



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)



Semester-I				
Part	Subject Status	Subject Title	Subject Code	Credit
I	LANGUAGE	TAMIL/MALAYALAM/HINDI	F1TL11/ F1MY11/ F1HD11	3
II	ENGLISH	ENGLISH	F2EN11	3
III	CORE	PYTHON PROGRAMMING	FCCS11	5
III	CORE	PRACTICAL- PYTHON PROGRAMMING	FCCSP1	3
III	ELECTIVE	DIGITAL LOGIC FUNDAMENTAL	FECS11	3
IV	SEC 1	PRACTICAL-OFFICE AUTOMATION	FSCS11	2
IV	FC	PROBLEM SOLVING TECHNIQUES	FFCS11	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 (GP)	point	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**

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



பொதுத்தமிழ் 1

தமிழ் இலக்கிய வரலாறு 1

அலகு 1: தமிழ் இலக்கிய, இலக்கண வரலாறு அறிமுகம்.

1. இலக்கணம்:

அ. தொல்காப்பியம், இறையனார், களவியல் உரை, நம்பியகப் பொருள், புறப்பொருள் வெண்பா மாலை, நன்னூல் தண்டியலங்காரம், யாப்பருக்கலக்காரிகை- நூல்கள்

ஆ. மொழிப் பயிற்சி - ஒற்றுப்பிழை தவிர்த்தல்

- வல்லினம் மிகும் இடங்கள்
- வல்லினம் மிகா இடங்கள்
- ஈரொற்று வரும் இடங்கள்
- ஒரு, ஓர் வரும் இடங்கள்
- அது, அஃது வரும் இடங்கள்
- தான், தாம் வரும் இடங்கள்

பயிற்சி: வல்லினம் மிகும் இடங்கள், மிகா இடங்கள் தவறாக வரும்வகையில் ஒரு பத்தி கொடுத்து ஒற்றுப் பிழை திருத்தி எழுதச் செய்தல்.

2. சங்க இலக்கியம்-எட்டுத்தொகை, பாத்துப்பாட்டு
3. அற இலக்கியம்-பதினெண்கீழ்கணக்கு நூல்கள்
4. காப்பிய இலக்கியம் - ஐம்பெருங் காப்பியங்கள், ஐஞ்சிறு காப்பியங்கள், சமயக் காப்பியங்கள்
5. பக்தி இலக்கியமும் (பன்னிரு திருமுறைகள், நாலாயிர திவ்வியப் பிரபந்தம் - பகுத்தறிவு இலக்கியமும் (சித்தர் இலக்கியங்கள், புலவர் குழந்தையின் இராவண காவியம்)

அலகு 2: சங்க இலக்கியம்

எட்டுத்தொகை

1. நற்றிணை-முதல் பாடல் - நின்ற சொல்லர்
2. குறுந்தொகை 3 ஆம் பாடல் - நிலத்தினும் பெரிதே
3. ஐங்குறுநூறு-நெல் பல பொலிக! பொன் பெரிது சிறக்க! (முதல் பாடல்)-வேட்கைப் பத்து
4. கலித்தொகை -51 - சுடர்தொடிக் கேளாய் - குறிஞ்சிக் கலி
5. புறநானூறு-189 தெண்கடல் வளாகம் பொதுமையின்றி, நாடா கொன்றோ - 187

பத்துப்பாட்டு:

1. முல்லைப்பாட்டு (முழுவதும்)

அலகு 3: அற இலக்கியம்

1. திருக்குறள் - அறன் வலியுறுத்தல் அதிகாரம்
2. நாலடியார் -பாடல் 131 (கஞ்சியாழகும்)
3. நான்மணிக்கடிகை - நிலத்துக்கு அணியென்ப
4. பழமொழி நானூறு-தம் நடை நோக்கார்
5. இனியவை நாற்பது-37 இளமையை மூப்பு என்று

அலகு 4: காப்பிய இலக்கியம்

1. சிலப்பதிகாரம் - வழக்குரைகாதை



2. மணிமேகலை - பாத்திரம் பெற்ற காதை
3. பெரியபுராணம்- பூசலார் நாயனார்புராணம்
4. கம்பராமாயணம்-குகப் படலம்
5. சீறாப்புராணம் - மாணுக்குப் பிணை நின்ற படலம்
6. இயேசு காவியம்-ஊதாரிப்பிள்ளை

