

RVS COLLEGE OF ARTS AND SCIENCE

Autonomous and Affiliated to Bharathiar University, Approved by AICTE

Reaccredited with 'A+' Grade by NAAC

Sulur, Coimbatore – 641 402, Tamilnadu, India.

Web: www.rvscas.ac.in

0422-2687421/603



Estd 1986

RVS CAS

Building Intellectual Capital

DEPARTMENT OF ELECTRONICS

BACHELOR OF INTERNET OF THINGS

SCHEME OF EXAMINATION AND SYLLABUS

2023-2026

SIGNATURE OF HOD

SIGNATURE OF PRINCIPAL

SIGNATURE OF COE

VISION

Quality Education for Digital Era.

MISSION

To impart a need – based quality education through comprehensive curriculum by adopting apt technologies and progressive teaching, learning and research processes.

ABOUT THE DEPARTMENT

B.Sc Internet of Things (IOT) Programme is specifically designed to impart knowledge in physical objects (or groups of such objects) with sensors , processing ability, software , and other technologies that connect and exchange data with other devices and systems over the Internet or other communications networks. It also offers the Graduates with an environment of life-long learning, research & innovation needed for progressive career with ethical attitude, team spirit, leadership & management qualities and effective communication skills to make them aware of their social responsibilities.

EXECUTIVE MEMBERS

CHAIRMAN

Dr. K.V. Kupusamy

MANAGING TRUSTEE

Dr. K. Senthil Ganesh

CORRESPONDENT

Mrs. S. Srividyalakshmi Senthil Ganesh

SECRETARY

Prof. Saramma Samuel

PRINCIPAL

Dr. T. Sivakumar

VICE PRINCIPAL

Dr. M.P. Ayyappadas

CONTROLLER OF EXAMIATIONS

Ms. G. Jeyalakshmi

HEAD OF THE DEPARTMENT

Dr. P.Venkateswari

PROGRAMME OUTCOMES (POs):

PO1	Domain Knowledge
PO2	Communicative Competence
PO3	Digital Strategic Knowledge
PO4	Multi-Cultural Competence
PO5	Critical Thinking and Problem Solving
PO6	Research and Analytical Skills
PO7	Moral, Ethical and Professional Responsibilities
PO8	Leadership and Lifelong Learning

PROGRAMME SPECIFIC OUTCOMES: (PSOs)

Upon completion of Bachelor of Internet of Things Degree, STUDENTS are able to achieve the following outcomes.

PSO1	Synthesize solutions for existing problems within practical constraints and develop skills for business practices and entrepreneurship.
PSO2	Design analog and digital circuits and choose protocols for IoT applications
PSO3	Develop skills in programming languages for IoT applications
PSO4	Design necessary techniques, hardware and software for IoT

RVS COLLEGE OF ARTS AND SCIENCE (Autonomous)

Sulur, Coimbatore – 641 402

SCHEME OF EXAMINATIONS

B.Sc (IoT) 2023 – 2026 BATCH

Semester	Course Opted	Course Name	D	L	T	P	CIA	ESE	Marks	Credits
I	MIL-I	Tamil-I/Hindi-I / Malayalam – I/ French-I	3	4	-	-	25	75	100	3
	ELN-I	English-I	3	4	-	-	25	75	100	3
	DSC – I	Mathematics -I	3	5	1	-	25	75	100	6
	DSC – II	Fundamentals of IoT and its Applications	3	4	-	4	25	75	100	6
			3				25	75		
	NMS-I	Soft Skills-I	3	2	-	-	Grade			
	NCC	NCC/NSS/ SPORTS/CULTURALS	-	1	-	-	-	-	-	-
	LIB	Library	-	1	-	-	-	-	-	-
Total			26			400			18	
II	MIL-II	Tamil-II/Hindi-II/Malayalam II/French-II	3	4	-	-	25	75	100	3
	ELN-II	English-II	3	4	-	-	25	75	100	3
	DSC – III	Mathematics –II	3	5	1	-	25	75	100	6
	DSC – IV	Fundamentals of Digital and ICs	3	4	-	4	25	75	100	6
			3				25	75		
	NMS-II	Soft Skills-II	3	2	-	-	Grade			
	AECC – I	Environmental Studies	3	1			100	-	100	1
	NCC	NCC/NSS/ Sports/Culturals	-	1	-	-	-	-	-	-
	LIB	Library	-	1	-	-	-	-	-	-
Total			27			500			19	

Semester	Course Opted	Course Name	D	L	T	P	CIA	ESE	Marks	Credits
III	MIL-III	Tamil-III/Hindi-III/Malayalam III/French-III	3	4	-	-	25	75	100	3
	ELN-III	English-III	3	4	-	-	25	75	100	3
	DSC – V	8051 Microcontroller And its Applications	3	4	-	4	25	75	100	6
			3				25	75		
	DSC – VI	Wireless Sensors Network Communication	3	5	1	-	25	75	100	6
	DSE-I	Elective-I	3	4	-	4	25	75	100	6
			3				25	75		
	NMS-III	Soft Skills-III	3	2	-	-	Grade			
NCC	NCC/NSS/SPORTS/CULTURALS	-	1	-	-	-	-	-	-	
Total			33			500			24	
IV	MIL-IV	Tamil-IV/Hindi-IV/Malayalam IV/French-IV	3	4	-	-	25	75	100	3
	ELN-IV	English-IV	3	4	-	-	25	75	100	3
	DSC- VII	Embedded Systems and PIC Microcontroller	3	4	-	4	25	75	100	6
			3				25	75		
	DSC- VIII	Arduino and Sensors	3	4	-	4	25	75	100	6
			3				25	75		
	DSE-II	Elective-II	3	4	-	4	25	75	100	6
			3				25	75		
	NMS-IV	Soft Skills-IV	3	2	-	-	Grade			
AECC – II	Aptitude	3	3	-	-	100	-	100	3	
NCC	NCC/NSS/SPORTS/CULTURALS	-	1	-	-	Good/Satisfactory				
Total			38			600			27	

Semester	Course Opted	Course Name	D	L	T	P	CIA	ESE	Marks	Credits	
V	DSC –IX	Raspberry pi with Python	3	4	-	4	25	75	100	6	
			3				25	75			
	DSC – X	Tiny ML	3	4	-	4	25	75	100	6	
			3				25	75			
	DSE-III	Elective-III	3	4	-	4	25	75	100	6	
			3				25	75			
	DSE-IV	Elective-IV(EDC)	3	5	1	-	25	75	100	6	
		Any One Group									
		Group A									
		SEC-G I-A-1	Placement - College to Corporate I	3	2	-	-	50	-	50	2
		SEC- GI-A-2	Placement - College to Corporate II		2	-	-	50	-	50	2
		Group B									
		SEC – GI-B	Printed Circuit Board (PCB) Fabrication	3	-	-	4	100	-	100	4
	Total			34			500			28	
VI	DSC -XI	IoT Computing Techniques	3	5	1	4	25	75	100	6	
	DSC-XII	Data Analytics Visualization and Security for IoT	3	4	-	4	25	75	100	6	
			3				25	75			
	DSE-V	Elective-V	3	5	1	-	25	75	100	6	
	DSE – VI	Elective-VI Project Work	-	-	-	6	25	75	100	6	
				30			400			24	
I-VI	ALCTA *	(e-Learning in MOOC Platform)							Extra Credits		4*
									Total	2900	140 +4*

ABBREVIATIONS

MIL	-	Multi Indian/ International Languages
ELN	-	English
DSC	-	Discipline Specific Courses
DSE	-	Discipline Specific Elective Courses
EDC	-	Extra Disciplinary Course
NMS	-	Naan Muthalvan Scheme
AECC	-	Ability Enhancement Compulsory Courses
SEC	-	Skill Enhancement Courses (Group A&B)
NCC	-	Non-Credit Course
ALCTA	-	Advanced Learner Course in Thrust Area

DSE I - Discipline Specific Elective Courses I: (III Semester)

- | | |
|-------------------|--------------------------------|
| 1. C- Programming | 2. Introduction to Java Script |
|-------------------|--------------------------------|

DSE II - Discipline Specific Elective Courses II: (IV Semester)

- | | |
|-----------------------|----------------------------|
| 1. Python Programming | 2. Robotics & Applications |
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DSE III - Discipline Specific Elective Courses III: (V Semester)

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|----------------------------------|----------|
| 1. Programmable Logic controller | 2. E-CAD |
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DSE IV - Discipline Specific Elective Courses III: (V Semester)

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|--|--|
| 1. Extra Disciplinary Course (EDC) – List Enclosed | |
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DSE V- Discipline Specific Elective Courses V: (VI Semester)

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|----------------------------|---------------------|
| 1. Digital Twin Technology | 2. Linux Essentials |
|----------------------------|---------------------|

DSE VI- Discipline Specific Elective Courses VI: (VI Semester)

- | | |
|-------------------------------|---------------|
| 1. Project Report – Viva voce | 2. Internship |
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DISCIPLINE SPECIFIC ELECTIVE COURSES (DSE) IV: (V- SEMESTER)**DSE – IV - EXTRA DISCIPLINARY COURSE :(EDC)**

Course	Course Name	L	T	P	CIA	ESE	Total	Credits
One Course – From the Group								
B.A. English	Professional Communication	5	1	-	25	75	100	6
BBA	Entrepreneurship	5	1	-	25	75	100	6
BBA (CA)	Project Management	5	1	-	25	75	100	6
BBA LOGISTICS	International Logistics	5	1	-	25	75	100	6
B.COM	Insurance and Risk Management	5	1	-	25	75	100	6
B.COM (CA)	Social Media Marketing	5	1	-	25	75	100	6
B.COM (IT)	E-Commerce	5	1	-	25	75	100	6
B.COM (PA)	Indian Tax System	5	1	-	25	75	100	6
B.COM (BA)	Digital marketing	5	1	-	25	75	100	6
BCA	Responsive Web Design	5	1	-	25	75	100	6
B.Sc., (CS)	Business Analytics	5	1	-	25	75	100	6
B.Sc., (IT)	Big Data Engineering	5	1	-	25	75	100	6
B.Sc., CSHM	Hospitality Management	5	1	-	25	75	100	6
B.Sc., ECS	Fundamentals of Digital Computers	5	1	-	25	75	100	6
B.Sc.,MATHS	Computational Mathematics	5	1	-	25	75	100	6
B.Sc., BC	Health Management	5	1	-	25	75	100	6
B.Sc., BT	Forensic Science	5	1	-	25	75	100	6
B.Sc., MB	Microbes – Health & Disease	5	1	-	25	75	100	6
B.Sc., N&D	Health & Life Style Disorders	5	1	-	25	75	100	6
B. Sc., Psychology	Stress and Conflict Management	5	1	-	25	75	100	6
B.Sc., IoT	Fundamentals of IoT and its applications	5	1	-	25	75	100	6
Total							100	6

SEM	Course Opted	Course Name	D	L	T	P	CIA	ESE	Marks	Credits
I	MIL – I	Tamil - I	3	4	-	-	25	75	100	3

Course Title :TAMIL I (T)	Course Code : 11T
Semester : I	Course Group : MIL-I
Teaching Scheme in Hrs (L:T:P) : 4:0:0	Credits : 3
Map Code: A (Language- Concepts)	Total Contact Hours: 60
CIA: 25 Marks	SEE # : 75 Marks
Programme: ALL I UG PROGRAMMES	Semester End Exam

No.	Course Outcomes (Cos): After completion of this course, the students will be able to	POs	CL. Ses	CL
CO1	பாரதியார் காலந்தொட்டு தற்கால புதுக்கவிதைகள் வரை கவிதை இலக்கியம் அறிமுகப்படுத்தப்படுவதால் படைப்பாற்றல்திறன் பெறுதல்.	PO4	14	U
CO2	உரைநடை இலக்கியத்தை அறிமுகப்படுத்தி தமிழ் மொழி, பண்பாடு, கலை ஆகியவற்றின் தொன்மை, சிறப்பு, கல்வியின் இன்றியமையாமை, பெண்ணியம் மற்றும் பாலின சமத்துவம் போன்றவற்றை அறியச்செய்தல்	PO7	15	U
CO3	சிற்றிலக்கியம் மற்றும் நாட்டுப்புற இலக்கியங்களை அறிமுகப்படுத்தி இடைக்கால மக்களின் வாழ்வியலையும், இயற்கை வளம், பண்டைத்தமிழரின் போர் அறம் போன்றவற்றை அறியச்செய்தல்.	PO8	12	U
CO4	இலக்கணத்தை அறிமுகப்படுத்தி மாணவர்கள் மொழியறிவை வளர்த்துக்கொள்ளவும், படைப்பாற்றலுக்கும் பயன்படும் விதமாக தொடரமைத்து எழுதவும் ஊக்குவித்தல்	PO2	9	AP
CO5	இலக்கிய வரலாற்றை கற்பதன் மூலம் போட்டித்தேர்வுகளை எதிர்கொள்ளுதல்.	PO1	10	AP

அலகு – 1 கவிதைகள்

பாடவேளைகள் –14

கண்ணன் என் தோழன் - பாரதியார் - (ஆசிரியர் குறிப்பு - உபாயம் உரைத்தலும் - கண்ணன் புகழும் - உற்ற மருந்தாவதும் - உள்ளன்பு கொள்ளலும் - மழைக் குக்; குடையாதலும் - பசி நேரத்தில் உணவாதலும்).

தமிழ்ப்பேறு - பாரதிதாசன் - (ஆசிரியர் குறிப்பு - வானம்ஓடை தாமரை பூக்கள் - ஓவியம் தீட்டுதல்பெண்கள் அன்பு செய்தல் - தமிழ்நாட்டு மக்கள் நிலை - இன்பத்தமிழ் கற்றல்).

எல்லாம்நானே - கண்ணதாசன் -(ஆசிரியர் குறிப்பு - நயம்பட வாழ்தல்- கற்றது குறைவு- மனிதரை வையகம் போற்றும் - வாழ்க்கை ஏற்றம் -இறக்கம்-- ஆணவத்திற்கு அழிவே இல்லை)

நியுட்டனின் மூன்றாம் விதி - நா. முத்துக்குமார் - (ஆசிரியர் குறிப்பு - கேயாஸ் தியரி- நீர்த்த அமிலங்கள் - கடவுள் பார்வை - செய்தித் தாள்களின் தற்கொலை -நியுட்டனின் மூன்றாம் விதி).

