	MACHINE LEARNING PRACTICALS	CMCSP6	2
III	Major Practical - VII	GREEN FOOT LAB	CMCSP7	2
III	Major Elective – I (Anyone)	1. MOBILE APPLICATION DEVELOPMENT 2. INTRODUCTION TO SECURITY IN COMPUTING 3. CLOUD COMPUTING	CECS51/ CECS52/ CECS53	4
III	Skill Based Common	PERSONALITY DEVELOPMENT/ EFFECTIVE COMMUNICATION/ YOUTH DEVELOPMENT	CCSB51	2



Total Marks: 100 Internal Exam: 25 marks + External Exam: 75 marks

A. Scheme for internal Assessment:

Maximum marks for written test: **20 marks**

3 internal tests, each of **1 hour** duration shall be conducted every semester.

To the average of the **best two** written examinations must be added the marks scored in. The **assignment** for 5 marks.

The break up for internal assessment shall be:

Written test- 20 marks; Assignment -5 marks Total - 25 marks

B. Scheme of External Examination

3 hrs. examination at the end of the semester

A – Part : 1 mark question two - from each unit

B – Part : 5 marks question one - from each unit

C – Part : 8 marks question one - from each unit

➤ **Conversion of Marks into Grade Points and Letter Grades**

S.No	Marks	Letter Grade	Grade point (GP)	Performance
1	90-100	O	10	Outstanding
2	80-89	A+	9	Excellent
3	70-79	A	8	Very Good
4	60-69	B+	7	Good
5	50-59	B	6	Above Average
6	40-49	C	5	Pass
7	0-39	RA	-	Reappear
8	0	AA	-	Absent

➤ **Cumulative Grade Point Average (CGPA)**

$$CGPA = \frac{\sum (GP \times C)}{\sum C}$$

- **GP** = Grade point, **C** = Credit
- CGPA is calculated only for Part-III courses
- CGPA for a semester is awarded on cumulative basis

➤ **Classification**

- First Class with Distinction : CGPA $\geq 7.5^*$
- First Class : CGPA ≥ 6.0
- Second Class : CGPA ≥ 5.0 and < 6.0
- Third Class : CGPA < 5.0



RELATIONAL DATABASE MANAGEMENT SYSTEM

COURSE OUTCOMES

On Successful completion of the course, the student will be able to

- CO1: To outline relational database concepts
- CO2: To relate transaction management concepts in database system.
- CO3: To utilize Normalizations techniques.
- CO4: To write SQL programs that use: procedure, function, package, cursor and Exceptions.
- CO5: To Use current techniques and tools necessary for complex computing practices.

UNIT I

Introduction: Database - system applications-Purpose of Database Systems - View of Data- Database languages -Relational Databases - Database Design - Data Storage and Querying - Transaction

Management - Database Architecture - Data Mining and Information Retrieval-Specialty Databases - Database Users and Administrators.

UNIT II

Introduction to the Relational Model and Introduction to SQL: Structure of Relational Databases -Database Schema-Keys-Schema Diagrams- Relational Query Languages- Relational Operations- Overview of the SQL Query Language -SQL Data Definition-Basic Structure of SQL Queries

UNIT III

SQL operations and Intermediate SQL : Additional Basic Operations-Set Operations- Null values- Aggregate functions- Nested Sub queries- Views - Integrity Constraints - SQL Data Types and Schemas

UNIT IV

Database Design using E-R Model & Relational Database Design: Overview – E-R Model – Complex attributes – Mapping Cardinalities – Primary key – Removing redundant attributes – Reducing E-R diagrams to schema –Extended E-R features – Features of good Relational design – Decomposition – Normal forms – Functional Dependency – Decomposition Functional & Multi value Dependencies – More Normal Forms.

UNIT V

Implementation using Oracle: Creating Table-Modifying Table-Creating SEQUENCE- Creating a Views - PL/SQL- Stored procedures and Functions.