அலகு 5: பக்தி இலக்கியமும், பகுத்தறிவு இலக்கியமும்

பக்தி இலக்கியம்:

1. திருநாவுக்கரசர் தேவாரம்-நாமார்க்கும் குடியல்லோம் எனத் தொடங்கும் பாடல் மட்டும்
2. மாணிக்கவாசகர் திருவாசகம் - நமச்சிவாய வா ஆழ்க நாதன்தான் வாழ்க முதல் சிரம்குவிவார் ஓங்குவிக்கும் சீரோன் கழல் வெல்க வரை
3. பொய்கையாழ்வார்-வையந் தகனியா வர்கடலே
4. பூதத்தாழ்வார் - அன்பே தகனியா
5. பேயாழ்வார் - திருக்கண்டேன் பொன்மேனி கண்டேன்
6. ஆண்டாள் - திருப்பாவை மார்களித் திங்கள் (முதல் பாடல்)

பகுத்தறிவு இலக்கியம்;

1. திருமூலர் - திருமந்திரம் (270,271,274,275 285)
2. பட்டினத்தார் - திருவிடை மருதூர் (காடே திரிந்து - எனத் தொடங்கும் பாடல் பா. எண்; 279,280)
3. கடுவெளி சித்தர் - பாபஞ்செய் எதிரி மனமே (பாடல் முழுவதும்)
4. இராவண காவியம் - தாய்மொழிப் படலம் 18 ஏடுகை இல்ல ரில்லை முதல் - 22 செந்தமிழ் வளர்த்தார் வரை

Reference Books:

- மு. வரதராசன், தமிழ் இலக்கிய வரலாறு, சாகித்ய அக்காதமி, புதுடெல்லி
- மது. ச. விமலானந்தன், தமிழ் இலக்கிய வரலாறு, மீனாட்சி புத்தக நிலையம், மதுரை.
- தமிழண்ணல், புதிய நோக்கில் தமிழ் இலக்கிய வரலாறு, மீனாட்சி புத்தக நிலையம், மதுரை;.
- தமிழ் இளகிய வரலாறு - முனைவர் சிற்பி பாலசுப்ரமணியன், முனைவர்.சொ. சேதுபதி
- புதி யதமிழ் இலக்கிய வரலாறு - முனைவர் சிற்பி பாலசுப்ரமணியன், நீல. பத்மநாபன்

Web Sources:

- [இணைய தமிழ் நூலகம் - சென்னை நூலகம் - Online Tamil Library - ChennaiLibrary.com](http://இணைய_தமிழ்_நூலகம்_-_சென்னை_நூலகம்_-_Online_Tamil_Library_-_ChennaiLibrary.com)
- [முகப்பு - சிறுகதைகள் \(sirukathaigal.com\)](http://முகப்பு_-_சிறுகதைகள்_(sirukathaigal.com))
- www.tamilvirtualuniversity.org
- [Buy tamil books online 10% to 50% discount, Tamil Novels, Tamil Audio Books online - Buy tamil books online - Established 2010 \(noolulagam.com\)](http://Buy_tamil_books_online_10%_to_50%_discount,_Tamil_Novels,_Tamil_Audio_Books_online_-_Buy_tamil_books_online_-_Established_2010_(noolulagam.com))
- www.katuraitamilblogspot.com



MALAYALAM

PAPER I- PROSE, COMPOSITION AND TRANSLATION

Unit 1

This unit focus on the importance of Malayalam fiction, -the origin and development of Malayalam Short story –renaissance in short story—Thakazhi-Basheer-Karoor- - Navothana katha:

For detailed study:

1. Marappavakal- Karoor Neelakantappilla.
2. Uthuppante kinar.-Karoor Neelakantappilla.
3. Ezhunnallathuduty-Karoor Neelakantappilla.