கோடுகள் - அப்துல்ரகுமான் - (ஆசிரியர் குறிப்பு - கோடுகள் கிழித்தல்-விளையாடுதல்- பாம்புகளாகி கடித்தல் - சங்கீதம் இல்லை-மனிதம்விளைச்சல்இல்லை-கோடுகளில் காயங்கள்).

ஹைக்கூ கவிதைகள் - அறிவுமதி - (ஆசிரியர் குறிப்பு - வாழ்த்து அட்டைப்படம்-
தூண்டில்காரன்வாழ்க்கை - வண்ணத்துப்பூச்சி - இலவச மனைப்பட்டா-- நசங்கியது
புல்லாங்குழல்-- கல்லூரி மணிக் கூண்டு).

அம்மா - சுகிர்தராணி - (ஆசிரியர் குறிப்பு - உன்னை அழைக்கிறேன்-பறவையாகி பறக்கிறேன் -
குரல் ஒலிக்கிறது).

அலகு - II- உரைநடை

பாடவேளைகள் -15

தமிழ் இலக்கியங்களில் கல்வியியல் சிந்தனைகள் - (ஆசிரியர் குறிப்பு - இளமையில் கல்வி
கல்வியினால் வரும் பெருமைகல்லாமை ஒரு குற்றம் - கற்பித்தலும்கற்றலும் - தலை மாணாக்கர் -
இடைமாணாக்கர்-கடை மாணாக்கர் - இலக்கியங்களில் காணப்படும் கல்வி குறித்த சிந்தனைப்
பதிவுகள்).

கீழடி - தமிழ்நாடு அரசு தொல்லியல்துறை வெளியீடு - (தொல்லியலும் அதன் ஆய்வும் :தமிழகத்
தொல்லியல்துறையும் அறிஞர்களும் - கீழடியின் காலத்தொன்மை-கட்டுமானப் பொருட்களின்
பகுப்பாய்வு).

பெண்ணாக்கல் - (ஆசிரியர் குறிப்பு - விளையாட்டுப்பொருட்கள்-புழங்கு பொருட்கள் - நல்ல
பெண்ணுக்கான குணநலன்கள்-வரையறைகள்).

தமிழக நாட்டுப்புறக் கலைகள் - (நாட்டுப்புறக் கலைகளின் வகைகளநாட்டுப்புற ஆட்டங்கள் -
தமிழகத்தில் கூத்துகளின் பிற பிரிவுகள்-இசைக் கருவிகள்- ஆடல் முறைகள்-பாடல்கள்
இடம்பெறல் நாட்டுப்புறக் கலைகளின் நலிவு).

அறிவும் படிப்பும் - (எல்லோருக்குமே சம உரிமை -கல்வியின் பொறுப்பு - கல்வியுடன் மதத்தை
கலத்தல் - அறிவுவேறு-மதம்வேறு).

அலகு - III சிற்றிலக்கியங்கள் - நாட்டுப்புறப்பாடல்கள் பாடவேளைகள் -12

கலிங்கத்துப் பரணி - ஜெயங்கொண்டார் - (யானையும் கப்பலும் குதிரையும் குதிரைத் தறியும்-
வீரர் முகமலர்ந்து கிடந்தமை -வீரர்களும் கருமிகளும்- வீரர் முகமலர்ந்து கிடந்தமை வீரர்களும்
கருமிகளும்).

குற்றாலக் குறவஞ்சி - திரிகூடராசப்பக்கவிராயர் - (குறத்தி மலைவளம் கூறுதல்குரங்குகளின்
விளையாட்டு- குறத்தி மலைவளம் கூறுதலபல மலைகளின் வளமுரைத்தல்- குறத்தி மலைவளம்
கூறுதல்குரங்குகளின் விளையாட்டு).

மதுரை மீனாட்சியம்மை பிள்ளைத்தமிழ் - குமர குருபரர் - (சப்பாணிப்பருவம்-
அம்மையின்அருட்காட்சி - வருகைப்பருவம்-அன்னையை; வருக வருக என அழைத்தல்;)

நாட்டுப்புறப்பாடல்கள் - தாலாட்டுப்பாட்டு - (குழந்தை தாலாட்டு- நித்திரை போதல்-
கண்ணைப்பாடுதல்- குழந்தை அழுதல்-தொழிற்பாட்டு-தினை விதைத்தல் - தினைப்பயிரை
காத்தல் - தினைப்பயிரைக் கொய்தல் - தியை அடித்தல்)

அலகு - IV-இலக்கணம்

பாடவேளைகள் -9

பெயரெச்சம்- வினையெச்சம் - (தெரிநிலைப் பெயரெச்சம்- குறிப்புப் பெயரெச்சம்-
தெரிநிலை வினையெச்சம் - குறிப்பு வினையெச்சம்);

பண்புத்தொகை - (குணம்-நிறம்-எண்ணம்-பண்பு- வினைத்தொகை- காலத்தை உணர்த்தும்).

வல்லினம் மிகும் இடங்கள்- (ஈறுகெட்ட எதிர்மறைப் பெயரெச்சம்-சால-தவ
முதலானஉரிச்சொற்கள்-உம்மைத்தொகை -இரட்டைக்கிளவி-அடுக்குத்தொடர்-வினா
எழுத்துகள்).

அலகு - V- இலக்கியவரலாறு

பாடவேளைகள் -10

புதுக்கவிதை - (மேனாட்டில் புதுக்கவிதை இயக்கச்சூழல் - தமிழகத்தில் புதுக்கவிதை; சூழல்
-மணிக்கொடிக் காலம் : எழுத்துக் காலம்- வானம்பாடிக்காலம் - 'ழ'காலம்).

உரைநடை - (தொடக்க கால உரைநடை- உரைநடையின் வளர்ச்சி-கடின உரைநடை- செறிவான உரைநடை- இலக்கியத் திறனாய்வு நூல்கள் - பயண நூல்கள் - கடித இலக்கியம் - வாழ்க்கை வரலாறு-இலக்கியத் திறனாய்வு நூல்கள்-கடித இலக்கியம்).

பார்வை நூல்கள் :

1. தமிழிலக்கிய வரலாறு - மு. வரதராசன்
2. கலிங்கத்துப் பரணி - ஜெயங்கொண்டார் - கழக வெளியீடு
3. குற்றாலக் குறவஞ்சி - திரிபுகூடராசப்பக்கவிராயர் - கழக வெளியீடு
4. மதுரை மீனாட்சியம்மை பிள்ளைத்தமிழ் - குமர குருபரர் - கழக வெளியீடு
5. கொங்கு நாட்டுப்புற பாடல்கள் - கிருஷ்ணசாமி - நாம் தமிழர் பதிப்பகம்
6. நல்ல தமிழ் எழுதவேண்டுமா? -அ.கி. பரந்தாமன் - பாரி நிலையம்

Sem	Course Opted	Course Name	D	L	T	P	CIA	ESE	Marks	Credits
I	MIL – I	HINDI-I	3	4	-	-	25	75	100	3

Course Title :HINDI – I (T)	Course Code: 11H
Semester : I	Course Group: MIL - I
Teaching Scheme in Hrs (L:T:P) : 4:0:0	Credits: 3
Map Code: A (Language- Concepts)	Total Contact Hours: 60
CIA: 25 Marks	SEE #:75 Marks
Programme: I YEARALL UG PROGRAMMES	#Semester End Exam

No	Course Outcome (Cos): After completion of this course, the students will be able to achieve the following outcomes	POs	CS	CL
CO1	Recognize the ancient valuable thoughts which insist in NEP-2020 through IKS system.	PO 7	15	U
CO2	Distinguish the importance and values of friendship which is very much needed of the hour.	PO7	12	AP
CO3	Practice the three important things in life which is very important in life	PO7	12	AP
CO4	Analyze the issues that cruel behavior with the animals is happen in the society can be eradicated.	PO4	12	AN
CO5	Criticize that the major family issues which is common is families and in the society.	PO8	9	E

UNIT : I – GADHYA AUR KAHANIYAN

LECTURE HOURS: 15

Jeevan ki teen pradhanbaate : written by vinobhabave, (what is the three important things in life. Why udhyog s importance. If udhyog is not there what will be the condition of the family. Through charka atleast one can get relief from the financial condition of the family. Bhakti is the second thing which is more important for the human being. Third thing in the life is what we learn in our live just teach the same to the others.)

haar ki jeet :(Author’s introduction. Proud on his horse named sultaan since it is very attractive and run fast like anything. Dacoit who wanted to get that horse anyway. One fine day he visited bharathi’s place and check out the horse for riding. Bharathi also innocently accepted for riding because people know about the horse which is pride for him. But the dacoit took away the horse from him. Bharathi felt very bad & he cried for the horse. One fine night he wake up from the sleep and went to shed where he find the horse. Conclusion.)

UNIT : II - GADHYA AUR KAHANIYAN

LECTURE HOURS: 12

Prayashit: (premchand, author’s introduction. Subhodh Chandra and madarilaal is school mates, always grudge with subodh since he is a bright student in the school. Every teacher liked him. This was added fire in the thoughts of madari who is working in tax office. Subhod is promoted as a secretary and join

the duty where madari is working. He planned to bring him down so he took away the rs.5000/- and the subodh did not have the condition to collect the money. He hanged himself he died. Madari really feel very after his demise. He took care of whole family of subodh and he atoned on his deeds).

Gaura gai :(mahadevivarma's introduction. She was touching her memory lane through gaura gai. She brought the cow from her sister shyama. Cow become very pet to mahadevi. Gaura become a mother of lalmani and it was pouring milk many liters. Sufficient milk given to other pets and neighbourychildren.still enormous milk was there. But the problem is for milking. Permanent solution is not there to milking because no man is ready. But author's old milk man is ready to do that work. Days are passed. One fine day gaura become very sad and the milk also reduced. Vetnary doctor examined the cow and they told that there isa needle in the stomach, if it reached to heart gaura will die. Mahadevi enquired about this and the matter was the gwala only did this because his income in the house by selling the milk. One fine day early morning gaura had its last breath. Mahadevi feels it very bad upon the tragic death of gaura. Aim and conclusion of the story).

UNIT : III GADHYA AUR KAHANIYAN

LECTURE HOURS:12

Chaiwaala: (writer's introduction. One fellow return to India to see the country how it developed. He stayed in five star hotels and he rounds daily to the neighboring place. One day while he returning back he wants to drink a tea on roadside normal tea shop. There was no change for a big note. This fellow says no problem. Don't give the change just keep this as a tips. But theshopkeeper though he is a poor, he doesn't want to have the money which is not right to have that. Conclusion).

Kadamb kephool: (fightbetween daughter in law andmotherinlaw. The reason is neighbor bring some kadamb flowers to bhabi. Sas maa thought that there was a sweet brought for her and she alone eats all. This misunderstanding crossed the border abd they both started fight. Gangaprasad came in the evening and he laughed after seeing the flowers).

Shivaji ka sacchaswarup: (The emperor who ruled the country was real Ramarajya, because Emperor Shivaji ruled the country in great manner which the history never fails to mention his name. one fine evening his peshwa returned to the kingdom after defeting the Ahmed's kingdom. As a gift they brought ahmed's daughter in law to Shivaji. Peshwa's this work irritated to the king. King is ready to return the gift in a full honor. And he asked sorry to her on behalf of his peshwas.This could be a small incident but through this we can come to know about his respect towards ladies. Conclusion)

UNIT : IV - Grammar

(LECTURE HOURS:12)

Sangya, sarvanaam, karak, visheshan: (Shabdhvichar: basic grammer knowledge will help the students to improve the language skills withsangya, sarvanaam, kriya, karak, visheshan, with sub topics).

UNIT : V TRANSLATION.

LECTURE HOURS: 9

Hindi to English Translation. (Teaching about the importance and art of translation)

TEXT BOOKS:

1. PUSHP KUNJ COMPILED BY BOS HINDI.

REFERENCE:

1. MANAK HINDI VYAKARAN. VANI PRAKHASHAN, N.DELHI.
2. <http://premchand.co.in/story/prayashchit>.
3. <https://www.youtube.com/watch?v=sh68KY1X2RA>

SEM	Course Opted	Course Name	D	L	T	P	CIA	ESE	Marks	Credits
I	MIL - I	Malayalam – I	3	4	-	-	25	75	100	3

Course Title : MALAYALAM – I (T)	Course Code: 11M
Semester : I	Course Group: MIL-I
Teaching Scheme in Hrs (L:T:P) : 4:0:0	Credits : 3 Credits
Map Code:A (Language Concept)	Total Contact Hour : 60
CIA : 25 Marks	SEE: 75 Marks
Programme: I Yr ALL UG PROGRAMMES	# - Semester End Exam

No	Course Outcome (Cos): After completion of this course, the students will be able to achieve the following outcomes.	POs	Cl. Sec	CL
CO1	Report the deleterious effects of modern agriculture	PO4	12	U
CO2	Interpret that an entire landscape can be altered by the use of a single pesticide with lot of side effects	PO3	12	U
CO3	Organize situations which involve rehabilitation of people who has suffer for generation because of the deadly toxin-endosulfan	PO5	12	AN
CO4	Categorize literature with clear and scientific insights on such environmentally committed novels	PO4	12	AN
CO5	Adapt ethical and social values especially the way to handle vulnerable groups in our society	PO7	12	AP

UNIT : I NOVEL

LECTURE HOURS: 12

ENMAKAJE – AMBIKA SUDHAN MAANGHAD: (Ambika Sudhan was born in kasaragode. Professor in Nehru College, Mangad.Winner of lot of prestigious awards.A very touching novel and contemporary too. The novel describes the deleterious effects of use of a pesticide named ‘endosulfan’. Devayani and Neelakandan lives together in a deep forest avoiding the contacts of rest of world. One fine morning Devayani found an unusual baby in the deep forest and brings to Neelakandan but he rejected the due to its unusual morphology. But Devayani decided to nurse the child inspite of his objection.The situations are progressing in an unpredictable way.)

UNIT : II NOVEL

LECTURE HOURS: 12

ENMAKAJE – AMBIKA SUDHAN MAANGHAD: (The sad part is that both of them strongly believe that the disease of the child is a result of curse from God. The mind set of both the characters is changed in the mid of the novel and they decided to come out of the forest of giving medical aid to the child.From the doctor they came to know that this disease is due to exposure of an endosulfan and it affects the animals around also.The ill effects of the pesticide are also scientifically challenged by the author in many crucial situations. From the doctor they came to know that this disease is due to exposure of an endosulfan and it affects the animals around also. The medical team was unable to save the child. The issue attracted the nedia attention. Jayarajan , social worker who took the matter and fought with the Government for the total ban of endosulfan. Due to interference of some rich farmers bureaucracy has tried its maximum to avoid the total ban of this hazardous chemical. At the end of the novel that good news is mentioned because Govt. of Kerala has decided foe a total ban of this destructive pesticide.)