Text Books:

1. Database System Concepts – Abraham Silberschatz, Henry F.Horth and S.Sudarashan, McGraw- Hill International Seventh Edition.
2. Oracle8i Jose A.Ramalho BPB Publications

Reference Books:

1. Database Management Systems, R.Panneerselvam, PHI Learning Private Limited
2. Database Management Systems, Ramakrishnan and Gehrke, Mc Graw Hill Publications
3. Relational Database Management Systems,P. Simon Navis, Ave Maria Publications

DATA COMMUNICATION AND COMPUTER NETWORKS

COURSE OUTCOMES

On Successful completion of the course, the student will be able to

- CO1:To define the concepts in Computer Network and Data Communication
- CO2:To outline the various protocols used in network
- CO3:To compare OSI Layers in Computer networks
- CO4:To list about Switching Techniques
- CO5: To discuss wireless LAN's

Unit-I

Introduction - Data communication – Networks-the Internet –Protocols and Standards. Network Models –Layered tasks –OSI model- layers in OSI model-TCP/IP protocol Suit-Addressing.

Unit II

Physical layer – Analog and digital – Transmission Impairment –Data rate limits- Performance- Transmission mode -Bandwidth Utilization- Multiplexing. Transmission media – Guided and Unguided media.

Unit III

Switching – Circuit Switched Network-Datagram Network – Virtual Circuit Network. Using telephone and cable networks – Telephone Network- Dial-Up Modem–Digital Subscriber line – Cable TV Network - Cable TV for Data transfer.

Unit IV

Data Link Layer :Error Detection and Correction- Introduction- Checksum. Data link



control-Framing-Flow and Error Control-Protocols-Noiseless Channels-Noisy Channels. Wired LANs-IEEE standards-Standard Ethernet- Changes in the Standard – Fast Ethernet-Gigabit Ethernet.

Unit V

Wireless LANs: IEEE 802.11-Blue tooth. Connecting LANs - Connecting devices. Wireless WANs: Cellular Telephony, Satellite Networks. Network Layer- IPv4 Address-IPv6 Address-Internetworking. Transport Layer- Process to Process delivery –UDP-TCP. Application Layer- Name space-DNS.

Text Book

1. Data Communication and Networking —BEHROUZ A FOROUZAN —,The McGraw- Hill- 4th edition.

References

1. Data Communication and Computer Networks – — PrakashC.Gupta
2. Computer Networks Protocols,Standards and Interfaces- — Uyless Black
3. Data Communications and Computer Networks – Brijendra Singh

PHP and mySQL

COURSE OUTCOMES

On Successful completion of the course, the student will be able to

- CO1: To define and use open source database management system MySQL
- CO2: To explain dynamic web pages and websites.
- CO3: To identify web pages with database.
- CO4: To compare the concepts of open sources
- CO5: To assess the knowledge about Arrays

UNIT-I

Introduction: Introduction- Open source PHP – PHP history- features-variables-statements operators conditional statements-if-switch-nesting conditions-merging forms with conditional statements-loops- while-do-for – loop iteration with break and continue.

UNIT – II

Arrays and Functions: Arrays: Creating an array- modifying array-processing array-grouping form with arrays- using array functions- creating user defined functions- using files- sessions- cookies- executing external programs- Creating sample applications using PHP.



UNIT –III

File Handling Opening files using fopen - looping over a files content with feof- reading text from a file using fgets - closing a file- reading character with fgetc- reading whole file with file_get_contents reading a file into an array with file- checking if a file exists- fscanf-parse_ini_file- Getting file information with stat-fseek- copying files with copy- deleting files-writing to a file-reading and writing binary files –locking files

UNIT-IV

MySQL: Effectiveness of MySQL -MySQL Tools-Prerequisites for MySQL connection-Databases and tables- MySQL data types-Creating and manipulating tables-Insertion-updation and deletion of rows in tables -Retrieving data- Sorting and filtering retrieved data -Advanced data filteringData manipulation functions- Aggregate functions -Grouping data- Sub queries- Joining Tables- Set operators-Full text searching.

UNIT-V

PHP with MySQL: Working MySQL with PHP-database connectivity- usage of MySQL commands in PHP processing result sets of queries- handling errors- debugging and diagnostic functions validating user input through Database layer and Application layer- formatting query output with Character- Numeric- Date and time – sample database applications.