Unit II

Kathayum adhunikathayum- To familiarize – Romanticism -Modernism, Plot and narration in modern short stories

For detailed study:

1. Neippayasam –Madhavikutty
2. Kadaltheerathu-.O.V.Vijayan
3. Radha radhamathram-M.Mukundan

Unit III

Samakala katha– Post modernism- Globalization-Women –Dalit- Cyber – Environmental issues in short stories-

The theme, structure and narrative style of the authors -comparison-

For detailed study:

1. Viyarppadayalanganl-Sara Joseph
2. Jwala - Priya .A.S
3. Vartha sareeram –Santhosh Echikkanam
4. Otta vaikkol viplavam –V.J.James

Unit IV

This unit briefs the history of Malayalm Novel- major works, romantic period- of M T Vasudevan Nair , narrative style of Nalukettu- craft and characterization in Nalukettu

Unit V

This unit focus on Translation, Word level and syntactic level and also discuss the writing style of Essay- introduce proverbs and paraphrasing in Malayalam

Recommended Texts

1. Marappavakalum mattu kathakalum – Karoor Neelakantapilla. (only 3 stories (a.)Marappavakal (b)Uthuppante kinar (c) Ezhunnallathuduty))
2. Nalukettu- .Novel -M.T.Vasudevan Nair

Reading list (print and online)

1. Adhunika Malayala Sahithya Charithram Prasthanangalilude – Dr. K.M.George (Ed.)
2. Cherukadha Innale Innu - M.Achuthan
3. Kadha Thedunna Kadha - N.Prabhakaran
4. M.T. Vakkinte Vismayam – V.R.Sudheesh
5. Kadhayum Kalavum –K.S.Ravikumar
6. Malayala Novalilee Desakaalanganl- E. Ramkrishnan
7. Maranunna Malayala Noval- K.P. Appan
8. Andhanaya Daivam- P.K.Rajasekharan
9. Shyalee shilppam- Dr.K.M. Prabhakra Warier
10. Bhasha gadhyam- C.V. Vasudeva Bhattathiri
11. Karur Kadha patanam- M.M.Basheer



HINDI - Hindi ka Samanya Gyan, Vyakaran aur Nibandh

Unit I

Buniyadi Hindi

- Swar
- Vyanjan
- Barah Khadi
- Shabd aur
- Vakya Rachna

Unit II

Hindi Shabdavali

- Rishto ke Naam
- Gharelu padartho ke Naam

Unit III

Vyakaran

- Sadharan Vakya aur Sangya
- Sarvanam
- Visheshan
- Kriya aadi shabdo ka prayog

Unit IV

Chote Gadyansh ka Pathan

- Bacho ki Kahaniya (1 to 5)
- Patra-Patrikao mein prakashit Gadyansho ka Pathan

Unit V

Nibandh

- Sant Tiruvalluvar
- E.V.R Thandai Periyar
- Naari Sashaktikaran
- Paryavaran Sanrakshan
- Vibhinna pratiyogi parikshao ke bare mein jaankari dena

Pratiyogi priksa par adharit nibandho dwara bhasha ki kshamta badhane vale prashikshan kary.

Reference Books

1. Hindi ke Avyay Vakyansh – Chaturbhuji Sahay
2. Subodh Hindi Vyakaran – Phoolchand Jain
3. Sankshipt Hindi Vyakaran – Kamta Prasad
4. Vyavaharik Hindi – Nagappa
5. Abhinav Hindi Vyakaran – Nagappa
6. Saral Hindi Vyakaran – Shyamchandra Kapur
7. Vyakaran Pradeep – Ramdev
8. Laghu Bal Kathaye – Ramashankar