UNIT III KHANDAKAVYAM**LECTURE HOURS: 12**

SHISHYANUM MAKANUM – VALLATTHOLE NARAYANAMENON: (Vallathole – an iconic modern poet. The relationship between guru and disciple is elucidated. The narration is done on a poetic way. The introduction of Ganapathy and Parasuraman is narrated. The issues between them is correlated with the contemporary problems in the present world. Their arguments and confrontations are well illustrated.)

UNIT:IV KHANDAKAVYAM**LECTURE HOURS: 12**

SHISHYANUM MAKANUM – VALLATTHOLE NARAYANAMENON: (One of the best things about Vallathol. In this poem, the affection of a son and the affection of a disciple come together. In this poem, we see Lord Shiva, who swells with love for his son and disciple, and Parvati, who loves her son as life.)

UNIT :V GRAMMAR**LECTURE HOURS: 12**

TRANSLATION: (The provided contents – two paragraphs to be translated with appropriate words. Their grammatical conversions shall be highlighted).

TEXT BOOKS:

- T1. Enmakaje - Ambikaasuthan Mangad
- T2. Shishyanum Makanum - Vallathole Narayana menon

REFERENCE TEXTS:

- R1. Malayalanoval Sahithyacharithram – KM Tharakan N B S Kottayam - 2000
- R2. Malayala kavithasahithyacharithram | Edition: 2 | D C Books | LeelavathiM-2001
- R3.Saahithyacharithra Prasthaananghaliloode – Dr. KM George, D C Books, Kottayam - 2004

Sem	Course Opted	Course Name	D	L	T	P	CIA	ESE	Marks	Credits
I	MIL-I	French-I	3	4	-	-	25	75	100	3

CourseTitle : FRENCH-I(T)	CourseCode : 11 F
Semester : I	CourseGroup : MIL-I
Teaching Scheme in Hrs (L:T:P) : 4:0:0	Credits : 3
Map Code: A (Language Concept)	Total Contact Hours : 60
CIA : 25Marks	SEE# : 75 Marks
Programme: ALLI YR UG PROGRAMMES (Except CS&HM) # - Semester EndExam	

COs	Course Outcome(Cos): After completion of this course, the students will be able to achieve the following outcomes.	POs	Cl. Ses	CL
CO1	Decouverte du francais, Premiers contacts, La langue de la classe. Demander de se presenter & se presenter, Demander/Donner des informations personnelles.	PO2	20	R
CO2	Demander/Dire le lieu d'habitation, Exprimer ses goûts, Parler de sa famille.	PO2	10	U
CO3	Faire des courses alimentaires, Donner une appreciation, Commander au restaurant.	PO4	10	AP
CO4	Presenter une ville/un quartier, Se deplacer en transports en commun, Demander/Indiquer le chemin.	PO4	10	AN
CO5	S'habiller, Donner une appreciation, Parler de la meteo, Decrire un objet.	PO7	10	C

UNIT – 1: Bienvenue & Je suis...

(Lecture Hours: 20 Hrs)

Les Informations initiales-(Alphabets, Phonetics, Salutations, Numbers, Days, Months, Seasons, Accents, Articles, Verbs, Conjugation, Adjectives, Time, General Questions.)

Communication- (Translation & Comprehension Passages)

Grammaire- (Grammar Exercises)

Vocabulaire- (Vocabulary Exercises)

Culture & Francophonie- (Information about French Culture & Francophone Countries)

UNIT – 2: Pres de moi

(Lecture Hours: 10 Hrs)

Communication - (Translation & Comprehension Passages)

Grammaire - (Grammar Exercises)

Vocabulaire - (Vocabulary Exercises)

Culture & Francophonie - (Information about French Culture & Francophone Countries)

UNIT – 3: Qu'est-cequ'on mange ? **(Lecture Hours: 10 Hrs)**

Communication - (Translation & Comprehension Passages)

Grammaire - (Grammar Exercises)

Vocabulaire - (Vocabulary Exercises)

Culture & Francophonie - (Information about French Culture & Francophone Countries)

UNIT – 4: C'estou ? **(Lecture Hours: 10 Hrs)**

Communication - (Translation & Comprehension Passages)

Grammaire - (Grammar Exercises)

Vocabulaire - (Vocabulary Exercises)

Culture & Francophonie - (Information about French Culture & Francophone Countries)

UNIT – 5: C'est tendance ! **(Lecture Hours: 10 Hrs)**

Communication - (Translation & Comprehension Passages)

Grammaire - (Grammar Exercises)

Vocabulaire - (Vocabulary Exercises)

Culture & Francophonie - (Information about French Culture & Francophone Countries)

TEXT BOOKS:

EDITO – NIVEAU A1- Methode de francais | Edition: 2 | Les Editions Didier | Caroline Sperandio | Lucie Mensdorff-Pouilly | Serguei Opatski | Violette Petitmengin | Sylvie Pons | Hamza Djimli (DELF) | Julie Veldeman-Abry (Phonetique) | (January, 2022)

REFERENCE BOOKS:

R1. Larousse – Dictionnairebilingue | Edition: 2 | Hachette | MARIANNE DURAND (2006)

R2. Collins dico | Edition: 8 | MAURY-IMPRIMEUR SA MALESHERBES, FRANCE.

Harper co | MARIANNE DURAND (2006)

WEBSITE LINKS:

i) wordreference.com

ii) verb2verbe.com

iii) tolearnfrench.com

Course Title: English I (T)	Course Code:
Semester: I	Course Group : ELN I
Teaching scheme in Hrs. (L: T:P): 4:0:0	Credits: 3
Map Code: A (Language concept)	Total Contact Hours: 60
CIA: 25 Marks	SEE: 75 Marks
Programme: All I UG Courses	#-Semester End Exam

UNIT - I

LECTURE HOURS:12

The Lotus – Toru Dutt: About the poet - Toru Dutt is one of the most famous Indo-Anglican poets - Most of her poetic works have an Indian theme and an Indian background - For an extended time, Lily and Rose had been fighting for the title 'Queen of flowers - Finally Love and Flora have decided to create a new flower that The Indian Lotus is the most beautiful and Queen of all flowers.

Monday Morning – Mark Twain (Adapted from Adventures of Tom Sawyer): Its an Adapted from "The Adventures of Tom Sawyer" by Mark Twain - Monday morning arises, and Tom is not so happy, because as usual, he has to go to school - He tries to find some reason to not go, like some ailment.

Parts of Speech: Definition of Noun, Pronoun, adjective- noun is a word used as the name of a person, place, thing etc, Definition of Verb and Adverbs - A verb is a word that denote an action. Definition of preposition, conjunction and interjection - A preposition is a word that is used with a suffix.

Hints Development: Read all the hints thoroughly - Try to understand the tone of the passage. Make sure to use all the hints; do not leave any point - Arrange the points sequentially, one leading to the other - Make two or three paragraphs, as required - Look for the tense in the hints, follow the same in the story.

UNIT - II

LECTURE HOURS:12

Goodbye Party to Miss. Pushpa T.S - Nizzim Ezekiel: Nissim Ezekiel in this poem narrates an incident when a woman (Miss Pushpa) is supposed to leave India - her colleagues have masterminded a "Goodbye Party" for her - The narrator is likely a man uses Babu English which is quite interesting as he uses the Hindustani dialect and manners in it.

A Day's Wait – Ernest Hemingway: It refers to the boy's day spent waiting to die, as he believes he will - The father narrates the story - doesn't realise that boy believes he is approaching imminent death - simply ascribes his son's strange behaviour to the illness.

Tense: Definition of Tenses – 12 basic English tenses - Types of tenses – Rules for Tenses with Examples. Sentence Pattern: Definition and Examples – Five Essential Elements of the sentence – Subject – Verb – Types of Verbs – Object – Complement – Adjunct – Examples.

Gerunds and Infinitives: Introduction about Gerunds and Infinitives - Basic Rules for Gerunds and Infinitives.

UNIT - III

LECTURE HOURS:12

Incident of the French Camp – Robert Browning: The poem describes an act of chivalry, gallantry, patriotism and sacrifice on the part of a young French soldier - It narrates an actual event in the war between France and Austria led by Napoleon in 1809 - Napoleon was standing on a little mound, eagerly looking towards Ratisbon.

I Have a Dream – Martin Luther King: It's a speech – given by Martin Luther King – In his speech minister and civil rights activist Martin Luther King Jr. outlines the long history of racial injustice in America and encourages his audience to hold their country accountable to its own founding promises of freedom, justice, and equality.

Concord: Introduction about Concord – Rules and Types of Concord – Exercises and examples.

Comparison of Adjectives: Introduction to the Degree of Comparison - Types of Degree of Comparison - Positive, Comparative and Superlative - Importance, Usage, Examples.

UNIT - IV

LECTURE HOURS:12

Daffodils – William Wordsworth: The poem was composed in the year 1802 - The title of the poem informs about the loneliness of the poet which he faces after the death of his brother - the endless view of the golden Daffodils in a field across the lake filled him with joy - This view was the greatest gift of nature to him.

The Unexpected – Robert Lynd: The essay “Unexpected” is the one which lets everyone to appreciate nature for the beauty which it shows us beyond our expectations - Lynd is trying to take us towards the natural beauty by taking the example of the wild birds and their singing ability which takes you to the imaginary world.

Conditional Clauses: Conditional clause definition - four main kinds of conditionals - The Zero Conditional (if + present simple, ... present simple) - The First Conditional (if + present simple, ... will + infinitive) - The Second Conditional (if + past simple, ... would + infinitive) - The Third Conditional (if + past perfect, ... would + have + past participle).

Re-Arranging Jumbled Sentences: Finding the opening sentence – Finding the closing sentence – Finding the connection between them – Finding the central theme of the sentence.

UNIT - V

LECTURE HOURS:12

Stopping by Woods on a Snowy Evening – Robert Frost: The story of a writer passing by some woods - The writer of the poem is traveling in the dark through the snow - pauses with his horse near the woods by a neighbour’s house to observe the snow falling around him.

My Lord, The Baby – Rabindranath Tagore: It begins with a twelve-year-old boy named Raicharan - He leaves his village and enters the home and service of a man who shares the same caste as Raicharan – He becomes the private servant - From birth up until the day that the boy leaves for college - he is Anukul’s personal attendant.

Reported Speech: Introduction to the Direct Speech and Indirect Speech - Changing Time Expressions - the difference between Direct and Reported Speech - Direct and Indirect Speech Rules with Examples.

TEXT BOOKS:

T1. Natarajan K. *Enlightening English Prose*. New Century Book House, 2011.

T2. Rathnasabapathi K. *Developing Language Skills through Literature -I*. Sunitha Printers, 2016.

T3. Robb, Cuthbert W. *Representative Anthology: English Essays*. Blacky Books, 2011.

REFERENCE BOOKS:

R1. Mohan, Krishna and Banerjee, Meena. *Developing Communication Skills*. Macmillan India, 1990.

Course Title : MATHEMATICS-I (T)	Course Code: 13A
Semester: I	Course Group: DSC-I
Teaching Scheme in Hrs (L:T:P) : 5:1:0	Credits: 6
Map Code: F (PROBLEM-ANALYSIS)	Total Contact Hours: 90
CIA: 25 Marks	SEE # : 75 Marks
Programme: B.Sc., Internet of Things	# - Semester End Exam

COs.	Course Outcome (COs): After successful completion of this course, the students will be able to	PSOs	Cl. Ses	CL
CO1	Solve linear system of equations and Eigen values and vectors of a matrix	PSO4	18	AP
CO2	Recall the Differentiation and solve the maxima and minima of multivariable functions	PSO4	18	AP
CO3	Identify the Integration and solve the Definite integral and Integration by rational functions	PSO4	18	AP
CO4	Compute the Laplace transforms Problems	PSO4	18	AP
CO5	Apply Complex Number & Vector Calculus to solve the Expansion of $\sin^n\theta$, $\cos^n\theta$ and derivative of scalar and vector functions.	PSO4	18	AP

UNIT I MATRICES

Lecture hours: 18

Definition of matrices(Types of Matrix)-Addition & multiplication of matrix (Related Problems)-Rank of matrix(Related Problems)-Cramer's Rule(Related Problems)-Solving a system of linear equations using matrix inversion (up to 3*3)(Related Problems)-Eigen values and Eigen vectors-using Cayley Hamilton Theorem(Related Problems)-Orthogonal matrix(Related Problems).

UNIT II DIFFERENTIATION

Lecture hours:18

Limits of a functions(Related Problems)-differentiation(Related Problems) –Product rule(Related Problems) –quotient rule(Related Problems)-Function of function rule(Related Problems)-velocity and acceleration (Definition & Related Problems)- Maxima and Minima (Related Problems)– Partial Differentiation (function of function rule&Related Problems).

UNIT III INTEGRATION

Lecture hours: 18

Standard type (Related Problems)–Definite integral(Related Problems) –Integration by rational functions(Related Problems) –Integral by parts(Related Problems).

UNIT IV LAPLACE TRANSFORMS

Lecture hours:18

Laplace transforms of standard function(Related Problems) –First shifting theorem (problems only) – Inverse Laplace transform (Related Problems)– convolution theorem(Related Problems)

UNIT V COMPLEX NUMBER & VECTOR CALCULUS

Lecture hours:18

Expansion of $\sin n\theta$, $\cos n\theta$, $\tan n\theta$ (Related Problems) - Expansion of $\sin^n \theta$, $\cos^n \theta$ - Differentiation of scalar and vector functions Directional derivative (Related Problems) - The divergence and curl of a vector (Related Problems).

TEXT BOOKS:

T₁: P.A. Navnitham, (Jai publishers), "Business Mathematics and Statistics".

T₂: Dr. N.K. Venkatasubramanian, Dr. V. Sundaram (J. Jpublications), "Engineering Mathematics".

T₃: T.K. Manickavasakam Pillai, "CALCULUS VOL I".

T₄: T.K. Manickavasakam Pillai, "CALCULUS VOL II".

T₅: P. Kandasamy, K. Thilagavathy, K. Gunavathy, "Engineering Mathematics Volume II".

REFERENCE BOOK:

R₁: M.K. Venkataraman, "Engineering Mathematics-VOL-II".