Text Books:

1. VIKRAM VASWANI- —PHP and MySQL— McGraw-Hill- 2005
2. BEN FORTA - MySQL Crash course — SAMS- 2006.
3. Steven Holzner , The Complete reference PHP, Tata McGraw Hill, 2008

Reference Books:

1. Tim Converse- Joyce Park and Clark Morgan- PHP 5 and MySQL -Wiley India reprint - 2008.
2. Robert Sheldon- Geoff Moes- Beginning MySQL-Wrox- 2005



PHP Lab

COURSE OUTCOMES

On Successful completion of the course, the student will be able to

- CO1: To develop knowledge about basic PHP Programs.
 - CO2: To evaluate PHP scripts and functions
 - CO3: To develop arrays in PHP
 - CO4: To design loops in PHP
 - CO5: To compare the scripts and functions in PHP
1. Create a simple HTML form and accept the user name and display the name through PHP echo statement.
 2. Write a PHP script to redirect a user to a different page.
 3. Write a PHP function to test whether a number is greater than 30, 20 or 10 using ternary operator
 4. Create a PHP script which display the capital and country name from the given array. Sort the list by the name of the country
 5. Write a PHP script to calculate and display average temperature, five lowest and highest temperatures.
 6. Create a script using a for loop to add all the integers between 0 and 30 and display the total.
 7. Write a PHP script using nested for loop that creates a chess board.
 8. Write a PHP function that checks if a string is all lower case.
 9. Write a PHP script to calculate the difference between two dates. 10. Write a PHP script to display time in a specified time zone

Machine learning Practicals

On Successful completion of the course, the student will be able to

- CO1: Apply the concepts and practical knowledge in analysis, design and Development of computing systems
- CO2: To make use of applications to multidisciplinary problems.
- CO3: To discuss the knowledge about various algorithms
- CO4: To interpret the knowledge about various datasets
- CO5: Develop data frames in Machine Learning

Exercises

1. Find the standard deviation for speed of a cars using numpy
2. Find the percentile of a marks of students
3. Draw the histogram for Normal Distribution
4. Draw the scatter Plot
5. Polynomial Regression
6. Draw the decision tree.
7. Create Table and insert values using Python MySQL
8. Construct the query for retrieving relevant information from the table Python MySQL
9. Delete the records from the table.
10. Update the values from the table.



Green foot Lab

COURSE OUTCOMES

On Successful completion of the course, the student will be able to

CO1: To know about the various Applications of Multimedia.

CO2: To develop two- dimensional graphical applications

CO3: To design multimedia animations

CO4: To know the knowledge about video works in multimedia applications

CO5: To implement interactive games.

Write the following program using Green foot :

1. To change the behaviour of an object.
2. For changing images
3. To make your own scenarios.
4. To create a new world subclass and compile the scenario
5. To add an Actor subclass instance to the scenario
6. To set up the scenario for gameplay
7. Program keyboard interaction
8. Using the playSound() method
9. To record sounds in Greenfoot
10. To changing the image of an instance summarized
11. To viewing the images stored in the scenario
12. To set an image using the image file name



MOBILE APPLICATION DEVELOPMENT

Objective:

- CO1: To recall the basics, field of computing sciences and Multidisciplinary of Mobile Applications
- CO2: To build interactive applications
- CO3: To develop multiple activities and indent in mobile applications
- CO4: To understand Fragments of mobile application development
- CO5: To develop mobile application development using Sqlite Database

Unit-I:

Getting Started: Diving in - Welcome to Android ville - The Android platform - Install Android Studio - How to build the app - Activities and layouts - first Android app - a complete folder structure - Useful files in your project - Edit code with the Android Studio editors - Run the app in the Android emulator -Creating an Android Virtual Device - Run the app in the emulator - watch progress in the console - What's in the layout? - activity_main.xml has two elements - Update the text displayed in the layout.

Building Interactive Apps: Apps that do something: building a Beer Adviser app - Create the project - a default activity and layout - A closer look at the design editor - Add a button using the design editor - activity_find_beer.xml has a new button - A closer look at the layout code - the app, test drive - Hardcoding text makes localization hard - Create the String resource - Use the String resource in your layout - The code for activity_find_beer.xml - Add values to the spinner - Add the string-array to strings.xml - Test drive the spinner - We need to make the button do something - Make the button call a method - The activity code - Add an onClickFindBeer() method to the activity - onClickFindBeer() needs to do something - Once you have a View, you can access its methods - Update the activity code - The first version of the activity - What the code does - Build the custom Java class.

