MANONMANIAM SUNDARANAR UNIVERISTY,
TIRUNELVELI-12
SYLLABUS
UG - COURSES – AFFILIATED COLLEGES
Course Structure for B. Sc. Computer Science
(Choice Based Credit System)

(with effect from the academic year 2024-2025 onwards)

Part	Subject Status	Subject Title	Subject Code	Credit
		Semester-IV		
I	LANGUAGE	TAMIL/MALAYALAM/HINDI	F1TL41/ F1MY41/ F1HD41	3
II	ENGLISH	ENGLISH	F2EN41	3
III	CORE	JAVA PROGRAMMING	FCCS41	4
III	CORE	PRACTICAL- JAVA PROGRAMMING	FCCSP6	3
III	ELECTIVE	RESOURCE MANAGEMENT TECHNIQUES/ ANALYTICS FOR SERVICE INDUSTRY/ BIOMETRICS	FECS41/ FECS42/ FECS43	3
IV	SEC 6	PRACTICAL - ADVANCED EXCEL	FSCSP4	2
IV		VALUE BASED EDUCATION	FVBE41	2
IV	NAAN MUTHALVAN	INTERNET FUNDAMENTALS		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 **I 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)**

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

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

➤ **Classification**
   a) First Class with Distinction   : CGPA $\geq$ 7.5**
   b) First Class   : CGPA $\geq$ 6.0
   c) Second Class   : CGPA $\geq$ 5.0 and $<$ 6.0
   d) Third Class   :   CGPA$<$ 5.0

Part 1 TAMIL
பொதுத்தமிழ் 4 - தமிழும் அறிவியலும்

அலகு 1: தமிழரின் அறிவியல் சிந்தனைகள்

1. அறிவியலும் மனித வாழ்வும்
2. ஐந்திணைப் பகுப்பும் சூழலியலும்
3. தொழில்நுட்ப மேலாண்மை
4. நேர் நிலம் மேலாண்மை

அலகு 2: பழந்தமிழ் இலக்கியங்களில் அறிவியல் சிந்தனைகள்

1. நிலவியல்
2. உலோகவியல்
3. வானவியல்
4. உயிரியல்
5. உளவியல்

அலகு 3: இடைக்கால இலக்கியங்களில் அறிவியல் சிந்தனைகள்

1. காப்பியங்களில் அறிவியல்
2. சிற்றிலக்கியங்களில் அறிவியல்
3. உரைநூல்களில் அறிவியல்

அலகு 4: இணையத் தமிழ்

1. இணையத் தமிழ் பயன்பாடு - அறிமுகம்
2. இணையத் தமிழ் கல்விக்கழகம்
3. இணைய நூலகம்
4. செயற்கை நுண்ணறிவியல்
5. தமிழ்நாட்டு அறிவியல் ஆளுமைகள்

அலகு 5: கடிதம் எழுதுதலும் கட்டுரை எழுதுதலும்

1. உறவு முறைக் கடிதப் பயிற்சி
2. அலுவலகக் கடிதப் பயிற்சி
3. விண்ணப்பப் படிவம் எழுதும் பயிற்சி
4. தன் விவரப் படிவம் எழுதும் பயிற்சி
5. கருத்து விளக்கக் கட்டுரைகள் எழுதும் பயிற்சி
6. பத்திரிகைகளுக்குக் கட்டுரை எழுதும் பயிற்சி

Text Books;

1. அறிவியல் தமிழ் இன்றைய நிலை - இராதா செல்லப்பன், உலகத் தமிழாராய்ச்சி நிறுவனம், சென்னை
2. மாணவ முஸ்தபா. தமிழில் அறிவியல் படைப்பிலக்கியம், மணவை பூப்பிளிகேஷன், சென்னை.
3. கலைச்சொல்லாக்கம் - மங்கை, ரங்கராசபுரம், சென்னை

Reference Books:

1. தமிழர் மேலாண்மை மரபுகள் - இல). செ. கந்தசாமி
2. சங்க இலக்கியத்தில் வேளாண் சமுதாயம், பொ. மாதையன், நியு செஞ்சுரி புக் ஹவுஸ்