Course Title : Fundamentals OF IoT and its Applications (T)	Course Code: 13B
Semester: I	Course Group: DSC-II
Teaching Scheme in Hrs (L:T:P) : 4:0:0	Credits: 4
Map Code: D (THEORY APPLICATION)	Total Contact Hours: 60
CIA: 25 Marks	SEE #: 75 Marks
Programme: B.Sc., Internet of Things	# - Semester End Exam

COs	Course Outcome (Cos): After completion of this course, the students will be able to	PSO's	Cl. Ses	CL
CO1	Summarize the basic concepts of IoT and rectify security issues	PSO1	12	U
CO2	Categorize the protocols of IoT and implement standard protocols for applications	PSO1	12	AN
CO3	Describe the IoT Architecture and use an open source IoT Stack	PSO3	12	U
CO4	Categorizing the Web of Things for Business Intelligence	PSO3	12	AN
CO5	Design IoT Applications for updating automation.	PSO2	12	AP

UNIT I

Lecture hours: 12

IOT (Definition& Characteristics of IoT,What is the IoT and why is it important?) -**ELEMENTS OF AN IOT ECOSYSTEM** (Sensors, Processors, Gateways, Applications) -**Technology drivers** (Cloud Computing, Blockchain, Sensors, Artificial Intelligence), Business drivers, Trends and implications, Overview of Governance, Privacy and Security Issues (The concept of privacy, Privacy risks in smart home).

UNIT II

Lecture hours: 12

IOT PROTOCOLS - Protocol Standardization for IoT (Efforts)- M2M and WSN Protocols – SCADA and RFID Protocols – Issues with IoT Standardization – Unified Data Standards – Protocols – IEEE802.15.4 (The IEEE 802 Committee Family of Protocols,The Physical Layer,The Media-Access Control Layer,Uses of 802.15.4) –BACNet Protocol (Standardization, Technology, BACnet Security) – Modbus (Introduction, Standardization, Message Framing and Transmission Modes) – KNX (Standardization, Technology Overview, Device Configuration) – Zigbee (Development of the Standard, Architecture) – Network layer – APS layer (Endpoints, Descriptors, APS Frame) – Security (ZigBee and 802.15.4 Security, Key Types, The Trust Center)

UNIT III

Lecture hours: 12

IOT ARCHITECTURE - IoT Open source architecture (OIC)(Characteristics)- OIC Architecture & Design principles- IoT Devices and deployment models (Gateway Based Deployment, Proxy Based Deployment, Direct Deployment over Internet) - **IoTivity**: An Open source IoT stack - Overview- IoTivity stack architecture- Resource model and Abstraction.

UNIT IV

Lecture hours: 12

WEB OF THINGS - Web of Things versus Internet of Things (Two Pillars of the Web) – Architecture Standardization for WoT– Platform Middleware for WoT (Standards for M2M, Frameworks for WSN, Standards for SCADA) – Unified Multitier WoT Architecture (SOA/EAI versus SODA/MAI, OSGi: The Universal Middleware) – WoT Portals and Business Intelligence.

UNIT V

Lecture hours: 12

IOT APPLICATIONS - IoT applications for industry: Future Factory Concepts (Manufacturing Vision, Challenges, Opportunities), Brownfield IoT, Smart Objects, Smart Applications. Study of existing IoT platforms /middleware, IoT- A, Hydra (Definition, Commands, Post Web Form).

TEXT BOOK & REFERENCES:

TEXT:

1. Honbo Zhou, “The Internet of Things in the Cloud: A Middleware Perspective”, CRC Press, 2012.-
2. Dieter Uckelmann, Mark Harrison, Michahelles, Florian (Eds), “Architecting the Internet of Things”, Springer, 2011.
3. David Easley and Jon Kleinberg, “Networks, Crowds, and Markets: Reasoning About a Highly Connected World”, Cambridge University Press, 2010.
4. Olivier Hersent, David Boswarthick, Omar Elloumi , “The Internet of Things – Key applications and Protocols”, Wiley, 2012.

REFERENCES:

1. Vijay Madiseti and Arshdeep Bahga, “Internet of Things (A Hands-on-Approach)”, 1st Edition, VPT, 2014.
2. Francis daCosta, “Rethinking the Internet of Things: A Scalable Approach to Connecting Everything”, 1st Edition, A press Publications, 2013.
3. Cuno Pfister, Getting Started with the Internet of Things, O’Reilly Media, 2011, ISBN: 978-1- 4493-9357-1.

Course Title : Fundamentals of IoT and its Applications (P)	Course Code: 13B
Semester: I	Course Group: DSC-II
Teaching Scheme in Hrs (L:T:P) : 0:0:4	Credits: 4
Map Code: K (Practical - Application)	Total Contact Hours: 60
CIA: 25 Marks	SEE #: 75 Marks
Programme: B.Sc ECS	# - Semester End Exam

LIST OF EXPERIMENTS

1. Study of different types of Network cables and practically implement the cross-wired cable and straight through cable using clamping tool.
2. Study of Network Devices in Detail & Study of network IP.
3. Connect the computers in Local Area Network.
4. Study of basic network command and Network configuration commands.
5. Performing an Initial Switch Configuration
6. Performing an Initial Router Configuration
7. Configuring and Troubleshooting a Switched Network
8. Connecting a Switch
9. Configuring WEP on a Wireless Router
10. Using the Cisco IOS Show Commands
11. Examining WAN Connections.

Text Book & References:

Text Books:

1. Honbo Zhou, "The Internet of Things in the Cloud: A Middleware Perspective", CRC Press,2012.●
2. Dieter Uckelmann, Mark Harrison, Michahelles, Florian (Eds), "Architecting the Internet● ofThings", Springer, 2011.

References:

1. Vijay Madiseti and ArshdeepBahga, "Internet of Things (A Hands-on-Approach)",1st Edition, VPT, 2014

Sem	Course Opted	Course Name	D	L	T	P	CIA	ESE	Marks	Credits
II	MIL – II	Tamil– II	3	4	-	-	25	75	100	3

Course Title :TAMIL - II (T)	Course Code: 21T
Semester : II	Course Group: MIL- II
Teaching Scheme in Hrs (L:T:P) : 4:0:0	Credits: 3
Map Code: A (Language- Concepts)	Total Contact Hours: 60
CIA: 25 Marks	SEE #: 75 Marks
Programme: ALL I YEAR UG PROGRAMMES	#-Semester End Exam

No.	Course Outcomes (Cos): After completion of this course, the students will be able to	POs	CL Ses	CL
CO1	அற இலக்கியங்களின் வழி, வாழ்வியல் விழுமியங்கள் மற்றும் நட்பு, விருந்தோம்பல் பண்பு, பெரியோர்களை துணையாகக் கொள்ளும் மாண்பு, போன்றவற்றை மாணவர்களுக்கு அறியச்செய்தல்.	PO7	13	U
CO2	பக்தி இலக்கியங்கள் வாயிலாக மாணவர்களிடையே இறையணர்வையும், பல்சமய இலக்கியங்கள் வாயிலாக சகோதர உணர்வையும் அறியச் செய்தல்.	PO7	12	U
CO3	சிறுகதைகள் வாயிலாக வாழ்வியல் நிகழ்வுகளையும் கதைப் பாத்திரங்களின் வழி மனித மனங்களை எடுத்துரைத்தல் மற்றும் கதைக்கரு, உள்ளடக்கம், சிறுகதை உத்தி ஆகியவற்றை அறியச்செய்து மாணவர்களின் படைப்பாற்றலை வளர்த்தல்	PO3	15	R
CO4	கடிதப்பயிற்சி வாயிலாக அரசு மற்றும் தனியார் நிறுவனங்களுக்கு கடிதம் எழுதும் முறைகளை அறியச்செய்தல்	PO2	9	U
CO5	மொழியறிவோடு இலக்கிய வரலாற்றை கற்பதன் மூலம் போட்டித்தேர்வுகளை எதிர்கொள்ளுதல் மற்றும் வேலை வாய்ப்பினைப் பெறுதல்	PO1	9	U

அலகு -I- அற இலக்கியங்கள்

பாடவேளைகள் -13

திருக்குறள் -(வாள்சிறப்பு-மழையின் பெருமை-மழை உணவாதல் -மழை இல்லாவிட்டால் பசித்துன்பம் மிகும் -கெடுப்பதும்கொடுப்பதும் மழை- மழை இன்றி கடலும் வற்றும் - தானமும் தவமும் மழையின்றிக் கெடும் - நீரின் அவசியம்)

திருக்குறள் -(இறைமாட்சி- அரசனது புகழ் - படை-குடி-பொருள்-அமைச்சர்-நட்பு- இயற்றல் - ஈட்டல் - காத்தல் இறைமாட்சி - காட்சிக்கு எளியவன் - அன்பாக பேசுதல்; -மன்னவனை இறைவனாகப்; போற்றுதல்; -செங்கொல்.)

நாலடியார் -(நாலடியார் பாடல்கள்- சிறப்புகள்- அறக்கருத்துகள் உணர்த்துதல்-இளமை நிலையில்லாதது - காம மயக்கத்தால் உடல் குன்றுதல் - இளமை நீங்கி முதுமை அடைதல்- கல்வியின் சிறப்பு-கற்பவர் நாள் சில- கல்விக்கு கரையில-பலரோடு சேர்த்து உண்ண வேண்டும் - செல்வம் யாரிடமும் தங்காது - எந்நிலத்து வித்திடிலும் எட்டி மரத்தின் காய் தென்னை ஆகாது - அறத்தின் வழியே சொர்க்கம் செல்லமுடியும்.)

சிறுபஞ்சமூலம் -(சிறுபஞ்சமூலம் அறிமுகம்- சிறுபஞ்சமூலம் பாடல்கள்சிறப்புகள் - அறக்கருத்துகள் உணர்த்துதல் -பிழை பொறுத்தல் - சிறுமை தீங்கெண்ணி இருத்தல் - நகைகெட வாழ்வதும் நன்று - பூக்காது காய்க்கும் மரம் உள -விதையாமை நாறுவநீர் அறம் நன்று - பார் அறம் நன்று - சாலை நடட்டல் நன்று.)

பழமொழி நானூறு - (கள்ளி -அகிலம்கருங்காக்கையும் உள்ள வேண்டாம் - அறிவு அன்று-அழகு அன்று - சிறியர் எனப்படுவர் - கண்ணுள் மணியே போல் காதலராக நடட்டவர்-உண்பவரைக் காப்பது கூற்று- மாரி வளம் குன்றியது-பாண்மகள் நிலைப்பாடு-மாமுன்றில் நிலை)

அலகு II-பக்தி இலக்கியங்கள்

பாடவேளைகள் -12

1. திருவாசகம்- பக்தி இலக்கியம் -(பன்னிரு திருமுறைகள் - எட்டாம் திருமுறை-திருச்சதகம்பதிகச்சிறப்பு - அடியார் நிலை- திருவடிச்சிறப்பு-வேறு தெய்வங்களை நினையாதிருத்தல்- பலசொற்களை பேசவும்அடியார் பேசுதல்-மலர்களால் அர்ச்சித்தல்-செல்வத்தை பெறவில்லை-அடியார்களின் துயர் களைதல்-திருவடி இன்பம் சூட்டுதல்-மெய்யுணர்தல்)
2. பொய்கையாழ்வார் பாசுரம்-நாலாயிர திவ்ய பிரபந்தம் -(முதலாழ்வார்கள் - முதல் திருவந்தாதி - உலகப்பொதுமை வேண்டல் - திரவடி மாலை சூட்டல் - உலகை உமிழ்ந்தவன் - ஐந்து பொறிவாசல் நின்றவன் -காட்சிக்கு எளியவன்-அன்பாக பேசுதல்;- மன்னவனை இறைவனாகப்; போற்றுதல்;)
3. மெய்ப்பொருள் நாயனார் புராணம்(மலாடர் கோமான் - அன்பர் கருத்து அறிந்து ஏவல் செய்பவர்;-அன்பர் வேடமே சிந்தை செய்பவர் -கோயில்களில் இடைவிடாது வழிபாடு செய்பவர்- செல்வங்களை திருக்கோயில்களுக்கு வாரி வழங்கியவர்-நாயனாரை வெல்ல மாற்று அரசன் வருதல் - அடியார் தோற்றமே அரண் என நம்பியவர் - முத்த நாதன் பொய்யான வேடத்தில் வருதல் - தத்தன் தடுத்து நிறுத்தல் - அரண்மனையில் புகதல் - முத்தநாதன் வஞ்சக மொழி உரைத்தல் - அரசியை தனியிடம் போக செய்தல் - முத்தநாதனின் வஞ்சக எண்ணம் பழித்தல்நாயனாரை வாளினால் வீழ்த்தல் - முத்தநாதனிடம் தத்தா நமர் எனல் - முத்தநாதனை காட்டில் விடச்செய்தல்-திருநீற்று அன்பு பாதுகாத்தல் - இறைவன் திருவடி நிழல் அடைதல்)
4. பிறசமயங்கள் - பராபரக்கண்ணி - (திருக்கூத்தினை கண்டு மகிழ்தல்-வேத மறைப்பொருளை உணர்தல்நாதாந்தப் பொருளை அறிதல்-பராபரத்தை வேண்டுகல்)
5. இயேசுநாதர் சரிதை- (மணிவயிற்று உதித்த வள்ளல்-அகமும்புறமும் நிறைந்தவன்-கருணையின் அன்னையிடம் அன்னை மரியாளின் அன்பு - ஆண்டவன் கரு வளர்தல் - அகந்தை வீற்றல்)