UNIT-II:

Multiple Activities and Intents: State your intent - More than one activity in an app - the app structure - create the project - Update the layout - Create the second activity and layout - Android manifest file - An intent - What happens when you run the app - Pass text to a second activity - Update the text view properties - putExtra() method - Update the CreateMessageActivity code - Get ReceiveMessageActivity to use the information in the intent - What happens when the user clicks the Send Message button - send messages to other people How Android apps work - Create an intent that specifies an action - Change the intent to use an action - the intent filter - if users ALWAYS want to choose an activity - when createChooser() method is called - Change the code to create a chooser.

The Activity Lifecycle: Being an activity - How do activities really work? - The Stopwatch app - Add String resources - How the activity code will work - Add



code for the buttons - The runTimer() method -The full runTimer() code - The full StopwatchActivity code - Rotating the screen changes the device configuration - The states of an activity - The activity lifecycle: from create to destroy - The updated StopwatchActivity code - What happens when you run the app - There's more to an activity's life than create and destroy - The updated StopwatchActivity code - when the app is run - when an app is only partially visible - The activity lifecycle: the foreground lifetime - Stop the stopwatch if the activity's paused - Implement the onPause() and onResume() methods - The complete StopwatchActivity code - Your handy guide to the lifecycle methods.

UNIT-III:

Views and View Groups: Enjoy the view - Your user interface is made up of layouts and GUI components - LinearLayout displays - Add a dimension resource file - Using margins - change a basic linear layout - adding weight to a view - Values you can use with the android:gravity attribute - The full linear layout code - Frame layouts stack their views - Add an image to your project - The full code to nest a layout - FrameLayout: a summary - Playing with views - Editable text view - Toggle button - Switch - Checkboxes - Radio buttons - Spinner - Image view - Adding images to buttons - Scroll views - Toasts.

Constraint Layouts: Put things in their place - Nested layouts can be inefficient - the Constraint Layout the Constraint Layout Library - Add the String resources to strings.xml - Use the blueprint tool - Position views using constraints - Add a vertical constraint - Changes to the blueprint are reflected in the XML - center views - Adjust a view's position by updating its bias - change a view's size - align views - build a real layout.

UNIT-IV:

List views and Adapters: Getting organized - Every app starts with ideas - Use list views to navigate to data - The drink detail activity - The Starbuzz app structure - The Drink class - The top-level layout contains an image and a list - The full top-level layout code - Get list views to respond to clicks with a listener - Set the listener to the list view - A category activity displays the data for a single category - Update activity_drink_category.xml - For nonstatic data, use an adapter - Connect list views to arrays with an array adapter - Add the array adapter to Drink Category Activity - App review - How clicks are handled in Top Level Activity - The full Drink Category Activity code - Update the views with the data - The Drink Activity code - when the app is run.

Fragments: Make it modular - Your app needs to look great on ALL devices - Your app may need to behave differently too - Fragments allow you to reuse code - The phone version of the app - Create the project and activities - Add a button to Main Activity's layout - How to add a fragment to your project - The fragment's onCreate() method - Add a fragment to an activity's layout - Get the fragment and activity



to interact - The Workout class - Pass the workout ID to the fragment - Get the activity to set the workout ID - The fragment lifecycle - Set the view's values in the fragment's on Start() method - How to create a list fragment - The updated Workout List Fragment code - The code for activity_main.xml - Connect the list to the detail - The code for WorkoutListFragment.java – Main Activity needs to implement the interface – Detail Activity needs to pass the ID to Workout Detail Fragment.

UNIT-V:

SQLite Databases: Fire up the database - Back to Starbuzz - Android uses SQLite databases to persist data - SQLite classes - The current Starbuzz app structure - change the app to use a database - The SQLite helper manages database - Create the SQLite helper - Inside a SQLite database - create tables using Structured Query

Language (SQL) - Insert data using the insert() method - Insert multiple records

- The StarbuzzDatabaseHelper code - What the SQLite helper code does - What if changes to the database is needed? - SQLite databases have a version number - when the version number is changed - Upgrade your database with onUpgrade() - Downgrade your database with onDowngrade() - upgrade the database - Upgrade an existing database - Update records with the update() method - Apply conditions to multiple columns - Change the database structure - Delete tables by dropping them - The full SQLite helper code.