9. Manoranjak Kahaniya – Premchand

10. CONCISE GRAMMAR OF THE HINDI LANGUAGE - H.C Scholberg

11. Hindi Grammar – Edwin Greaves

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

1. [1. fr#oYyqoj%https://bharatdiscovery.org/india/%E0%A4%A4%E0%A4BF%E0%A4B0%E0%A5%81%E0%A4B5%E0%A4B2%E0%A5%8D%E0%A4B2%E0%5%81%E0%A4B5%E0%A4B0#:~:text=%E0%A4%A4%E0%A4BF%E0%A4B%E0%A5%81%E0%A4B5%E0%A4B2%E0%A5%8D%E0%A4B2%E0%A5%81%E0%A4B5%E0%A4B0%20\(%E0%A4%85%E0%A4%82%E0%A4%97%E0%5%8DE0%A4%B0%E0%A5%87%E0%A4%9C%E0%A4%BC%E0%A5%80%3A%20Thiruvallur\)%20%E0%A4%A6%E0%A4%95%E0%A5%8D%E0%A4%B7%E0%A4BF%E0%A4%A3,%E0%A4AA%E0%A4BF%E0%A4A4%E0%A4BE%20E0%A4AE%E0%A5%87%E0%A4%82%20%E0%A4B5%E0%A4BF%E0%A4B6%E0%A5%8D%E0%A4B5%E0%A4BE%E0%A4B8%20%E0%A4B0%E0%A4%96%E0%A4A4%E0%A5%87%20%E0%A4A5%E0%A5%87%E0%A5%A4](https://bharatdiscovery.org/india/%E0%A4%A4%E0%A4BF%E0%A4B0%E0%A5%81%E0%A4B5%E0%A4B2%E0%A5%8D%E0%A4B2%E0%5%81%E0%A4B5%E0%A4B0#:~:text=%E0%A4%A4%E0%A4BF%E0%A4B%E0%A5%81%E0%A4B5%E0%A4B2%E0%A5%8D%E0%A4B2%E0%A5%81%E0%A4B5%E0%A4B0%20(%E0%A4%85%E0%A4%82%E0%A4%97%E0%5%8DE0%A4%B0%E0%A5%87%E0%A4%9C%E0%A4%BC%E0%A5%80%3A%20Thiruvallur)%20%E0%A4%A6%E0%A4%95%E0%A5%8D%E0%A4%B7%E0%A4BF%E0%A4%A3,%E0%A4AA%E0%A4BF%E0%A4A4%E0%A4BE%20E0%A4AE%E0%A5%87%E0%A4%82%20%E0%A4B5%E0%A4BF%E0%A4B6%E0%A5%8D%E0%A4B5%E0%A4BE%E0%A4B8%20%E0%A4B0%E0%A4%96%E0%A4A4%E0%A5%87%20%E0%A4A5%E0%A5%87%E0%A5%A4)

2. bZ-os-jkelkeh

[https://hi.wikipedia.org/wiki/%E0%A4AA%E0%A5%87%E0%A4B0%E0%A4BF%E0%A4AF%E0%A4BE%E0%A4B0#:~:text=%E0%A4%87%E0%A4B0%E0%A5%8B%E0%A4A1%20%E0%A4B5%E0%A5%87%E0%A4%82%E0%A4%95%E0%A4%9F%20%E0%A4A8%E0%A4BE%E0%A4AF%E0%A4%95%E0%A4B0%20%E0%A4B0%E0%A4BE%E0%A4AE%E0%A4BE%E0%A4B8%E0%A4BE%E0%A4AE%E0%A5%80%20\(17.%E0%A4B5%E0%A4BE%E0%A4B2%E0%A5%87%20%E0%A4B9%E0%A4BF%E0%A4A8%E0%A5%8D%E0%A4A6%E0%A5%81%E0%A4A4%E0%A5%8D%E0%A4B5%20%E0%A4%95%E0%A4BE%20%E0%A4B5%E0%A4BF%E0%A4B0%E0%A5%8B%E0%A4A7%20%E0%A4A5%E0%A4BE%E0%A5%A4](https://hi.wikipedia.org/wiki/%E0%A4AA%E0%A5%87%E0%A4B0%E0%A4BF%E0%A4AF%E0%A4BE%E0%A4B0#:~:text=%E0%A4%87%E0%A4B0%E0%A5%8B%E0%A4A1%20%E0%A4B5%E0%A5%87%E0%A4%82%E0%A4%95%E0%A4%9F%20%E0%A4A8%E0%A4BE%E0%A4AF%E0%A4%95%E0%A4B0%20%E0%A4B0%E0%A4BE%E0%A4AE%E0%A4BE%E0%A4B8%E0%A4BE%E0%A4AE%E0%A5%80%20(17.%E0%A4B5%E0%A4BE%E0%A4B2%E0%A5%87%20%E0%A4B9%E0%A4BF%E0%A4A8%E0%A5%8D%E0%A4A6%E0%A5%81%E0%A4A4%E0%A5%8D%E0%A4B5%20%E0%A4%95%E0%A4BE%20%E0%A4B5%E0%A4BF%E0%A4B0%E0%A5%8B%E0%A4A7%20%E0%A4A5%E0%A4BE%E0%A5%A4)