அலகு III-சிறுகதைகள்

பாடவேளைகள் -15

1. நீர் விளையாட்டு- பெருமாள் முருகன் - (கிணறு தோற்றம்- கிணற்றில் குதித்தல்- கிணற்றை ழந்தையாக பார்த்தல் சிறுமியின் செயல்- நீர் விளையாட மறுத்தல்- அச்சத்தை விடுவித்தல்- கிணற்றின் ஆழத்திற்கு செ;லலல்- கைகள் நீந்திக் கொண்டிருந்தன-தவளையாய் நீந்தினான.;)
2. காடர் குடி -வே. பிரசாந்த் - (பழங்குடிமக்கள் - குடில்கள் அமைத்தல் - காடர்குடி செட்டில்மெண்ட்மழையால் குடியிருப்பு பாதிப்பு - ரேஞ்சரின் கோபம் - ஒன்றிய அரசின் திட்டம்மூப்பனும் ரவியும் காடு வாழ்விடம் எனல் - மீண்டும் திரும்புதல்);
3. வீடு - காஞ்சனா தாமோதரன் - (முற்றத்தில் பல்வகையான நிகழ்வுகள் - திண்ணைகள்தொட்டிக்கட்டு - பழமையான வீடு - வீட்டின் அறைகள்-பேச்சியின் பிதற்றல் - கூட்டுக்குடும்ப வாழ்க்கை - கிணற்றுப்பக்கம் - புளியமரம்-குருவிகள் நிலை - பாட்டிபெரியம்மா - வீட்டின் பழமை.)
4. (இருவர் கண்ட ஓரே கனவு - கு. அழகிரிசாமி- வெள்ளையம்மாள் குடும்பம்-குழந்தைகள் நிலை - பசியின் கொடுமை-வேலப்பனின் கருணையுள்ளம்- வெள்ளையம்மாள் மரணம்-வேலப்பன் அரவணைத்தல் - குழந்தைகளின் கனவு - வெள்ளையம்மாள் மரணம் - வேலப்பன் அரவணைத்தல் - குழந்தைகளின் கனவு.)
5. நிழலும் நிஜமும் - (மதுரைப் பயணம்-ஆசிரியயப்பணி- கிறிஸ்துமஸ்க்கு துணிஎடுத்தல் -உணவு அருந்துதல்- சிக்கனமாக செலவு - பலவித சிந்தனை- தின்பண்டம் வாங்குதல்-நிஜமும் - ஹோட்டலில் உணவு அருந்துதல்- சிறுவனின் வறுமை - சிறுவனுக்குக் காசு கொடுத்தல் - சாட்டையடித்தல் நிகழ்வு - சிறுவனின் பார்வை -சிறுவனின் ஈகைப்பண்பு.)
6. இரணியவதம் - (சின்னக்கருப்பு வாத்தியார் - ராஜாராமன் - இரணியவதம் கூத்து பயிலுதல் - தமுக்கம் மைதானத்தில் கூத்து - நாடகம் புத்துயிர் பெறுதல் - டைம் ஆப் இந்தியா ஆக்கூர் - பக்கிரியிடம் புலி நகம் வாங்கச் செல்லல் - புலி நகம் வாங்கி வருதல் - சின்னக்கருப்புவால் பாப்பாவிிற்கு ஏற்படும் சிக்கல் - ராஜாராமனின் இரணிய வதம்)

அலகு IV- விண்ணப்பம்- கலைச்சொற்கள்

பாடவேளைகள் -09

கடிதம் எழுதுதல் கடிதப்பயிற்சி- (அலுவலகக் கடிதம் - அரசு அலுவலகங்கள்-வேலைவாய்ப்பு கடிதங்கள்;- அரசு அலுவலகங்கள் - கருத்தரங்கம் நடத்த வேண்டி விண்ணப்பித்தல்;.)
விண்ணப்பம் எழுதுதல் - (கல்விக்கடன் -முதல்பட்டதாரி - புத்தகங்கள் வேண்டி விண்ணப்பம் எழுதுதல். - கணிப்பொறியில் கலைச் சொற்கள்)
துறைதோறும் கலைச்சொற்கள்- (மருத்துவம் - வேளாண்மை - சட்டம் - பொறியியல்;-தொழில் நுட்பம் - ஆட்சிச்சொல்.)

அலகு V - இலக்கிய வரலாறு

பாடவேளைகள் -09

அற இலக்கியங்கள் (பதினெண் கீழ்க்கணக்கு நூல்கள்- திருக்குறள் நாலடியார் சிறப்புகள் - அற இலக்கியங்கள் - அற இலக்கியங்களின் பயன் - அக நூல்கள் - புற நூல்கள் - அகப்புற நூல்கள் - தோற்றம் வளர்ச்சி.)

பக்தி இலக்கியங்களின் தோற்றமும் வளர்ச்சியும் - (சைவம்- பன்னிரு திருமுறைகள் - தேவாரம் - திருவாசகம் - திருமந்திரம் - பெரியபுராணம் - சமயக்குரவர்களின் சிறப்பு- வைணவ இலக்கியம் - நாலாயிர திவ்விய பிரபந்தம் - ஆழ்வார்களின் சிறப்பு.)

சிறுகதையின் தோற்றமும் வளர்ச்சியும் -- (சிறுகதை விளக்கம்- சிறுகதை சூழல் - சிறுகதை அமைப்பு - சிறுகதை எழுத்தாளர்கள் - பிச்சமூர்த்தி-புதுமைப்பித்தன்-அழகிரிசாமி முதலியோர்-சிறுகதை தோற்றமும் வளர்ச்சியும்.)

பார்வை நூல்கள் :

1. தமிழிலக்கிய வரலாறு - மு. வரதராசன்
2. திருக்குறள் -- கழக வெளியீடு
3. நாலடியார் -- கழக வெளியீடு
4. திருவாசகம் - கழக வெளியீடு
5. நல்ல தமிழ் எழுதவேண்டுமா? - அ.கி. பரந்தாமன் - பாரி நிலையம்

Sem	Course Opted	Course Name	D	L	T	P	CIA	ESE	Marks	Credits
II	MIL - II	HINDI -II	3	4	-	-	25	75	100	3

Course Title : HINDI - II (T)	Course Code : 21H
Semester : II	Course Group : MIL - II
Teaching Scheme in Hrs (L:T:P) : 4:0:0	Credits : 3
Map Code: A (Language- Concepts)	Total Contact Hours: 60
CIA: 25 Marks	SEE # : 75 Marks
Programme: ALL I YEARUG PROGRAMMES	#Semester End Exam

No	Course Outcome (Cos): After completion of this course, the students will be able to achieve the following outcomes.	POs	CS	CL
CO1	Recognize the ancient valuable thoughts through which is contemporary even day today's life now also.	PO7	15	U
CO2	Distinguish the importance and values of the nature and its credibility to the environmental basis.	PO3	15	R
CO3	Implement the issues which human carried out is in the wrong perception. Adopt ourselves to the situation is important.	PO7	15	AP

CO4	Distinguish the issues handled the problems day to day life in middle class family.	PO8	8	AN
CO5	Knowing & applying more grammar in every walk of life.	PO1	7	AP

UNIT : I – KABIR KE DOHE

(LECTURE HOURS: 15)

KABIR KE DOHE: (samaj kepratikabir ki vani , samaj me sadhuvonkeprati kaliaan ki bhavana, jydalalach ki bhavana se dur rehne ki maangishwar se kartehaia, jitnimehnat hum karengutna hi phal pavengeuskesiddhant ko yuvyaktkartehai, ninakon ko paasrahne ki salaah detehai, unkivajah se hum nirmal ho jayengebinasabuntathapaanike, manushyon ki jindagi bahut kumsamaykeliey, I hai, usme hum acchekarmon se duniya ka prem jitnahai, atmaparamatmake Milan ki baatkartehai, jaisejal me kumbkumb me jalkebarabarathamparamatmeketatvahai jo acchekarmo ki vajah se paramatka me vilin ho saktehai).

RAHIM KE DOHE: (rahimkeanusaar prem bahut punithai, issebachakarrakhnachahiey, rahimkeanusaar madhurbaarbolicahieykhari baton se dil dukhna to dur vemitratakeliey layaknahi ban jaate, taruvarjistarike se apna phal khud nahikhatausitarah bade log sampatti ko ikkatakarkedusaronkemadadkelieydetehai to usme koi kharabinahihai, pani ka mahatva ko batatehaijise manav me manyshyarupimanavaatakijarurathai).

UNIT – II

(LECTURE HOURS: 15)

CHARU CHANDRA KI CHANCHAL KIRANE: (Maithili charanguptkepanchavati kavya se liyagayapdyahai. Ismeprakrutivarnan ka adhikstaandiyagayahai. Chandi raat ka varnan, nadi ka varnan,ityadi,2. Panchavati ki chaya me parnakutirhaijiskesammukhlakshmanpahredari banker baithahuahai, kisivrat me leen yah nidra ko khote hue vipin ko apnavaasbanahuahaiyise is kutiya me kyadhanhai. Mritymalok ki papon ko mitane swami sang jo aayihavah teen lok ki lakshmi hai, uskehatir ye lakshmanpehredaribanahuahai.)

VAH TODTI PATHAR: (niraladwarakrut ek diyakavitahaijismedopherkesamay me bin cchayadhup me baithkarpathartodrahihaiuskavarnanhai.)

KYA PUJAN KYA ARCHAN RE: (mahadevivar madwarakrutkavita me ye deh hi devalaykebarabarhai, jiskojis par nivasishwar ka ehsaa ho to manyshyjindagi ka saakarmilega. Isi tatv ko lekarvarmacchayavaaditvatva ko darshate hue is kavita ko rachihain.

JO BEET GAYI SO BAAT GAYI): (bacchan ji ne is kavitakedauran ye darshaatehai ki jo baat beet chukihaiuske bare me chintakarnesekya lab? Aage ki agrasarhonapadega. Isi taty ko is kavitarashatihai).

UNIT III

(LECTURE HOURS: 15)

DAUD LAGHU UPANYAAS: (mamtakaliadwaralikhitlaaghuupanyaas ek Madhya vargiyaparivaar ki kahani ko darshatahai. Ismepavanapne maa baap se dur naukrikeliyelahabad se ahmedabaad aa jaatahai aur puranevicharonketyajnayevicharon se phalibut ho jaatahai. Isliye maa baap aur uske beech ki duriyan bad jaatihai. Aur chotimotibaateapas me uthirehtihai. Vah ek ladki ko pasandkartahaiuskomaapasandnahikarti, magaruskiparavasahuskonahivahaagebadkarsamuhikvivaahkarlewtahai. Aaj kal ki pidi maa baap se badkar paise ka mahatvdetehai. Akhir chota beta bhivideshchalejaatahai, lautkarnahiaane ki sambhavanahihai. Maa bap ka vilap bad to jaatahaimagarlautanahi)

UNIT IV

(LECTURE HOURS: 8)

VYAKARAN:(vachan aur ling ka bed , striling se pulling me badaln, ek vachan se bahu vachan me baldne ka pura vivarantathaniyam ko dena)

UNIT IV

(LECTURE HOURS: 7)

ANUVAADABHYAAS: (Angreji se hindi me parivartankarnachoteshabdon ka anuvadkarnathathavakyon ka anuvaadsaath hi panktiyon ka anuvaadkarnaaadiabhyas ko chotron ko dena)

TEXT BOOKS:

1. VIVIDH MAALA: COMPILED BY BOS HINDI.

REFERENCE:

1. MANAK HINDI VYAKARAN. VANI PRAKHASHAN, N.DELHI.
2. <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwj0tq7U4pyAAxUL4TgGHWsfBSgQFnoECBMQAQ&url=https%3A%2F%2Fwww.hindi-kavita.com%2FHindiPanchvatiMaithilisharanGupt.php&usg=AOvVaw33u82y1QBzUZw0cMQr-4x0&opi=89978449https://www.youtube.com/watch?v=sh68KY1X2RA>

Course Title : MALAYALAM – II(T)	Course Code: 12 M
Semester: II	Course Group: MIL - II
Teaching Scheme in Hrs (L:T:P) : 4:0:0	Credits: 3 Credits
Map Code: A (Language Concept)	Total Contact Hour : 60
CIA: 25 Marks	SEE: 75 Marks
Programme: I Yr ALL UG PROGRAMMES	# - Semester End Exam

No	Course Outcome (Cos): After completion of this course, the students will be able to achieve the following outcomes.	POs	Cl. Sec	CL
CO1	Understand the past scenario of ethnical people and their livelihood and thereby inculcating moral values.	PO2	12	U
CO2	Interpret the importance of environmental studies and a recalling the existence of humans in resilience with nature and its components	PO4	12	U
CO3	Adapt gender equity, need of protecting girl child and importance of Women empowerment	PO7	12	AP
CO4	Apply secularism and its challenges in the current scenario giving emphasis to live and let live	PO1	12	AP
CO5	Analyze the attractive features in Indraprastha which makes the capital of country unique	PO4	12	AN

UNIT -I SHORT STORIES

LECTURE HOURS: 12

1. UTHUPPAANTEY KINAR – KAROOR NILAKANDA PILLA

(Karur is a writer who has left his mark on Malayalam fiction with his meticulous life observations. His writings are distinguished by their sincerity, pure presentation and moderation.)

2. POOVANPAZHAM – VAIKKAM MUHAMMAD BASHEER: (This carefully selected collection of Vaikom Muhammad Basheer's short stories are characterised by a variety in theme and tone. He has enshrined in them every kind of experience from the pangs of hunger and sex to the rapture of mystic vision. Its range includes stark realistic pictures of the material world as well as the realm of fantasy haunted by ghosts and spirits. Basheer has written on love and hate, on politicians and pickpockets, on the fancies of childhood and on the disillusionments of adult life with an intense sense of the tragedy of life and at the same time an irrepressible sense of humour)

3. SHABDIKKUNNA KALAPPA – PONKUNNAM VARKKI: (It is the story of a heart-to-heart relationship between a farmer named Ouseph and a plowman named Kannan. As the beginnings tightened, Ouseph had to sell Kannan. Later, Ouseph rescues Kannan from the slaughterhouse, leaving even the emergency.)

UNIT -II SHORT STORIES

LECTURE HOURS: 12

4. NASHTTAPPETTA NILAAMBARI - MAADHAVIKKUTTI

(Madhavikutty was a storyteller who traveled in a dream world mixed with reality and imagination. Through her writings, she portrayed different facets of love and new definitions of gender relations. Neelambari tells the story of Dr. Subhadra who comes to Madurai in search of the love she lost in her teens. When she left Madurai to study in Madras and later lived in Kozhikode with her husband, Madurai remained in Subhadra's mind as an unforgettable memory. In the streets smelling of jaggery, peach and marigold, in

the cool interiors of the Madhura Meenakshi temple, Subhadra searched not only for the lost Nilambari, but also for her own identity.)

5. BIRIYANI – SANTHOSH EACHIKKANAM

(Santhosh Aechikkanam is surely one of the most influential writers in the present-day Malayalam short story. He has, to his credit, around eighty stories anthologized in half a dozen volumes. As a keen observer of life he has phenomenal skill in capturing the subtle nuances of the sordid side of the seemingly naive lives around him. The range of themes he deals with in his stories amply demonstrates his creative genius.)