Websites:

1. https://www.chennailibrary.com/
2. முகப்பு - சிறுகதைகள்
3. www.tamilvirtualuniversity.org
4. Buy tamil books online 10% to 50% discount, Tamil Novels, Tamil Audio Books online – Buy tamil books online – Established 2010
5. www.katuraitamilblogspot.com

Part I MALAYALAM
DESKTOP PUBLISHING AND PRINTING IN MALAYALAM

UNIT I

This unit introduces basics of the printing technology, History of Malayalam printing-publishing-Newspapers-Journals-Social commitment -Propagation of ideas- Social struggle against invasion product of industrialization-printing in new era- - Data entry, DTP, editing, layout and Book publishing, e-publishing -: Significance of ISBN and ISSN..

UNIT II e -Malayalam – Malayalam in cyber space Detailed Study :

1. Malayalam computing-charithravalokanam.Dr.Mahesh Mangalatt ,Cyber Malayalam Sunitha T.V.(Ed)
2. Vayana, Ezhuthu, prasadhanam digital yugathil Dr.B.Iqbal(Grandhalokam- June 2013)

UNIT III e-Vayana- Reading in digital era Detailed Study :

1. E.vayana innathe Vayana– E-malayalam.Sunitha T.V State Institute of Languages.Thiruvananthapuram
2. Malayalam wiki media samrambhangal.Shiju Alex Cyber Malayalam .Sunitha T.V (Ed).Current Books.
3. Web magazinukal-Ini Vayana E Vayana.V.K Adarsh D C Books

UNIT IV Modern Media

Tools in Cyber space-editing tools

Unicode- Fonts- Drawing Tools, Painting tools. M S Paint- File Types (jpg ,IMG, XMP, Gif, PNG)

Resolution-Layers-Palattes, Greyscale, image, image recognition, Colour space, image transformation- image preview.

Detailed Study:

Unicode – Ini vayana e vayana – V.K Adarsh - D C Books

UNIT V

Proof reading techniques and cataloguing, cover designing, blurb writing

Detailed study:

      Proof thiruthal.Vanijyaparamaya kathidapadukal.G.R.Pilla,

      State Institute of Languages.Thiruvananthapuram

Reading List (Print and Online)

1. https://www.amazon.com/Desktop-publishing-Bittukumar/dp/9350570130
2. Computer parichayavum prayogavum.Dr.Achythsankar S Nair State Institute of languages.Thiruvananthapuram
3. Malayalam computing parimithikalum sadhyathakalum (Combiled.) Dr.Smitha K Nair
4. Sankethika patham-kerala University Publications
5. Computer Gurukulam-DTP ,Kairali Publications Thiruvananthapuram
6. Pusthaka nirmaanam - The state Institute of languages, Thiruvananthapuram
7. Proof reading - The state Institute of languages
8. Printing A to Z - K.J. Sam kutti
9. Ini vayana e vayana- V.K. Adarsh, D.C. books.
10. 1Printing Technology and Compositing- The State institute of Language s . T Thiruvananthapuram
11. Navamadhyamangal Bhaasha sahityam samskaram- Jose K Manuel, N B S
12. Cyber aadhunikata @ Malayalam – Jose K Manuel ,Athma Books
13. Bookstalgia- P.K. Rajasekharan- Mathrubhumi books
14. Pusthakam Untakunnathu- V.K. Haridas, Poorna publications, Kozhikode
15. An Introduction to Book Publishing D,Raghavan
16. Copy Editing- Judith Butcher
17. E Malayalam –Sunitha T.V- The State Institute of Language s

PART I HINDI
Hindi Bhasha aur Computer

Course Objectives

The Main Objectives of this course are to:

- Knowing about computer in Hindi
- Understanding Technical Hindi
- E-Learning and its aspects
- Hindi application with the Technical tools

Unit I

Computer aur Hindi

- Computer ka Parchay aur Vikas
- Computer mein Hindi ke Vividh Prayog

Unit II

Proudyogiki aur Hindi

- Unicode
- Dewanagari Lipi
- Hindi ki Vibhinna Website – Ek Parichay

Unit III

Computer ke madhyam se Hindi shikshan

- Vibhinna Shikshan Takkini ki
- Sarkari aur gair sarkari sansthao mein prayukt Hindi Bhasha