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<https://www.hindikiduniya.com/essay/women-empowerment-essayinhindi/#:~:text=%E0%A4AE%E0%A4B9%E0%A4BF%E0%A4B2%E0%A4BE%20%E0%A4%B8%E0%A4B6%E0%A4%95%E0%A5%8D%E0%A4A4%E0%A4BF%E0%A4%95%E0%A4B0%E0%A4A3%20%E0%A4%95%E0%A5%8D%E0%A4AF%E0%A4BE%20%E0%A4B9%E0%A5%88%20%3F&text=%E0%A4AE%E0%A4B9%E0%A4BF%E0%A4B2%E0%A4BE%20%E0%A4B8%E0%A4B6%E0%A4%95%E0%A5%8D%E0%A4A4%E0%A4BF%E0%A4%95%E0%A4B0%E0%A4A3%20%E0%A4%95%E0%A5%8B%20%E0%A4AC%E0%A5%87%E0%A4B9%E0%A4A6%20%E0%A4%86%E0%A4B8%E0%A4BE%E0%A4A8,%E0%A4B8%E0%A4%95%E0%A5%8D%E0%A4B7%E0%A4AE%20%E0%A4AC%E0%A4A8%E0%A4BE%E0%A4A8%E0%A4BE%20%E0%A4AE%E0%A4B9%E0%A4BF%E0%A4B2%E0%A4BE%20%E0%A4B8%E0%A4B6%E0%A4%95%E0%A5%8D%E0%A4A4%E0%A4BF%E0A%95%E0%A4B0%E0%A4A3%20%E0%A4%B9%E0%A5%88%E0%A5%A4>

4. i;kZoj.k laj{k.k%

a. https://hi.wikipedia.org/wiki/%E0%A4AA%E0%A4B0%E0%A5%8D%E0%A4AF%E0%A4BE%E0%A4B5%E0%A4B0%E0%A4A3_%E0%A4B8%E0%A4%88%E0%A4B0%E0%A4%95%E0%A5%8D%E0%A4B7%E0%A4A3#:~:text=%E0%A4AA%E0%A4B0%E0%A5%8D%E0%A4AF%E0%A4BE%E0%A4B5%E0%A4B0%E0%A4A3%20%E0%A4B8%E0%A4%82%E0%A4B0%E0%A4%95%E0%A5%8D%E0%A4B7%E0%A4A3%20%E0%A4%95%E0%A4BE%20%E0%A4B8%E0%A4AE%E0%A4B8%E0%A5%8D%E0%A4A4%20%E0%A4AA%E0%A5%8D%E0%A4B0%E0%A4BE%E0%A4A3%E0%A4BF%E0%A4AF%E0%A5%8B%E0%A4%82,%E0%A4AA%E0%A5%83%E0%A4A5%E0%A5%8D%E0%A4B5%E0%A5%80%20%E0%A4B8%E0%A4AE%E0%A5%8D%E0%A4AE%E0%A5%87%E0%A4B2%E0%A4A8'20%E0%A4%86%E0%A4AF%E0%A5%8B%E0%A4%9C%E0%A4BF%E0%A4A4%20%E0%A4%95%E0%A4BF%E0%A4AF%E0%A4BE%20%E0%A4%97%E0%A4AF%E0%A4BE%E0%A5%A4

b. http://gadyakosh.org/gk/%E0%A4%86%E0%A4%88%E0%A4AF%E0%A5%87!_%E0%A4AA%E0%A4B0%E0%A5%8D%E0%A4AF%E0%A4BE%E0%A4B5%E0%A4B0%E0%A4A3_%E0%A4AC%E0%A4%9A%E0%A4BE%E0%A4%8F%E0%A4%81!/_%E0%A4%85%E0%A4A8%E0%A5%8D%E0%A4A4%E0%A4B0%E0%A4BE_%E0%A4%95%E0%A4B0%E0%A4B5%E0%A4A1%E0%A4BC%E0%A5%87



PAPER II –GENERAL ENGLISH - I

Learning Objectives

- To enable learners to acquire self awareness and positive thinking required in various life situations.
- To help them acquire the attribute of empathy
- To assist them in acquiring creative and critical thinking abilities
- To enable them to learn the basic grammar
- To assist them in developing LSRW skills