6. KALLAN – MP NARAYANAPILLA: (Narayana Pillai is considered by many as one of the finest writers of Malayalam fiction. It was reported that he started writing during his stay in Delhi where he met Kakkanadan and was influenced by the writer; the first story was *Kallan* (The Thief). *Murugan Enna Pambatti*, *George Aramante Kodathi*, *Yathrakkidayil* and *Njangal Njangal Asuranmar* are some of his most notable short stories. Most of his short stories have been compiled in 5 anthologies viz. *Murugan Enna Pambatti*, *Sathragali*, *Anthikoottu*, *Njangal Asuranmar* and *M. P. Narayana Pilayude Kathakal*. He wrote only one novel, *Parinamam*, which was selected for the Kerala Sahitya Akademi Award for Novel)

UNIT - III TRAVALOGUE

LECTURE HOURS: 12

PURUSHANTHARANGALILOODE – VAYALAR RAMAVARMMA: (Ramavarma's first poetry anthology was *Padamudrakal*, in 1948 which reflected his affinity towards Gandhian ideals in those days. Later he changed his thought towards communism and keep close contact with the communist party of India. There are notable literature works against cast and communal systems in Kerala even though he is from an upper caste family. But he had a good affinity towards Indian culture which is reflected in the poem *Sargga Sangeetham*.¹ Between 1950 and 1961, he published a number of anthologies including *Konthayum Poonoolum* (1950), *Naadinte Nadam*, *Enikku Maramamilla*, *Mulankadu* (1955), *Oru Judas Janikkunnu* (1955), *Ente attolikavithakal* (1957), and *Sargasangeetham* (1961), a khandakavyam titled *Ayisha*, two short story anthologies)

UNIT - IV TRAVALOGUE

LECTURE HOURS: 12

PURUSHANTHARANGALILOODE – VAYALAR RAMAVARMMA: (Vayalar Ramavarma was a famous poet and lyricist belonging to Malayalam. He remained the most popular lyricist during the glorious era of Malayalam film music in the 1960s and 1970s and was a recipient of Kerala state award for best lyricist 4 times. He was also a recipient of National Film award for best lyricist for the songs of *Achanum Bappayum*, which include “*Manushyan Mathangale Srishtichu*”. He was also a famous poet, best known for his poems – *Sargasangeetham*, *Mulankaadu*, *Padamudrakal*, *Konthayum Poonoolum*, *Enikk Maranamilla*, *Aayisha* and *Oru Judas janikkunnu*, and recipient of Kerala Sahitya Academy Award for poetry in 1962 for the poetry collection – *Sargasangeetham*)

UNIT - V MALAYALABHASHAYUM COMPUTERSAHITHYAVUM

LECTURE HOURS: 12

E MALAYALAM: (A study on electronic Malayalam penned by Suneetha T V offering detailed study of the Malayalam cyber world ranging from e-mail to e-book and blog to web portals. ‘E. Malayalam’ has eight essays including *Bhasha Sankethika Vidyayum Computerum*, *Malayalm Computing*, *Internetile Malayalam*, *E. Malayalam*)

TEXT BOOKS:

- T1. Uthuppaantey Kinar - Ediiton – 2, DC Books – 1990 - Karoor Nilakantappillai
- T2. Poovambhazham – Edition – 3, DC Books – 2003 - Vaikkam Muhammad Basheer
- T3. Shabdikkunna Kalappa – Edition – 3, 2000, Current Books, Ponkunnam Varkki

- T4. Nashttappetta Neelambari – Edition – 40, DC Books, 2008, Maadhavikkutti
T5. Biriyaani – Edition – 18, DC Books,2008, Santhosh Eachikkaanam
T6. Kallan – Edition – 6, DC Books,2003, M P Pavithran
T7. Purushaantharangaliloode –Edition – 10 Saindhava Books, 1999, Vayalaar Ramavarmma
T8. E- Malayalam – Edition – 3, Kerala Bashainstitute 2019, Sunitha TV

REFERENCES:

- R1. Malayalacherukatha Sahithyacharithram – Edition – 6, Kerala Sahithyaacademi, 2000, Dr.M.M.Basheer
R2. Malayalasaahithyacharithram – Edition – 6 –Kerala Bashainstitute TVM, - 2003, Kalpatta Narayanan
R3.E- Malayalam – Edition – 3, Kerala Bashainstitute 2019, Sunitha TV

WEB RESOURCES

- | | |
|---|---|
| https://youtu.be/hOgGteIBC_M | https://youtu.be/QDj7RApGg6k |
| https://youtu.be/M8DNtoB0kTA | https://youtu.be/rJ1UEyI65qk |
| https://youtu.be/-MqXQnpTJ3k | https://youtu.be/jMi-1OwSIB4 |
| https://youtu.be/GE-wyIB0OtA | https://youtu.be/QVId_t6DT_M |
| https://youtu.be/WNEye7uOyms | https://youtu.be/UCn3hfj8Apo |
| https://youtu.be/amobVw5Bvko | https://youtu.be/vSTZVrSx_Xw |

Sem	Course Opted	Course Name	D	L	T	P	CIA	ESE	Marks	Credits
II	MIL-II	French-II	3	4	-	-	25	75	100	3

CourseTitle :FRENCH-II (T)	Course Code : 21 F
Semester : II	Course Group : MIL-II
Teaching Scheme in Hrs (L:T:P) : 4:0:0	Credits : 3
Map Code: A (Language Concept)	Total Contact Hours : 60
CIA : 25Marks	SEE# : 75 Marks
Programme:ALLI YR UG PROGRAMMES (Except CS&HM) # - Semester EndExam	

No.	Course Outcome(Cos): After completion of this course, the students will be able to achieve the following outcomes.	POs	Cl. Ses	CL
CO1	Parler de sesactivitesquotidiennes,Demander/Dire l'heure,Proposer/Accepter/Refuser une sortie, Decrireunepersonne.	PO2	12	R
CO2	S'informer sur un logement, exprimer des regles de vie commune, Expliquer un probleme domestique.	PO2	12	U
CO3	Exprimerune emotion, Parler de sasanté et de sport, Exprimer son accord ou son desaccord, Exprimerune obligation, une interdiction, Donner un conseil.	PO4	12	AP
CO4	Reserverune chambre d'hotel, Decrireuneville, un pays, Decrire un paysage, Exprimer la preference, Ecrireune carte postale.	PO4	12	AN
CO5	Parler de ses etudes et de son universite, Parler de ses competences, Parler de son projetprofessionnel, Parler de son métier.	PO7	12	C

UNIT – 1: Qu'est-cequ'on fait aujourd'hui ? (Lecture Hours: 12 Hrs)

- Communication** - (Translation & Comprehension Passages)
- Grammaire** - (Grammar Exercises)
- Vocabulaire** - (Vocabulary Exercises)
- Culture & Francophonie** - (Information about French Culture & Francophone Countries)

UNIT – 2: Chezmoi (Lecture Hours: 12 Hrs)

- Communication** - (Translation & Comprehension Passages)
- Grammaire** - (Grammar Exercises)
- Vocabulaire** - (Vocabulary Exercises)
- Culture & Francophonie** - (Information about French Culture & Francophone Countries)

UNIT – 3: En forme (Lecture Hours: 12 Hrs)

- Communication** - (Translation & Comprehension Passages)
- Grammaire** - (Grammar Exercises)
- Vocabulaire** - (Vocabulary Exercises)
- Culture & Francophonie** - (Information about French Culture & Francophone Countries)

UNIT – 4: Bonnesvacances ! (Lecture Hours: 12 Hrs)

- Communication** - (Translation & Comprehension Passages)

Grammaire - (Grammar Exercises)
Vocabulaire - (Vocabulary Exercises)
Culture & Francophonie - (Information about French Culture & Francophone Countries)

UNIT – 5: Au travail !

(Lecture Hours: 12 Hrs)

Communication - (Translation & Comprehension Passages)
Grammaire - (Grammar Exercises)
Vocabulaire - (Vocabulary Exercises)
Culture & Francophonie - (Information about French Culture & Francophone Countries)

TEXT BOOKS:

EDITO – NIVEAU A1- Methode de francais | Edition: 2 | Les Editions Didier | Caroline Sperandio | Lucie Mensdorff-Pouilly | SerguieOpatski | Violette Petitmengin | Sylvie Pons | Hamza Djimli (DELF) | Julie Veldeman-Abry (Phonetique) | (January, 2022)

REFERENCE BOOKS:

R1. Larousse – Dictionnairebilingue | Edition: 2 | Hachette | MARIANNE DURAND (2006)
R2. Collins dico | Edition: 8 | MAURY-IMPRIMEUR SA MALESHERBES, FRANCE.
Harper co | MARIANNE DURAND (2006)

Website Links:

i) wordreference.com ii) verb2verbe.com iii) tolearnfrench.com

Course Title: ENGLISH – II(T)	Course Code: 22E
Semester: II	Course Group: ELN-II
TeachingschemeinHrs(L:T:P) : 4:0:0	Credits :3
MapCode: A	TotalContactHours: 60
CIA: 25Marks	SEE : 75Marks
Programme All UG Programmes	#-SemesterEndExam

COs.	Course Outcome (COs): After successful completion of this course, the students will be able to	PSOs	Cl. Ses	CL
CO1	Enrich the students with pronunciation and accuracy in the use of English Language.	PSO1 & PSO4	12	R
CO2	Aid them understand the responsibilities and societal problems and solutions along with one act plays.	PSO1 & PSO4	12	R
CO3	Teach them various opportunities and success of different noble people.	PSO1 & PSO4	12	U
CO4	Help the students to learn the variety of sentence structures.	PSO1 & PSO4	12	U
CO5	Become an employable person with effective communication	PSO1 & PSO4	12	R

UNIT – I (ONE ACT PLAYS)

LECTURE HOURS-12

1. **Chitra** - Rabindranath Tagore – Introduction – About the Author- The play adapts the story of Chitrāngadā and Arjuna from the Mahabharata. - Chitra beginning a conversation with Madana, the god of love, and Vasanta, the god of springtime and eternal youth - Chitra, the beauty of which he mentions, enters and Arjuna immediately strikes up a conversation with her - The play ends with Chitra finally admitting to Arjuna that she is the princess of which he spoke of and that she begged for beauty in order to win him over.

2. **The Sun**– John Gales worthy – Introduction – About the Author *The Sun*, a soldier returns from the WWI front to reunite with his fiancée, only to discover that she has jilted him for another man. The girl is nervous and guilty-the man is ready to fight for his woman--but the soldier cannot bring himself to fight anymore. The sun is shining, the soldier has returned home, and he will let nothing stand in the way of his high spirits. John Galsworthy’s delightful one-act bursts with sunny cheer and the joy of being alive.

3. **The Boor** – Anton Chekhov Introduction – About the Author “The Boor is a romantic farce - a widow who is mourning her husband's death - disturbed in her home by a brutish man who her late husband owed him money, through their arguments about which of the genders is more faithful in relationships they ultimately fall in love with each other.

4. **Heart in the Ground** – Douglas Introduction – About the Author- **Heart in the Ground**, is a powerful and moving story of love- reconciliation- healing and hope, as a young farming couple learn to come to terms with the loss of their baby.

UNIT – II (BIOGRAPHY)

LECTURE HOURS-12

1. **Dr. APJ Abdul Kalam :Avul Pakir Jainulabdeen Abdul Kalam** 15 October 1931 – 27 July 2015) was an Indian aerospace scientist and statesman who served as the 11th President of India - He thus came to be known as the **Missile Man of India**. Kalam served as the Chief Scientific Adviser to the Prime Minister and Secretary of the Defence Research. During his term as president, he was affectionately known as the People's President, saying that signing the Office of Profit Bill was the toughest decision he had taken

during his tenure. Kalam was criticised for his inaction in deciding the fate of 20 out of the 21 mercy petitions submitted to him during his tenure

2. Helen Keller: Helen Adams Keller was an American author- disability rights advocate, political activist - lecturer. Born in West Tusculum, Alabama -she lost her sight and her hearing after a bout of illness when she was 19 months old. Annie had been blind, but had her eyesight restored by surgery. Charlie Chaplin Sarah was a teacher for the deaf. Later, during World War II, she visited with wounded army soldiers encouraging them not to give up. Helen spent much of her life working to raise money and awareness for people with disabilities, especially the deaf and the blind.

3. Charlie Chaplin: Sir Charles Spencer Chaplin KBE was an English comic actor, filmmaker, and composer who rose to fame in the era of silent film. He became a worldwide icon through his screen persona, the Tramp, and is considered one of the film industry's most important figures. The Masterpiece Features – The Gold Rush (1925), The Circus won Charles Chaplin his first Academy Award. City Lights proved to be the hardest and longest undertaking of Chaplin's career. In Modern Times Chaplin set out to transform his observations and anxieties into comedy. His last picture, "A Countess from Hong Kong". He was also a composer, having written and published many songs, among them: "Sing a Song"; "With You Dear in Bombay";

UNIT – III (GRAMMAR)

LECTURE HOURS-12

1. Active Voice and Passive Voice In the active voice, the sentence's subject performs the action on the action's target. In the passive voice, the target of the action is the main focus, and the verb acts upon the subject.

Rita wrote a letter. (Subject + Verb + Object)

A letter was written by Rita. (Object) + (auxiliary verb) + (past participle) + (by subject).

She cooks food. (Subject + Verb + Object)

2. Articles -Definite article- **the** (before a singular or plural noun)-Indefinite article- **a** (before a singular noun beginning with a consonant sound) -**an** (before a singular noun beginning with a vowel sound) -Count nouns - refers to items that can be counted and are either singular or plural - non-count nouns - refers to items that are not counted and are always singular

3. Question Tag- Question tags are short questions at the end of statements. They are mainly used in speech when we want to: **confirm that something is true or not**, or - **to encourage a reply** from the person we are speaking to. Question tags are formed with the auxiliary or modal verb from the statement and the appropriate subject. A **positive** statement is followed by a **negative** question tag. Jack **is** from Spain, **isn't** he? Mary **can** speak English, **can't** she? A **negative** statement is followed by a **positive** question tag. They **aren't** funny, **are** they? He **shouldn't** say things like that, **should** he?

4. Sentence Pattern - Subject: A person, animal, place, thing, or concept that does an action. Determine the subject in a sentence by asking the question "Who or what?" "**I** like spaghetti. **He** reads many books. **Verb:** Expresses what the person, animal, place, thing, or concept does. Determine the verb in a sentence by asking the question "What was the action or what happened?" (The *be* verb is also sometimes referred to as a copula or a linking verb. It links the subject, in this case "the movie," to the complement or the predicate of the sentence, in this case, "good.") **Object:** A person, animal, place, thing, or concept that receives the action. Determine the object in a sentence by asking the question "The subject did what?" or "To whom? /For whom? I like *spaghetti* He reads *many books*."