Basic cursors: Getting data out - The new Starbuzz app structure - change Drink Activity to use the Starbuzz database - The current Drink Activity code - Get a reference to the database - Get data from the database with a cursor - Return all the records from a table - Return records in a particular order - Return selected records - The Drink Activity code so far - To read a record from a cursor, you first need to navigate to it - Navigate cursors - Get cursor values - The Drink Activity code - The current

Drink Category Activity code - Get a reference to the Starbuzz database - replace the array data in the list view - A simple cursor adapter maps cursor data to views - use a simple cursor adapter - Close the cursor and database - The Drink Category Activity code.

Text Book:

1. Head First Android Development (Nov 2019) - Dawn Griffiths & David Griffiths, O'Reilly Media/Shroff Publishers & Distributors Pvt. Ltd.- ISBN: 9789352136063 (Chapters 1-7, 9, 15, 16)

Reference Books:

1. Beginning Android Programming with Android Studio (Wrox Beginning Guides) 4e, 2016 - J.F. DiMarzio - Wiley
2. Android Developer Fundamentals Course: 2017 <https://google-developer-training.github.io/android-developer-fundamentals-course-concepts/en/androiddeveloper-fundamentals-course-concepts-en.pdf>
3. Android Programming Unleashed, 1e, 2013 - B.W.Harwani – Pearson



INTRODUCTION TO SECURITY IN COMPUTING

COURSE OUTCOMES

On Successful completion of the course, the student will be able to

- CO1: To relate the concepts of basic concepts in security in computing
- CO2: To explain about the various encryption and decryption security algorithms
- CO3: To enquire Number theory and key algorithms
- CO4: To list the authentication
- CO5: To identify the intruder of security in computing

UNIT-I

Model of network security – Security attacks, services and attacks –OSI security architecture – Classical encryption techniques – SDES – Block cipher PrinciplesDES – Strength of DES – Block cipher design principles – Block cipher mode of operation – Evaluation criteria for AES – RC4 - Differential and linear cryptanalysis – Placement of encryption function – traffic confidentiality.

UNIT-II

Number Theory – Prime number – Modular arithmetic – Euclid's algorithm - Fermet's Euler's theorem – Primality – Chinese remainder theorem – Discrete logarithm – Public key cryptography and RSA – Key distribution – Key management – Diffie Hellman key exchange – Elliptic curve cryptography.

UNIT-III

Authentication requirement – Authentication function – MAC – Hash function – Security of hash function and MAC – SHA - HMAC – CMAC - Digital signature and authentication protocols – DSS.

UNIT-IV

Authentication applications – Kerberos – X.509 Authentication services - E- mail security – IP security - Web security

UNIT-V

Intruder – Intrusion detection system – Virus and related threats – Countermeasures – Firewalls design principles – Trusted systems – Practical implementation of cryptography and security

Text Book:

1. William Stallings, —Cryptography & Network Securityl, Pearson Education,Fourth Edition 2010.

Reference Books:

1. Charlie Kaufman, Radia Perlman, Mike Speciner, —Network Security, Private communication in public worldl, PHI Second Edition, 2002.
2. Bruce Schneier, Neils Ferguson, —Practical Cryptographyl, Wiley Dreamtech India Pvt Ltd, First Edition, 2003.
3. Douglas R Simson —Cryptography – Theory and practicell, CRC Press, First Edition, 1995.



CLOUD COMPUTING

COURSE OUTCOMES

On Successful completion of the course, the student will be able to

- CO1: To understand the History of cloud computing
- CO2: To know in detail about the various Cloud Computing concepts
- CO3: To enquire cloud computing Architecture
- CO4: To understand SOA components
- CO5: To know about cloud security and privacy

UNIT I:

Introduction to cloud computing- History of cloud computing. Fundamentals of the cloud computing ecosystem. Cloud computing characteristics. Technical characteristics of cloud computing Basic characteristics of cloud computing- Advantages and disadvantages of cloud computing. Comparison of traditional and cloud computing paradigms. Cluster computing- Grid computing.. Cloud computing- Evaluating the cloud's business impact and economics Business drivers of cloud computing adoption. Future of the cloud (FoC).