Unit I

SELF-AWARENESS (WHO)&POSITIVE THINKING (UNICEF)

Life Story

- 1.1 Chapter 1 from Malala Yousafzai, I am Malala
- 1.2 An Autobiography or The Story of My Experiments with Truth (Chapters 1, 2 & 3) M.K.Gandhi

Poem

- 1.3 Where the Mind is Without Fear – Gitanjali 35 – Rabindranath Tagore
- 1.4 Love Cycle – Chinua Achebe

Unit II

EMPATHY

Poem

- 2.1 Nine Gold Medals – David Roth
- 2.2 Alice Fell or poverty – William Wordsworth

Short Story

- 2.3 The School for Sympathy – E.V. Lucas
- 2.4 Barn Burning – William Faulkner

Unit III

CRITICAL & CREATIVE THINKING

Poem

- 3.1 The Things That Haven't Been Done Before – Edgar Guest
- 3.2 Stopping by the Woods on a Snowy Evening – Robert Frost

Readers Theatre

- 3.3 The Magic Brocade – A Tale of China
- 3.4 Stories on Stage – Aaron Shepard (Three Sideway Stories from Wayside School" by Louis Sachar)

Unit IV

Part of Speech

- 4.1 Articles
- 4.2 Noun
- 4.3 Pronoun
- 4.4 Verb
- 4.5 Adverb
- 4.6 Adjective
- 4.7 Preposition



Unit V**Paragraph and Essay Writing**

- 5.1 Descriptive
- 5.2 Expository
- 5.3 Persuasive
- 5.4 Narrative

Text books (Latest Editions)

1. MalalaYousafzai. I am Malala, Little, Brown and Company, 2013.
2. M.K. Gandhi. An Autobiography or The Story of My Experiments with Truth (Chapter – I), Rupa Publications, 2011.
3. Rabindranath Tagore. "Gitanjali 35" from Gitanjali (Song Offerings): A Collection of Prose Translations Made by the Author from the Original Bengali. MacMillan, 1913.
4. N.Krishnasamy. Modern English: A Book of Grammar, Usage and Composition Macmillan, 1975.
5. Aaron Shepard. Stories on Stage, ShepardPublications, 2017.
6. J.C. Nesfield. English Grammar Composition and Usage, Macmillan, 2019.

Web Resources

1. MalalaYousafzai. I am Malala (Chapter 1) <https://archive.org/details/i-am-malala>
2. M.K Gandhi. An Autobiography or The Story of My Experiments with Truth(Chapter-1)- Rupa Publication, 2011 <https://www.indiastudychannel.com/resources/146521-Book-Review-An-Autobiography-or-The-story-of-my-experiments-with-Truth.aspx>
3. Rabindranath Tagore. "Gitanjali 35" from Gitanjali (Song Offerings)<https://www.poetryfoundation.org/poems/45668/gitanjali-35>
4. Aaron Shepard.Stories on Stage, Shepard Publications, 2017 <https://amzn.eu/d/9rVzINv>
5. JC Nesfield. Manual of English Grammar and Composition. <https://archive.org/details/in.ernet.dli.2015.44179>

PYTHON PROGRAMMING**Learning Objectives**

- To make students understand the concepts of Python programming.
- To apply the OOPs concept in PYTHON programming.
- To impart knowledge on demand and supply concepts
- To make the students learn best practices in PYTHON programming
- To know the costs and profit maximization

UNIT I

Basics of Python Programming: History of Python-Features of Python-Literal-Constants-Variables - Identifiers–Keywords-Built-in Data Types-Output Statements –



Input Statements-Comments – Indentation- Operators-Expressions-Type conversions.
Python Arrays: Defining and Processing Arrays – Array methods.

UNIT II

Control Statements: Selection/Conditional Branching statements: if, if-else, nested if and if-elif-else statements. Iterative Statements: while loop, for loop, else suite in loop and nested loops. Jump Statements: break, continue and pass statements.