UNIT – IV (LANGUAGE COMPONENTS)

LECTURE HOURS-12

1. One Word Substitution: One word substitution is the use of one word in place of a wordy phrase in order to make the sentence structure clearer. The meaning, with the replacement of the phrase

remains identical while the sentence becomes shorter. Her younger son has an extreme fear of dogs: Her son has cynophobia. I am interested in the study of ancient things: I am interested in archaeology.

2. **Idioms:** An **idiom** is a phrase or expression that typically presents a figurative, non-literal meaning attached to the phrase; but some phrases become figurative idioms while retaining the literal meaning of the phrase. Break the ice -To get the conversation going. Provide a conversation prompt. **Example:** Starting class with a joke or subjects students like will help to **break the ice**.
3. **Words from Headlines:** the heading or caption of a newspaper article -publicize widely or highly, as if with a headline - provide (a newspaper page or a story) with a headline - Headlines play a very important in any newspaper. Actually, Headline is used to attract the user to read the whole news. Headlines describe the whole news in short. Utterly-Completely, Scramble - Climb, Feud – Fight
4. **Homophones and Homonyms:** Words that sound alike but are different in meaning and spelling are called as Homophones ('bored'- 'board'); rather words that are similar in spelling and pronunciation but different in meaning are called as Homonyms ('park'- 'park').

UNIT – V (LANGUAGE STUDY AND COMMUNICATION)

LECTURE HOURS-12

1. **Letter Writing :** A letter is a written message that can be handwritten or printed on paper. It is usually sent to the recipient via mail or post in an envelope, although this is not a requirement as such. Any such message that is transferred via post is a letter, a written conversation between two parties. Letters are of two types – 1. Formal Letter A Letter written for a formal purpose is called a Formal letter. It addresses a serious issue 2. Informal Letter - A Letter written for an informal purpose is called an Informal letter. It is written for a casual purpose.
2. **Poster Making:** Posters have become an increasingly popular means of communicating research findings. However, at conferences there are often a large number of posters on display, so you need to ensure that yours is well-designed to attract, and hold, other people's attention. Elements of Mail Writing- The Format of Mail Writing
3. **E-mail Writing:** Email stands for electronic mail. It is the easiest and cheapest way of communication, which is primarily sent from the computer and mobile devices to one or multiple recipients. An email can be formal or informal depending on the circumstances if it is for the office purpose, Companies, organizations, govt. departments and officers use formal emails which are written like formal letters for official communication. Informal emails are sent to family, relatives, friends and sometimes acquaintances and are written in a friendly and conversational style.
4. **Note Making:** Notes are a permanent record of information that will help you prepare for seminars, presentations, assignments and examinations. Note-making helps you concentrate on what you are reading, watching or hearing; it helps you to understand new information and new ideas; noting things down in your own words helps to place them in your long-term memory. Effective note-making is a key academic skill; The Procedure of Note Making. Read the passage carefully and thoroughly While reading the passage, underline the key sentences. It will help you in forming the title and sub-titles. Make a rough note of the main points and give them a logical sequence. Use any format you like but it should depend on the theme of the passage. A little practice will make you adept in note-making.

Text Books :

- T1. Tagore. *One Act Plays*. New Century Book House, 2004.
- T2. Virtual English. Prepared by The Department of English. 2018.
- T3. Effective English | Edition:1 | RVS | Department of English. 2019

Reference Books:

- R1. High School English Grammar And Composition Book. Wren & Martin. 2017.
- R2. Developing Reading Skills. Edition 1. Bloomsbury. 2015.

Course Title : MATHEMATICS-II (T)	Course Code : -23A
Semester : II	Course Group : DSC-III
Teaching Scheme in Hrs (L:T:P) : 5:1:0	Credits : 6
Map Code : F (PROBLEM-ANALYSIS)	Total Contact Hours : 90
CIA : 25 Marks	SEE # : 75 Marks
Programme: B.Sc. Electronics and Communication Systems & Internet of Things # - Semester End Exam	

No.	Course Outcome	PSOs	Cl. Ses	CL
CO1	Solving simultaneous linear equations in Numerical Methods.	PSO1	18	AP
CO2	Compute Fourier series problems.	PSO1	18	AP
CO3	Recall Fourier Transforms and solve the related problems.	PSO1	18	AP
CO4	Solve the Differential equation problems and Understand the working nature of different circuits.	PSO1	18	AP
CO5	Recall probability Distribution, Correlation and Regression to solve the related problems.	PSO1	18	AP

UNIT I

LECTURE HOURS:18

Numerical Methods Solving simultaneous linear equation using Gauss elimination process (Related problems) - Gauss – Jordan Method (Related problems)– Gauss Jacobi Method (Related problems) – Gauss Seidal Method (Related problems)– Numerical Integration (Related problems) – Trapezoidal rule (Related problems) – Simpson’s rule(Related problems) – Romberg’s Integration(Related problems).

UNIT II Fourier series

LECTURE HOURS:18

Dirichlet’s conditions (Related problems) – General Fourier series(Related problems) – Change of length of interval (Related problems).Half-range Expansions.(Related problems)

UNIT III Fourier Transform

LECTURE HOURS:18

Complex Fourier Transform and its inversion formula(Related problems)-Fourier sine transform (Related problems)-Fourier cosine transform (Related problems).

UNIT IV -Differential Equations

LECTURE HOURS:18

Second order linear differential equations with constant coefficient (Related problems)–Evaluation of the particular integral (Multiplication of the form $x^k, e^{ax}\sin ax, e^{ax}\cos ax$).-Application of electrical Circuits RL, RC, and RLC (Related problems).

UNIT V –Probability Distribution, Correlation, Regressions

LECTURE HOURS:18

Probability distribution (Related problems)- binomial distribution (Related problems)- Poisson distribution (Related problems).-Karl Pearson’s coefficient of correlation (Related problems)-Spearman’s Rank Correlation (Related problems)- Regression equations (Related problems).

TEXT BOOK

1. M.K. Venkatraman, “Numerical methods in Science and Engineering, National Publication, Chennai
2. Engineering Mathematics -Volume – II, M.K. Venkatraman, National Publication, Chennai
3. Higher Mathematics for Engineering and Science, M.K. Venkatraman, National Publication, Chennai

REFERENCE BOOK

1. Engineering Mathematics – P.K. Kandasamy, S. Chand, Publications, New Delhi
2. Engineering Mathematics – A. Singaravelu, Meenakshi Agencies, Chennai

Course Title : FUNDAMENTALS OF DIGITAL AND ICs	Course Code: 23B
Semester : II	Course Group: DSC-IV
Teaching Scheme in Hrs (L:T:P) : 4:0:0	Credits: 4 Credits
Map Code : D (THEORY – APPLICATION)	Total Contact Hours : 60
CIA : 25 Marks	SEE #: 75 Marks
Programme : BSC-IoT	# - Semester End Exam

No	Course Outcome (Cos): After completion of this course, the students will be able to	POs & PSOs	Cl.Ses.	CL
CO1	Describe all number system and convert from one form to another form of number system	PO1& PSO1	12	U
CO2	Identify all logic gates, retell Boolean theorem and solve Boolean algebra	PO1& PSO1	12	A
CO3	Retell and solve binary problems using combinational circuits.	PO1& PSO1	12	A
CO4	Retell and solve binary problems using sequential circuits.	PO1& PSO1	12	A
CO5	Identify and explain Analog ICs	PO1& PSO1	12	U

UNIT I: NUMBER SYSTEM

LECTURE HOURS: 12

Decimal number system (9's & 10's Complements, 9's Complement method of Subtraction, 10's Complements method of Subtraction) - Binary Number System(Counting in binary, B- to –D conversion, D- to –B conversion, Binary Addition, Binary subtraction) - Signed number system(Representation of signed number, 2's Complement Arithmetic, 1's Complement Arithmetic) - Octal Number System(O – to – B conversion, B – to – O conversion, O – to – D conversion, D – to – O conversion, Octal Arithmetic) - Hexadecimal Number System(Counting sequence, B – to – H conversion, H – to – B conversion, H – to – D conversion, D – to – H conversion, O – to – H conversion, H – to – O conversion, Hexadecimal Arithmetic)

UNIT II: LOGIC GATES & BOOLEAN THEOREMS

LECTURE HOURS: 12

Logic Gates(Introduction, Types) - AND Gate, OR Gate NOT Gate (Symbol, Truth table and operation) - Universal Gate & X-OR gate(NAND & NOR gate, X-OR gate as an inverter)-Boolean LAW(Complement Law, AND Law, OR Law, Commutative Law, Associative Law, Distributive Law, Redundant Literal Rule, Idempotence Law, Absorption Law) - Boolean Theorems(Consensus Theorem, Transposition Theorem, De Morgan's Theorem)

UNIT III: COMBINATIONAL CIRCUIT

LECTURE HOURS: 12

Introduction & Design Procedure– Adders(Half adder, Full adder)– Subtractors(Half subtractor, Full Subtractor) - Binary Parallel Adder (4- Bit Parallel adder & Binary Adder-Subtractor) – Comparator(1- Bit

magnitude comparator)–Encoder(O – to – B encoder)– Decoder(BCD – to – Seven segment decoder)– Multiplexers(2 Input,)- - De-multiplexer(1 – to – 4).

UNIT IV :SEQUENTIAL CIRCUITS

LECTURE HOURS: 12

Latches & Flip-Flops(Introduction and classification) – REGISTERS-(Shift Registers introduction and its types) - COUNTERS(up –Down counter)-ADC and DAC(Introduction and its types).

UNIT V: IC FABRICATION and Analog IC's

LECTURE HOURS: 12

IC FABRICATION TECHNOLOGY : Fundamentals of monolithic technology , Basic planer process IC 741(Introduction - Inverting and non-inverting - Amplifier internal circuit – Op-amp characteristics ,Applications) IC 555(Introduction-Functional block diagram of IC 555 timer – Monostable operation –Astable operation, Application).

TEXT BOOK

T1. "Fundamentals of Digital Circuits", A. Anand Kumar, 2rd Edition, Eastern Economy Edition

T2:B.S.Sonde, ‘ INTRODUCTION TO SYSTEM DESIGN USING INTEGRATED CIRCUITS’, Willsey eastern Ltd., 1995

T3:D.Roy Choudry , Sahil Jain “ LINEAR INTEGRATED CIRCUITS’ New Age International (p) Ltd., Publishers 2001.

Course Title: FUNDAMENTALS OF DIGITAL AND IC 'S	Course Code: 23P
Semester : II	Course Group: DSC-IV
Teaching Scheme in Hrs (L:T:P) : 0:0:4	Credits: 2 Credits
Map Code: M (PRACTICAL APPLICATION)	Total Contact Hours: 60
CIA: 40 Marks	SEE #: 60 Marks
Programme: BSC-IoT	# - Semester End Exam

LIST OF EXPERIMENTS

1. Verification of logic gates
2. Universal building blocks using NAND gate
3. Universal building blocks using NOR gate
4. Half adder and full adder
5. Half subtractor and full subtractor
6. Data comparator
7. Multiplexer / De-multiplexer
8. Encoder/Decoder
9. Flip flops
10. De-morgans Theorem
11. Inverting Amplifier
12. Non-Inverting Amplifier
13. Astable Multivibrator

TEXT BOOK

- T1.** "Fundamentals of Digital Circuits", A. Anand Kumar, 2rd Edition, Eastern Economy Edition
- T2:**B.S.Sonde, ‘ INTRODUCTION TO SYSTEM DESIGN USING INTEGRATED CIRCUITS’, Willsey eastern Ltd., 1995
- T3:**D.Roy Choudry , Sahil Jain “ LINEAR INTEGRATED CIRCUITS’ New Age International (p) Ltd., Publishers 2001.

Sem	Course Opted	Course Name	D	L	T	P	CIA	ESE	Marks	Credits
III	MIL – III	Tamil - III	3	4	-	-	25	75	100	3

Course Title : TAMIL III (T)	Course Code : 31T
Semester : III	Course Group : MIL - III
Teaching Scheme in Hrs (L:T:P) : 4:0:0	Credits : 3
Map Code: A (Language- Concepts)	Total Contact Hours: 60
CIA: 25 Marks	SEE # : 75 Marks
Programme: ALL II YEAR UG PROGRAMMES	# Semester End Exam

No.	Course Outcomes (Cos): After completion of this course, the students will be able to	POs	CL. Ses	CL
CO1	தமிழ்க்காப்பியங்களின் வழி வாழ்வியல் சிந்தனையைப் பெறுவர்	PO7	14	U
CO2	காப்பியங்கள் அறிமுகப்படுத்தப்படுவதால் தமிழ்மொழியின் உயர்வையும் சிறப்பையும் உணர்தல்	PO7	14	U
CO3	தமிழ்ப்புதினங்களின் வழி சமகாலப்படைப்புகளின் வாழ்வியல் சிந்தனைகளை அறிந்து கொள்வர்	PO3	12	R
CO4	நாவல் இலக்கியம் அறிமுகப்படுத்தப்படுவதால் சிந்தனையாற்றல், படைப்பாற்றல் கற்பனைத்திறன் வளர்தல்	PO2	10	AP
CO5	யாப்பு, அணி இலக்கணங்கள், மொழித்திறன் இலக்கிய வரலாறு ஆகியவற்றைக் கற்பதன் மூலம் போட்டித்தேர்வுகளை எதிர்கொள்ளுதல்	PO1	10	R

அலகு -I காப்பிய இலக்கியம்

பாடவேளைகள் -14

காப்பியங்கள் - சிலப்பதிகாரம் -(வேளிற்காதை - தமிழகத்தின் எல்லையும் தென்றலின் வருகையும் - மாதவியின் பிரிவும்-யாழ்மீட்டலும் - யாழின் உறுப்புகள் - மாதவி கோவலனுக்குத் திருமுகம் அனுப்புதல் - மாதவி கடிதத்தை வசந்தமாலையிடம் கொடுத்தல் - கோவலன் மாதவியின் எண்வகை நடிப்புகளை நடித்துக்காட்டல் -காண்வரி -கண்கூடு வரி -கிளர் வரி - புறவரி- வசந்தமாலை உரைத்தல் - மாதவியின் நம்பிக்கை.)