Cloud Services and Deployment Models. Objectives. Cloud deployment models. Public (external) cloud. Private/Internal/Corporate cloud. Hybrid cloud. Cloud Service Models- Infrastructure-as-a- Service (IaaS) Platform-as-a-Service (PaaS). Software as a-Service (SaaS) Cloud infrastructure mechanisms Logical network perimeter (LNP) Virtual server. Cloud storage devices (CSD) Cloud usage monitor -Resource replication. Ready-made environment. Cloud service management.

UNIT II:

Cloud Computing Architecture.. Objectives. Cloud computing architecture design principles.. Cloud computing life cycle (CCLC). Phase 1- Architect. Phase 2- Engage Phase 3- Operate.. Phase 4- Refresh .Cloud computing reference architecture Load balancing approach Mobile cloud computing (MCC). Mobile computing features.. Challenges.. Mobile cloud computing architecture.

Virtualization Technology. Objectives. Understanding virtualization Adopting virtualization. Techniques of virtualization. How virtualization works? XEN- Kernel-based virtual machine (KVM). VMware. Virtual Box –Citrix.Types of Virtualization Data virtualization-Desktop virtualization -CPU virtualization

Network virtualization. Storage virtualization -Server virtualization. Virtualization in Cloud

UNIT III:

Service oriented Architecture Objectives SOA foundation.. Web Services and SOA .SOA communication. SOA components. SOA Infrastructure. Need of SOA. Business Process Management (BPM).Business Process Management Platform as a Service - BPM PaaS Business Process as a Service-BPaaS. Cloud Security and Privacy... Objectives. Cloud security - Cloud CIA security model.. Data confidentiality Data integrity.. Data availability., Cloud computing security architecture Service provider security issues. Security issues in virtualization. Cloud legal issues . Performance monitoring and management of cloud services Legal issues in cloud computing



Data security in cloud .The cloud risk management framework. Risk management process for cloud consumers- Requirement for risk management in ISO/IEC 27001- Data privacy risks in the cloud. Availability risks. Service provisioning risks .

UNIT IV:

Business continuity and disaster recovery Disaster recovery requirements... Mechanisms for cloud disaster recovery. Disaster recovery as a service. The cloud disaster recovery architecture. Challenges of the cloud disaster recovery. Threats in cloud. Security techniques for threats protection. Cloud service level agreements (SLA) practices Components of a cloud SLA. Types of SLAS. Cloud vendors. Issues of Quality of Cloud Services. Techniques for providing QoS to the cloud applications. Migration of a local server into cloud.. Preliminary checklist/planning for migration. Migration steps. Types of migration for cloud-enabled applications.. Trust management. Trust management evaluation attributes. Cloud trust management techniques Cloud Computing Applications.. Objectives. Introducing cloud computing applications Google App Engine. Google Apps. Gmail. Google Docs.. Google Calendar Google Drive. Google Cloud Data store. Drop box Cloud. Apple iCloud Microsoft Windows Azure Cloud. Amazon Web Services (AWS) Amazon Elastic Compute Cloud (Amazon EC2) Amazon Simple Storage Service (S3).

UNIT V:

Cloud Computing Technologies, Platforms and Services. Objectives. High-performance computing with cloud technologies. Message Passing Interface (MPI).. Map Reduce programming model. Dryad and DryadLINQ.. Eucalyptus cloud platform. Components of Eucalyptus OpenNebula cloud platform. Layers of OpenNebula Features of OpenNebula. OpenStack cloud platform.. OpenStack components Benefits of Open Stack.. Nimbus Cloud Computing Platform Features of Nimbus. The Apache Hadoop ecosystem
Architecture of Hadoop Major components of Hadoop. Hadoop and cloud. Adoption of Cloud Computing. Objectives. Adoption of cloud computing in the current era Factors affecting cloud computing adoption. Technological factors. Organizational factors Environmental factors.. Cloud computing existing areas of application.. Cloud computing in education. Cloud computing in healthcare. Cloud computing in politics. Cloud computing in business. Cloud computing in agriculture. Case studies Cloud computing adoption in Sub-Saharan Africa. Cloud computing adoption in India. Cloud computing certifications Google Cloud Certifications.. IBM Cloud Certifications.. Amazon Web Services (AWS) Cloud Certifications.