Unit IV

Vividh Paksh

- Internet par Hindi Bhasha
- Hindi SMS
- Hindi Tankan
- Hindi ke Vibhinna Prayukthi

Unit V

Pratiyogi priksha par aadharit Computer sambandhit prashikshan Karya

- Hindi mein Powerpoint banana
- Hindi mein Google Document thaiyar karna
- Hindi mein Google form taiyar karna
- Vibhinna pratiyogi parikshao ke bare mein suchna pradan karna

Reference Books

1. Social Networking: Naye Samay ka Samvad – Ed. Sanjay Dwivedi
2. Jansanchar aur Maas Culture – Jagdeeshwar
3. Media: Bhumandalikaran aur Samaj – Ed. Sanjay Dwivedi
4. Naye Jamane ki Patrakarita – Sourabh Shukla
5. Patrakarita se Media tak – Manoj Kumar

Related Online Contents (MOOCs, SWAYAM, NPTEL, YouTube, Websites, etc.)

1. https://techshindi.com/%E0%A4%AB%E0%A4%BC%E0%A5%89%E0%A4%A8%E0%A5%8D%E0%A4%9F%E0%A4%95%E0%A5%8D%E0%A4%AF%E0%A4%BE-%E0%A4%B9%E0%A5%88%E0%A4%82-%E0%A4%94%E0%A4%B0-%E0%A4%AF%E0%A5%87-%E0%A4%95%E0%A4%BF%E0%A4%A4%E0%A4%A8/
2. https://www.techyukti.com/2020/12/computer-font-kya-hai.html
3. https://chti.rajbhasha.gov.in/pdf/Chap4HindiShabadSansadhan2ndEditionPart2.pdf

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Part II ENGLISH

UNIT I GOAL SETTING (UNICEF)
Life Story
      1.1 From Chinese Cinderella – Adeline Yen Mah

      1.2 Why I Write - George Orwell

Short Essay
      1.3 On Personal Mastery – Robin Sharma

      1.4 On the Love of Life – William Hazlitt

UNIT II INTEGRITY
Short Story
      2.1 The Taxi Driver – K.S. Duggal

      2.2 Kabuliwala - Rabindranath Tagore

      2.3 A Retrieved Reformation – O Henry

Extract from a play
      2.4 The Quality of Mercy (Trial Scene from the Merchant of Venice - Shakespeare)

UNIT III COPING WITH EMOTIONS
Poem
      3.1 Pride – Dahlia Ravikovitch

      3.2 Phenomenal Woman – Maya Angelou

Reader's Theatre
      3.3 The Giant's Wife A Tall Tale of Ireland –William Carleton

      3.4 The Princess and the God : A Tale of Ancient India

UNIT IV Language Competency Sentences
      4.1 Simple Sentences

      4.2 Compound Sentences

      4.3 Complex Sentences

Direct and Indirect Speech

UNIT V Report Writing
      5.1 Narrative Report

      5.2 Newspaper Report

Drafting Speeches
      5.3 Welcome Address

      5.4 Vote of Thanks

Text Books (Latest Editions)
1. Oxford Practice Grammar , John Eastwood, Oxford University Press
2. Cambridge Grammar of English , Ronald Carter and Michael McCarthy
3. George Orwell Essays, Penguin Classics

Web Resources
1. http:/www.gradesaver.com/George-orwell-essays/study/summary
2. O' Henry. A Retrieved Reformation.
   https://americanenglish.state.gov/files/ae/resource_files/a-retrieved-reformation.pdf
3. Maya Angelou. Phenomenal Woman.
   https://www.poetryfoundation.org/poems/48985/phenomenal-woman
4. The Quality of Mercy, https://poemana1ysis.com
5. https://www'.oxfordscho1ar1yeditions.coin/disp1ay/10.1093/actrade/9780199235742.book.1/actrade-9780199235742-div1-106-William Hazilitt

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JAVA PROGRAMMING

Learning Objectives

- To provide fundamental knowledge of object-oriented programming
- To equip the student with programming knowledge in Core Java from the basics up.
- To enable the students to use AWT controls, Event Handling and Swing for GUI.
- To provide fundamental knowledge of object-oriented programming.
- To equip the student with programming knowledge in Core Java from the basics up.