UNIT III

Functions: Function Definition – Function Call – Variable Scope and its Lifetime-Return Statement. Function Arguments: Required Arguments, Keyword Arguments, Default Arguments and Variable Length Arguments- Recursion. Python Strings: String operations- Immutable Strings - Built-in String Methods and Functions - String Comparison. Modules: import statement-The Python module–dir()function– Modules and Namespace –Defining our own modules.

UNIT IV

Lists: Creating a list -Access values in List-Updating values in Lists- Nested lists - Basic list operations-List Methods. Tuples: Creating, Accessing, Updating and Deleting Elements in a tuple– Nested tuples– Difference between lists and tuples. Dictionaries: Creating, Accessing, Updating and Deleting Elements in a Dictionary– Dictionary Function And Methods-Difference between Lists and Dictionaries.

UNIT V

Python File Handling: Types of files in Python - Opening and Closing files-Reading and Writing files: write() and writelines() methods-append() method–read() and readlines() methods – with keyword –Splitting words – File methods - File Positions-Renaming and deleting files.

Textbooks

1. Reema Thareja, —Python Programming using problem solving approach ||,First Edition, 2017, Oxford University Press.
2. Dr.R.Nageswara Rao,—Core Python Programming||, First Edition, 2017, Dreamtech Publishers.

Reference Books

1. Vamsi Kurama,—Python Programming: AModern Approach||, Pearson Education.
2. Mark Lutz,|| Learning Python||,Orielly.
3. AdamStewarts,—Python Programming||,Online.



4. FabioNelli,—Python Data Analytics, APress.
5. Kenneth A.Lambert, —Fundamentals of Python—First Programs, CENGAGE Publication.

Web Resources

1. <https://www.programiz.com/python-programming>
2. <https://www.guru99.com/python-tutorials.html>
3. https://www.w3schools.com/python/python_intro.asp
4. <https://www.geeksforgeeks.org/python-programming-language/>
5. [https://en.wikipedia.org/wiki/Python_\(programming_language\)](https://en.wikipedia.org/wiki/Python_(programming_language))

PRACTICAL - PYTHON PROGRAMMING

Learning Objectives

- Be able to design and program Python applications.
- Be able to create loops and decision statements in Python.
- Be able to work with functions and pass arguments in Python.
- Be able to build and package Python modules for reusability.
- Be able to read and write files in Python.

List of Exercises

1. Write a Python program to read and print values of variables of different data types
2. Write a Python program to perform addition, subtraction, multiplication, division, integer division and modulo division on two integer numbers..
3. Write a Python program to determine whether the character entered is a vowel or not using conditional statement
4. Write a Python program to calculate the factorial of a number using loop.
5. Write a Python program to calculate the square root of a number. Use break, continue and pass statements.
6. Write a Python program using function and return statement to check whether a number is even or odd.
7. Write a Python program to print the Fibonacci series using recursion
8. Write a Python program to reverse the order of the items in the array.
9. Write a Python program that accepts a string from the user and redisplay the same string after removing vowels from it.
10. Write a Python program to remove all duplicates from a list.
11. Write a Python program that has a list of numbers.(both positive and negative). Make new tuple that has only positive values from this list.
12. Write a Python program that creates a dictionary of radius of a circle and its circumference



DIGITAL LOGIC FUNDAMENTALS

Learning Objectives

- To understand the concepts of number systems
- To learn conversions
- To construct truth tables
- To learn SOP and POS
- To understand various simplifications

UNIT I

Number Systems: Codes and Digital Logic Binary Number System –Binary to Decimal Conversion – Decimal to Binary Conversion –Octal Numbers –Hexadecimal Numbers –The ASCII Code –The Excess- 3 Code –The Gray Code. Digital Logic: The Basic gates NOT,OR,AND–Universal Logic Gates NOR,NAND– AND-OR Invert Gates.

UNIT II

Combinational Logic: Circuits Boolean Laws and Theorems – Sum of Products Method–Truth Table to Karnaugh Map –Pairs, Quads and Octets –Karnaugh Simplifications –Don't Care Conditions –Product of Sums Method –Product of Sums Simplification.

UNIT III

Data Processing and Arithmetic circuits: Multiplexers –De- multiplexers –1-of-16-Decoders –BCD- to-Decimal Decoders – Seven-Segment decoders –Encoders – Exclusive-OR gates. Arithmetic Circuits: Binary Addition –Binary Subtraction – Unsigned BinaryNumbers–Sign-MagnitudeNumbers–2'sComplement Representation–2's Complement Arithmetic.