Text Book:

1. Cloud Computing, Kamal Kant Hiran,Ruchi Dosai, Temitayo Fagbola,Mehul Mahrishi, BPB publication, First edition 2019.

Reference Book:

1. Cloud Computing, V. K. Pachghare, PHI Learning Pvt Ltd, 2016
2. Cloud Computing, Anthony T.Velte, Toby J.Velte, Robert Elsenpeter, TMH, 2010
3. Cloud Computing Bible, Barrie Sosinsky, Wiley Publishing, Inc.



PERSONALITY DEVELOPMENT

UNIT: I - PERSONALITY

Definition –Determinants –Personality Traits –Theories of Personality –Importance of Personality Development. SELF AWARENESS–Meaning –Benefits of Self –Awareness –Developing Self –Awareness. SWOT–Meaning –Importance-Application –Components. GOAL SETTING-Meaning-Importance –Effective goal setting –Principles of goal setting –Goal setting at the Right level.

UNIT :II- SELF MONITORING

Meaning –High self –monitor versus low self monitor –Advantages and Disadvantages self monitor-Self –monitoring and job performance. PERCEPTION-Definition-Factor influencing perception-Perception process –Errors in perception –Avoiding perceptual errors. ATTITUDE–Meaning-Formation of attitude –Types of attitude -Measurement of Attitudes –Barriers to attitude change –Methods to attitude change.

ASSERTIVENESS-Meaning –Assertiveness in Communication –Assertiveness Techniques –Benefits of being Assertive –Improving Assertiveness.

UNIT : III - TEAM BUILDING

Meaning –Types of teams –Importance of Team building-Creating Effective Team. LEADERSHIP–Definition –Leadership style-Theories of leadership –Qualities of an Effect leader. NEGOTIATION SKILLS–Meaning –Principles of Negotiation –Types of Negotiation –The Negotiation Process –Common mistakes in Negotiation process. CONFLICT MANAGEMENT–Definition-Types of Conflict-Levels of Conflict –Conflict Resolution –Conflict management .

UNIT :IV - COMMUNICATION

Definition –Importance of communication –Process of communication - Communication Symbols –Communication network –Barriers in communication –Overcoming Communication Barriers. TRANSACTIONAL ANALYSIS–Meaning –EGO States –Types of Transactions –Johari Window-Life Positions. EMOTIONAL INTELLIGENCE-Meaning –Components of Emotional Intelligence-Significance of managing Emotional intelligence –How to develop Emotional Quotient. STRESS MANAGEMENT–Meaning –Sources of Stress –Symptoms of Stress –Consequences of Stress –Managing Stress.

UNIT :V - SOCIAL GRACES

Meaning–Social Grace at Work –Acquiring Social Graces. TABLE MANNERS–Meaning –Table Etiquettes in Multicultural Environment-Do's and Don'ts of



Table Etiquettes. DRESS CODE–Meaning-Dress Code for selected Occasions –Dress Code for an Interview. GROUP DISCUSSION–Meaning –Personality traits required for Group Discussion-Process of Group Discussion-Group Discussion Topics. INTERVIEW–Definition-Types of skills –Employer Expectations –Planning for the Interview –Interview Questions-Critical Interview Questions.

REFERENCES:

1. Dr.S. Narayana Rajan, Dr. B. Rajasekaran, G. Venkadasalapathi, V. Vijuresh Nayaham and Herald M.Dhas, Personality Development, Publication Division, Manonmaniam Sundaranar University, Tirunelveli
2. Stephan P.Robbins, Organisational Behaviour, Tenth Edition, Prentice Hall of India Private Limited, New Delhi,2008.
3. Jit S. Chandan, Oragnisational Behaviour, Third Edition, Vikas Publishing House Private Limited, 2008.
4. Dr.K.K. Ramachandran and Dr.K.K. Karthick, From Campus to Corporate, Macmillan Publishers India Limited, New Delhi,2015.