UNIT I

Introduction: Review of Object Oriented concepts – History of Java – Java buzzwords – JVM architecture – Data types - Variables - Scope and life time of variables - arrays - operators – control statements - type conversion and casting - simple java program - constructors - methods - Static block - Static Data – Static Method String and String Buffer Classes.

UNIT II

Inheritance: Basic concepts - Types of inheritance - Member access rules - Usage of this and Super key word - Method Overloading - Method overriding - Abstract classes - Dynamic method dispatch - Usage of final keyword.
Packages: Definition-Access Protection –Importing Packages.
Interfaces: Definition–Implementation–Extending Interfaces.

UNIT III

Exception Handling: try – catch- throw - throws – finally – Built-in exceptions - Creating own Exception classes. Multithreaded Programming: Thread Class - Runnable interface –Synchronization–Using synchronized methods– Using synchronized statement- InterthreadCommunication –Deadlock.

UNIT IV

I/O Streams: Concepts of streams - Stream classes- Byte and Character stream - Reading console Input and Writing Console output - File Handling.
Event Handling: Events - Event sources - Event Listeners - Event Delegation Model (EDM) - Handling Mouse and Keyboard Events - Adapter classes - Inner classes

UNIT V

AWT Controls: The AWT class hierarchy - user interface components- Labels - Button - Text Components - Check Box - Check Box Group - Choice - List Box - Panels – Scroll Pane - Menu - Scroll Bar. Working with Frame class - Colour - Fonts and layout managers.

Text Books:

1. Programming with JAVA a Primer – E.BALAGURUSAMY, McGraw Hill,4 th Edition Herbert Schildt, The Complete Reference, Tata McGraw Hill, New Delhi, 7th Edition, 2010
2. Gary Cornell, Core Java 2 Volume I – Fundamentals, Addison Wesley, 1999

References :
1. Head First Java, O'Rielly Publications,
2. Y. Daniel Liang, Introduction to Java Programming, 7th Edition, Pearson Education India, 2010

Web Resources
1. https://javabeginnerstutorial.com/core-java-tutorial
2. http://docs.oracle.com/javase/tutorial/
3. https://www.coursera.org/

PRACTICAL- JAVA PROGRAMMING

Learning Objectives
- To provide fundamental knowledge of object-oriented programming.
- To equip the student with programming knowledge in Core Java from the basics up.
- To enable the students to know about Event Handling .
- To enable the students to use String Concepts.
- To equip the student with programming knowledge in to creat GUI using AWT controls.

List of Excercise
1. Write a JAVA program using Multiple Constructors
2. Write a JAVA program using overloading method
3. Write a JAVA program using Overriding Method
4. Write a JAVA program using one-dimensional arrays
5. Write a JAVA program using Two-dimensional array
6. Write a program to do String Manipulation using Character Array and perform the following string operations: String length, Finding a character at a particular position, Concatenating two strings
7. Write a JAVA program implementing interface(s)
8. Write a JAVA program to create and import package
9. Write a JAVA program to create and deal multiple threads
10. Write a JAVA program with throwing your own exception
11. Write a JAVA program using Applet to Design a Web Page
12. Write a JAVA program for handling mouse events
13. Write a JAVA program for handling keyboard events

Text Book
1. Herbert Schildt, The Complete Reference, Tata McGraw Hill, New Delhi, 7th Edition, 2010.
2. Gary Cornell, Core Java 2 Volume I – Fundamentals, Addison Wesley, 1999.

Reference Books
1. Head First Java, O'Rielly Publications,
2. Y. Daniel Liang, Introduction to Java Programming, 7th Edition, Pearson Education India, 2010.