UNIT IV

Flip-Flops: RS Flip Flops–Edge Triggered RS Flip Flops-Edge Triggered D Flip Flops-Edge Triggered JK Flip Flops –JK Master Slave Flip Flops

UNIT V

Registers: Types of Registers –Serial in serial out –serial in parallel out – parallel in serial out –parallel in parallel out–Universal Shift Register.

Text Book:

1. Digital Principles and Applications, by Albert Paul Malvino & Donald P.Leach, Seventh Edition, McGraw Hill Education Private Limited

Reference Books:

1. Fundamentals of Digital Circuits,A.AnandKumar, SecondEdition, PHILearning Private Limited
2. Digital design, M.Morris Mano, Third Edition, Pearson Education



PRACTICAL-OFFICE AUTOMATION

Learning Objectives

- To understand the concepts of MS word
- To learn the features of Word
- To do calculations in excel
- To Design invitation set using Word
- To understand and design presentations

Contents

1. Usage of Numbering, Bullets, Indents and Headers in a Word Document
2. Prepare a Calendar in a Word Document
3. Usage of Spell Check, Find and Replace
4. Picture Insertion and Alignment
5. Prepare a semester wise mark statement for a computer class of 20 students using any spreadsheet worksheet. Total, average and rank the student marks. Give proper headings. Make the column headings bold and italics
6. Use any spreadsheet to use mathematical, statistical and logical functions
7. Use any spreadsheet to plot a chart for marks obtained by the students(outof5)vs. frequency (total number of students in class is 50).
8. Create a student database and create validation rules for fields like age, date of birth, pincode etc.
9. Enter data to the student database using a form.
10. Create a query and add criteria to the query.

Reference Books:

1. Microsoft Office 2016 Step By Step, Lambert, Joan, Frye, Curtis D. ,Phi Learning
2. Microsoft Access 2016 Step By Step, By Lambert, Joan Phi Learning
3. Microsoft Excel 2016 Step By Step, Curtis Frye, Phi Learning
4. Browse the Internet for Open Source Office Software

PROBLEM SOLVING TECHNIQUES

Learning Objectives

- Familiarize with writing of algorithms, fundamentals of C and philosophy of problem solving.
- Implement different programming constructs and decomposition of problems in to functions.
- Use dataflow diagram, Pseudocode to implement solutions.
- Define and use of arrays with simple applications
- Understand about operating system and their uses



UNIT I

Introduction: History, characteristics and limitations of Computer. Hardware/Anatomy of Computer: CPU, Memory, Secondary storage devices, Input Devices and Output devices. Types of Computers: PC, Workstation, Minicomputer, Main frame and Supercomputer. Software: System software and Application software.

UNIT II

Programming Languages: Machine language, Assembly language, High-level language, 4GL and 5GL-Features of good programming language. Translators: Interpreters and Compilers. Data: Data types, Input, Processing of data, Arithmetic Operators, Hierarchy of operations and Output. Different phases in Program Development Cycle (PDC).

UNIT III

Structured Programming: Algorithm: Features of good algorithm, Benefits and drawbacks of algorithm. Flowcharts: Advantages and limitations of flowcharts, when to use flowcharts, flowchart symbols and types of flowcharts.

UNIT IV

Pseudocode: Writing a pseudocode. Coding, documenting and testing a program: Comment lines and types of errors. Selection Structures: Relational and Logical Operators -Selecting from Several Alternatives – Applications of Selection Structures.

UNIT V

Repetition Structures: Counter Controlled Loops –Nested Loops– Applications of Repetition Structures. Data: Numeric Data and Character Based Data. Arrays: One Dimensional Array - Two Dimensional Arrays – Strings as Arrays of Characters.

Textbooks

1. Stewart Venit, —Introduction to Programming: Concepts and Design, Fourth Edition, 2010, Dream Tech Publishers.

Web Resources

1. <https://www.codesansar.com/computer-basics/problem-solving-using-computer.htm>
2. <http://www.nptel.iitm.ac.in/video.php?subjectId=106102067>
3. http://utubersity.com/?page_id=876