Web Resources
1. https://www.w3schools.com/java/
2. http://java.sun.com
3. http://www.afu.com/javafaq.html

RESOURCE MANAGEMENT TECHNIQUES

UNIT I

Simplex Method: Different forms of Linear Programming Problem – Basic solution, Degenerate solution, Non-Degenerate solution, Basic feasible solution , Improved BFS, Optimum BFS – Minimax Theorem of LPP - Slack, Surplus, Restricted and Unrestricted variables

UNIT II

Theory of Games: Introduction – payoff matrix , fair game, strictly determinable game - Two person zero sum games – The Maximin Minimax principle of game theory – Graphical solution of 2 X N and M X 2 games .

UNIT III

Replacement Problem: Introduction - Replacement of items that Deteriorate with time –Replacement of Items whose Maintenance costs increase with time and the value of money also changes with time - Replacement of items that fail completely – Individual Replacement policy - Group Replacement policy

UNIT IV

Network Scheduling by PERT / CPM: Introduction – Basic concepts : Activities, Nodes, Network, Critical path – Constraints in Networks – Construction of the Network – Various Time calculations in Networks, PERT – PERT calculations.

UNIT V

Queuing Theory: Introduction - Characteristics of queuing systems - Basic queuing process - Customer's behaviours in the queue - Postulate for the Poisson process - Distribution of arrival time - Distribution of service time - Symbols and Notations – Definition of Transient and Steady states .

TEXT BOOK:

1. Operations Research - P.K.Gupta, Kanti Swarup and Man Mohan, SultanChand & Sons Publications.

REFERENCE BOOKS:

1. Operations Research - J.A. Mangaladoss , Presi – Persi Publications
2. Operations Research - R.Paneer Selvam, Prentice Hall of India

ANALYTICS FOR SERVICE INDUSTRY

Learning Objectives

- Recognize challenges in dealing with data sets in service industry.
- Identify and apply appropriate algorithms for analyzing the healthcaredata.
- Make choices for a model for new machine learning tasks.
- To identify employees with high attrition risk.
- To learn various biomedical signals

UNIT I

Introduction: Healthcare data sources and basic analytics - Advanced data analytics for health care - Applications and practical systems for healthcare

UNIT II

Electronic health records: A survey - Components of EHR - Coding systems - Benefits of EHR- Barriers to adopting EHR - Challenges of using EHR data.

UNIT III

Bio medical Image Analysis: Introduction - Bio medical imaging modalities - Object detection - Image segmentation - Feature extraction.

UNIT IV

Mining of sensor data in health care: Introduction - Mining sensor data n medical informatics Scope and challenges - Challenges in health care data analysis - Sensor data mining applications - Non clinical health care applications.

UNIT V

Biomedical signals: Types of biomedical signals - Social media analytics for healthcare: Social media analysis for detection and tracking of infectious disease outbreaks -Outbreak detection - analyzing and tracking outbreaks

Textbooks

1. Chandan K. Reddy and Charu C Aggarwal, ―Healthcare data analytics‖, Taylor & Francis, 2015.
2. Edwards Martin R, Edwards Kirsten (2016),―Predictive HR Analytics: Mastering the HR Metric‖, Kogan Page Publishers, ISBN-0749473924
3. Fitz-enzJac (2010), ―The new HR analytics: predicting the economic value of your company's human capital investments‖, AMACOM, ISBN-13: 978-0-8144-1643-3
4. RajendraSahu, Manoj Dash and Anil Kumar. Applying Predictive Analytics Within the Service Sector.

Reference Books

1. Hui Yang and Eva K. Lee, ―Healthcare Analytics: From Data to Knowledge to Healthcare Improvement, Wiley, 2016
2. Fitz-enzJac, Mattox II John (2014), ―Predictive Analytics for Human Resources‖, Wiley, ISBN- 1118940709.

Web Resources

1. https://www.ukessays.com/essays/marketing/contemporary-issues-in-marketing-marketing-essay.php
2. https://yourbusiness.azcentral.com/examples-contemporary-issues-marketing-field-26524.html

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BIOMETRICS

Learning Objectives
- Identify the various biometric technologies.
- Design of biometric recognition.
- Develop simple applications for privacy
- Understand the need of biometric in the society
- Understand the scope of biometric techniques

UNIT I

Introduction: What is Biometrics, History, Types of biometric Traits, General architecture of biometric systems, Basic working of biometric matching, Biometric system error and performance measures, Design of biometric system, Applications of biometrics, Biometrics versus traditional authentication methods.

UNIT II

Face Biometrics: Introduction, Background of Face Recognition, Design of Face Recognition System, Challenges in Face Biometrics, Face Recognition Methods, Advantages and Disadvantages Retina and Iris Biometrics: Introduction, Performance of Biometrics, Design of Retina Biometrics, Design of Iris Recognition System, Applications of Iris Biometrics, Advantages and Disadvantages

UNIT III

Vein and Fingerprint Biometrics: Introduction, Biometrics Using Vein Pattern of Palm, Fingerprint Biometrics, Fingerprint Recognition System, Advantages and Disadvantages Privacy Enhancement Using Biometrics: Introduction, Privacy Concerns Associated with Biometric Deployments, Comparison of Various Biometrics in Terms of Privacy, Soft Biometrics. .

UNIT IV

Multimodal Biometrics: Introduction to Multimodal Biometrics, Basic Architecture of Multimodal Biometrics, Multimodal Biometrics Using Face and Ear, Characteristics and Advantages of Multimodal Biometrics, Watermarking Techniques: Introduction, Data Hiding Methods, Basic Framework of Watermarking, Classification of Watermarking, Applications of Watermarking,

UNIT V

Scope and Future: Scope and Future Market of Biometrics, Biometric Technologies, Applications of Biometrics, Biometrics and Information Technology Infrastructure, Role of Biometrics in Enterprise Security, Role of Biometrics in Border Security, Smart Card Technology and Biometrics, Radio Frequency Identification (RFID) Biometrics, DNA Biometrics, Comparative Study of Various Biometric Techniques.

Recommended Text
1. Biometrics: Concepts and Applications by G.R Sinha and SandeepB.Patil , Wiley, 2013

References Books
1. Guide to Biometrics by Ruud M. Bolle , SharathPankanti, Nalinik.Ratha, Andrew W.Senior, Jonathan H. Connell , Springer 2009
2. Introduction to Biometrics by Anil k. Jain, Arun A. Ross, KarthikNandakumar
3. Hand book of Biometrics by Anil K. Jain, Patrick Flynn, ArunA.Ross.

Web Resources
1. https://www.tutorialspoint.com/biometrics/index.htm
2. https://www.javatpoint.com/biometrics-tutorial
3. https://www.thalesgroup.com/en/markets/digital-identity-and-security/government/inspired/biometrics

PRACTICAL- ADVANCED EXCEL

Learning Objectives
- Handle large amounts of data
- Aggregate numeric data and summarize into categories and subcategories
- Filtering, sorting, and grouping data or subsets of data
- Create pivot tables to consolidate data from multiple files
- Presenting data in the form of charts and graphs

LIST OF EXCERCISES
1. Logical operations - Consider the design of a light switch system that can turn the same light on or off in three different places. One switch (A) is installed in the hall on the first floor. Another switch (B) is located on the upstairs landing and the third switch (C) is located on the ground floor. Each of the switches has 2 states (on and off). When an odd number of switches are on, the bulb remains off and in all other cases, the bulb glows. Design a truth table and find the various states of the bulb for various combinations of the 3 switches.
2. You are given the name, gender, attendance, assignment, midterm and final grades of five students. Find the total of the assessment marks. Students who pass need to have a total score greater than or equal to 50. Display the word "Pass" or "Fail" under a column called Description.
3. Create worksheet with columns Full name, Last Name, First Name and E-Mail. Give Full Name for ten students. Using text function find and fill Last Name, First Name and E-mail(Last Name_First Name @gmail.com)
4. Use the functions related to date and time such as Date, Date value, Day, Days, Minute, Month
5. Data Validation Create excel table with columns Emp.Name, Emp.No, Salary, Bonus, Date of entry, Department. Each column in the Excel table have some

rule for writing values. We have to modify Data Validation to be able to enter only correct values into the cells. Rules: Employee number is exactly 5 characters long. Salary can be set in the range 600-2000. Bonus cannot be greater than 10 % of the salary. Date of entry can be set only as today. Department must be one of the values from the list of Departments.

6. Sorting and filtering Create excel table with columns Course, Level(Certificate, diploma, advanced diploma, all levels), Instructor name, Day(Monday to Friday), Starting time, Duration, Course fee Sort the table by: Course level; then Start time; then course fee Use filtering to show rows for a particular instructor, The day is Monday; and The time is after 17:00.

7. Create Column chart, Line chart, Bar Chart, Pie chart, Scatter chart for the marks obtained by a student in six semesters.

8. Share chart with word and ppt

Text Book
1. Excel 2019 All
2. Microsoft Excel 2019 Pivot Table Data Crunching

Reference Books
1. Excel 2019 All-in-One for Dummies, Greg Harvey, 1st edition

Web Resources
1. https://www.simplilearn.com
2. https://www.javatpoint.com
3. https://www.w3schools.com

VALUE BASED EDUCATION

Unit-I Introduction to Value based Education

a. Value: meaning and Classification

b. Value based Education: Meaning, Characteristics, Components and Contents

c. Value Erosion and Inculcation: Value crises in social life, economic life, and political life - Value inculcation: need and importance - Role of Parents and Teachers in inculcating values

Unit-II Harmony in Being and Living

a. Harmony of the self (I) with the body: Nurturing of the body- Understanding myself as co-existence of the self and the body- Understanding needs of self and needs of the body- Understanding the activities in the self and activities in the body.

b. Harmony in the Family, Society and Nature: Family as a basic unit of human interaction and values in relationships - Affection, care, guidance, reverence, Glory, gratitude, and love – Harmony in society: Justice preservation, Production Work, Exchange Storage Harmony in nature: four orders in nature-The holistic perception of harmony in existence.

Unit III: Social Issues, Social Justice and Human Rights

Social issues – causes and magnitude - alcoholism, drug addiction, poverty, unemployment

Social Justice: Definition and need – factors responsible for social injustice: caste and gender – contributions of social reformers.

Human Rights: Concept and Principles of human rights – human rights and Indian constitution – Rights of Women and children – violence against women

Unit IV: Values and Mass Media

Mass media: Meaning, functions and characteristics – Effects and Influence on youth and children – **Media Power** – socio, cultural and political consequences of mass mediated culture - consumerist culture – Globalization – new media- prospects and challenges – Role of media in value building

Unit V: Ethics

Ethics: Meaning and importance

Social ethics: tolerance, equity, justice for all, sensitivity towards mankind, love for nature and creatures, nationalism-love for nation, pride for nation, Honour to the law, Indian culture and traditions – Civic Sense: Being a good civilian

Professional Ethics: Dedication to work and duty – Commitment to the Profession

References:

1. Allport, G.W., Vermon, P.E., and Lindzey, G. (1970) study of values, Buston: Houghton Mifflin.
2. Central Board of Secondary Education (1997), Value Education: A Handbook for Teachers, Delhi: Central Board of Secondary Education.
3. Delors, J. (1996), Learning: The Treasure within- Report of the International Commission on Education for the Twenty-First Century, Paris: UNESCO.
4. Morris, Charles W. (1956). Varieties of Human Values. Chikago: University of Chicago Press.
5. Shukla, R.P. (2005). Value Education and Human Rights. Sarup& Sons, New Delhi
6. Satchidananda. M.K. (1991), "Ethics, Education, Indian Unity and Culture" – Delhi, Ajantha Publications
7. Saraswathi. T.S. (Ed) 1999. Culture", Socialisation and Human Development: Theory, Research and Application In India" – New Delhi Sage Publications.
8. Venkataiah. N (Ed) 1998, "Value Education" New Delhi Ph. Publishing Corporation.
9. Chakraborti, Mohit (1997) "Value Education: Changing Perspectives" New Delhi: Kanishka Publications.

Web Resources

1. https://testbook.com/ugc-net-paper-1/value-education