மணிமேகலை -(மணிமேகலா தெய்வம் வந்து தோன்றிய காதை - உதயகுமரன் மயக்கமும்சுதமதி உரையும் - சுதமதி தன்வரலாறு உரைத்தல் - தந்தையின்பரிவு - சுதமதியின் தந்தை தேடுதல்- தந்தையின்பரிவு - சங்கதருமன் உரை - மணிமேகலா தெய்வம் தோன்றல -புத்த பீடிகை வலம் வருதல் - புகார் எனும் பூங்கொடி -அகழி -ஞாயில் - கோட்டம்- கோயில் பெண்ணாக உருவகித்தல் - அந்திமாலையின் வரவு -பெடையின் நிலை- அன்னச்சேவல் நிலை- பசுவின் நிலை- கோவலர் நஜிலை -மகளிர் நிலை. அந்திமாலைச் சிறப்பு.)

கம்பராமாயணம் - வாலிவதைப்படலம் -(வாலி போருக்கு எழுந்த சூழல் - தாரையின் தடையும்: விடையும் - கிட்கிந்தைக்கு அரசே- வலிமையில் பாதியைப் பெற்று விடுவேன் - இரண்டு மலைகள் மோதுதல் - குயவன் தன் திரிகையிலே மண்ணை வைத்துக் குடத்தை வனைவது போல இருத்தல் - இருவரும் ஒருதாயின் வயிற்றில் பிறந்த பிள்ளைகள் - சந்தன்உபசந்தன் என்னும் மன்னர்கள் - கையினால் ஒருவரை ஒருவர் பற்றி எடுப்பர் - காற்றைப் போல சுற்றிச் சுற்றி வருவர் - கால்களால் பின்னிக் கொள்வர் - வாலி மேல் இராமன் அம்பு எய்தல் - கதிரவன் மகனாகிய சுகிரீவன் - இராமன் மறைந்து நின்று அம்பை விடுத்தல் - வாலி அம்பைப்பற்றிஎடுத்தல் - என்மீது அம்புவிட்டவன் செயல் ஒப்பற்றசெயல் - வாலியின் செய்கையைக் கண்ட தேவரும்படைவீரரும்பிறரும் போற்றல் - அம்பில் பொறித்த நாமம் மூன்று உலகங்களுக்கும் மூல மந்திரம் - வாலி இராமனை இகழ்ந்துரைத்தல் - தாமரை பூப்பதைப் போல அவன் தோன்றினான் - மரபைக்; காத்த நீ தீமை செய்தாய் - பரதனுக்கு முன் தோன்றியவன் - என்பால் எப்பிழையைக் கண்டாய் - அறச் செயலன்று

தகுதியற்ற செயல்- இராமன் மறுமொழி கூறல் - வாலியின் மனமாற்றம் - சிறியன சிந்தியாதவன் வாலி. ; திருவடிகளை எனக்குத் தருவாயாக என்று வேண்டுகல்.)

அலகு II- நாவல்

பாடவேளைகள் -14

புத்துமண் - சுப்ரபாரதி மணியன் -(அதிகாலைப் பொழுதும்சூயிலின் வீடும் - சிவராத்திரியும் பயணமும் - சிவரஞ்சனி-தேனம்மையின் படிப்புகள் - போதை ஆசாமியும் - உளவும் பாதையும்- அமெரிக்கத் தகவலும் - பெண் வடுதலையும்-சுமங்கலித்திட்டமும் - கடிதமும்வீடும் - விதைகளும்; கனவும் - குறுந்செய்திகளும்குற்றச் செய்திகளும் - சுடுமணல் - பூவுலகின் நண்பர்கள் - அஞ்சலி.)

அலகு III- இலக்கணம்

பாடவேளைகள் -12

அணி இலக்கணம் -(அணி இலக்கண நூலும் - வகைகளும் - தன்மையணி-பின்வருநிலையணி - உவமையணி - உருவக அணி - சிலேடையணி - தற்குறிப்பேற்ற அணி)

அலகு IV- பயிற்சி

பாடவேளைகள் -10

1. சிறுகதை உருவாக்கம் -(கதைக்களம்-கதை மாந்தர்கள்-கதைப்பின்னல்-உத்திகள்)
2. கவிதை உருவாக்கம் - (மரபுக்கவிதை-புதுக்கவிதை-கஜல்கவிதை-ஹைக்கூ கவிதை-லிமராக்க கவிதை)
3. நூல் மதிப்பீட்டுப்பயிற்சி -(விமர்சனப்பார்வை-நூல் தரும் கருத்துகள்).

அலகு V - இலக்கிய வரலாறு

பாடவேளைகள் -10

1. காப்பியங்கள் தோற்றம் வளர்ச்சி -(காப்பியம் - விளக்கம் - காப்பிய பகுப்புகள் - காப்பிய இலக்கணம் - காப்பிய வகைகள்)
2. நாவலின் தோற்றம் வளர்ச்சி -(நாவல் - இலக்கணம் - நாவல் தோற்றம் - மேனாட்டில் நாவல் இலக்கியம் - நாவல் வகைகள் - தமிழ் நாவல்கள்.)

பார்வை நூல்கள் :

1. தமிழிலக்கிய வரலாறு - மு. வரதராசன்
2. சிலப்பதிகாரம்--நா. மு. வேங்கடசாமி நாட்டார் -கழக வெளியீடு
3. மணிமேகலை --உ.வே. சாமிநாதய்யர் -கழக வெளியீடு
4. கம்பராமாயணம் - ஆசிரியர் குழுகம்பன்கழகம்
5. புத்துமண் - சுப்ரபாரதி மணியன் - உயிர்மைபதிப்பகம்

Course Title : English III(T)	Course Code:
Semester : III	Course Group: ELN III
Teaching scheme in Hrs(L:T:P) : 4:0:0	Credit : 3
Map Code : A (LANGUAGE CONCEPTS)	Total Contact Hours : 60
CIA : 25Marks	SEE: 75Marks
Programme : All II UG Courses	#-SemesterEndExam

No.	Course Outcomes(Cos): After completion of this course, the students will be able to	PSOs	CL. Ses	CL
CO1	Broaden their outlook and sensibility and be acquainted with cultural diversity and divergence in perspectives.	PSO1	15	AP
CO2	Be updated with basic informatics skills and attitudes relevant to the emerging knowledge society	PSO1, PSO2	15	U
CO3	Produce grammatically and idiomatically correct language	PSO4, PSO6	15	AP
CO4	Gain knowledge in writing techniques to meet academic and professional needs.	PSO4, PSO5, PSO6	15	R
CO5	Be equipped with sufficient practice in Vocabulary, Grammar, Comprehension and Remedial English from the perspective of career oriented tests.	PSO3, PSO8	8	R

UNIT I: POETRY

LECTURE HOURS:12

1.1 The Voice of the Mountains -Mamang Dai- 'The Voice of the Mountain' by Mamang Dai talks about a young man. He brought a fish as an offering to the spirit of the mountain as he couldn't speak. The person thought if the mountain took pity on him, he would grant his voice back. According to the mountain, such acts of pleasing him are repeated.

1.2 Sita- Toru Dutt- In the poem "Sita" the poet Toru Dutt conjures up the mythic past and tries to infuse into it the past glory. She gives a picture of Sita in exile. What fascinates the reader is her description of nature in which flowers, lakes, peacocks, and a herd of deer find a place.

1.3 A Song of Hope – Oodgeroo Noonuccal- The poem 'A Song of Hope' revolves around the dark history of Australia where discrimination and slavery were shown to the Aboriginal People. But unlike most poems 'A Song of Hope' like its name positively talks about a brighter and fairer future for the coming generations of Aboriginal People.

1.4 In an Artist's Studio - Christina Rossetti- Christina Rossetti's sonnet, 'In an Artist's Studio', is broadly concerned with the tensions between art and reality. Specifically, these tensions arise from the relationship between the male artist and the artist's female model, the gazer and the gazed-upon.

UNIT II: SCENES FROM SHAKESPEARE

LECTURE HOURS:12

2.1 Romeo & Juliet -The Balcony Scene- At the start of this scene, Romeo hides beneath Juliet's balcony and overhears her talking about him. He eventually comes out and they talk to each other. They declare their love for each other and arrange to meet the next day when Romeo has promised to marry Juliet.

2.2 Macbeth-Banquet Scene- In this scene, Macbeth and Lady Macbeth host a banquet for the Scottish thanes. A murderer tells Macbeth that he has been successful in killing Banquo, but that Fleance

escaped. During the banquet, Macbeth sees the ghost of Banquo sitting at his place at the table. He is horrified.

2.3 Julius Caesar - Murder Scene-In this scene Caesar refuses to read Artemidorus' warning. Cassius has a moment of panic and fears the plot has been discovered but Brutus reassures him. The conspirators surround Caesar, pretending to kneel in appeal, and Caesar is stabbed to death by all the conspirators.

UNIT III: SPEECHES OF FAMOUS PERSONALITIES

LECTURE HOURS:12

3.1 Tryst with Destiny- Jawaharlal Nehru- This speech was delivered on the midnight of 14th August 1947 to the Indian Constituent Assembly in the Parliament. Tryst with Destiny focuses on restoring the glory of India and rebuilding after the destruction caused by British rule. The speech's central aspect was addressing ignorance, poverty and health.

3.2 Yes, We Can-Barack Obama- “Yes, we can” is a popular repetition in President Obama's speeches. This phrase shows his political power and strong authority to address the weakened era of the US to inspire and motivate citizens towards progress and prosperity.

3.3 You’ve Got to Find What You Love-Steve Jobs- Jobs considered work as his first love always and here's what he said in his speech, "You've got to find what you love. And that is as true for your work as it is for your lovers. Your work is going to fill a large part of your life, and the only way to be truly satisfied is to do what you believe is great work.

UNIT IV: LANGUAGE COMPETENCY

LECTURE HOURS:12

4.1 Writing letters and emails- Different types of letters- Informal letter- Formal letter- E-mail writing introduction- Things to remember while writing an E-mail- Writing an effective E-mail.

4.2 Writing and messaging in social media platform- Writing methods for each social media platforms- Instagram- Twitter- Facebook- LinkedIn

4.3 Learning netiquette, email etiquette- Introduction to netiquette- Rules of netiquette- Introduction to E-mail etiquette- Importance of E-mail etiquette- Rules for E-mail etiquette.

UNIT V: ENGLISH FOR WORKPLACE

LECTURE HOURS:12

5.1 Data Interpretation and Reporting- Introduction to data interpretation- Steps involved in interpretation- Precautions in interpretation- Meaning of research report- purpose or functions of research reports- Characteristics of a good research report- Writing style of report.

5.2 Data Presentation and analysis- Introduction to data presentation- Types of data presentation- Steps involved in presenting data- Data analysis process

5.3 Meeting Etiquettes – Introduction to meeting etiquette- Importance of meeting etiquette- Rules for proper meeting etiquette

Online Meetings - Terms and expressions used

5.4 Conducting and participating in a meeting- Introduction- Rules for conducting effective meeting- Disciplines for participating in a meeting.

Text Books :

T1. Natarajan K. *Enlightening English Prose*. New Century Book House, 2011.

T2.Rathnasabapathi K. *Developing Language Skills through Literature -I*. Sunitha Printers,2016.

T3.Robb, Cuthbert W. *Representative Anthology: English Essays*. Blacky Books, 2011.

Reference Books:

R1. Mohan, Krishna and Banerjee, Meena. *Developing Communication Skills*. Macmillan India, 1990.

Course Title : 8051 Microcontroller and Its Applications (t)	Course Code: 33A
Semester: III	Course Group: DSC-V
Teaching Scheme in Hrs (L:T:P) : 4:0:0	Credits: 4 Credits
Map Code: F(THEORY PROGRAMMING)	Total Contact Hours : 60
CIA: 25 Marks	SEE # : 75 Marks
Programme: BSC-IoT	# - Semester End Exam

No.	Course Outcome (Cos): After completion of this course, the students will be able to	PSO	Cl. Ses	CL
CO1	Gain comprehensive knowledge about Microcomputer programming languages and development tools.	PSO3	12	U
CO2	Gain comprehensive knowledge about addressing modes in 8051 microcontroller	PSO3	12	U
CO3	Gain knowledge about instruction set and and write basic programs in assembly language.	PSO3	12	AP
CO4	Use various peripherals and timers in 8051 microcontroller and develop programs.	PSO3	12	AP
CO5	Write assembly language program in real world applications using interface concepts	PSO3	12	AP

UNIT I : OVERVIEW OF THE MICROCONTROLLER

LECTURE HOURS: 12

Inside the Computer: CPU – ALU - Control Unit – Memory – RAM – ROM – Peripherals –Input - Output. Microprocessor - Microcontroller: Bus Architecture - Computer Languages: Bit – Byte - Nibble- Word – Instruction – Mnemonics – Program - Machine language - Assembly language - Low level Language - High Level Language – Assembler - Compiler - Interpreter- Simulator- Integrated Development Environment (IDE).

UNIT II: 8051 ARCHITECTURE AND ADDRESSING MODES

LECTURE HOURS: 12

Architecture of 8051: Functional units of 8051 Microcontroller. 8051 Memory organization: RAM allocation- Special Function Register [SFR]- Program Memory - Register organization: Flag bits and PSW register- Program counter. Program flow: Instruction Fetching - Decoding and Execution concepts. Addressing modes: Addressing Modes – Immediate - Register – Direct – Register Indirect – Indexed.

UNIT III: INSTRUCTION SET AND PROGRAMMING

LECTURE HOURS: 12

Instruction set - Data transfer Instructions - Arithmetic Instructions - Logical Instructions - Boolean Instructions- Branching Instructions – Jump – Loop - CALL instructions - Introduction to ALP: Data types- assembler directives - simple data transfer programs- Unsigned addition and subtraction- Unsigned multiplication and division- Counting and Looping techniques - Addition of array of data.

UNIT IV: 8051 PERIPHERALS & INTERRUPTS TIMERS

LECTURE HOURS: 12

Programming 8051 timer: Basic registers of timer - Programming 8051 timer and counter. UART: Serial communication registers - 8051 connection to RS232 - 8051 serial communication programming. 8051 interrupts: Interrupts registers - Programming timer interrupts - Programming external hardware Interrupts - Programming with serial communication interrupts.

UNIT V : REAL WORLD APPLICATIONS**LECTURE HOURS: 12**

I/O Interfacing: Keypad interfacing - Display interfacing: LED interfacing - LCD Interfacing. I/O Interfacing data convertor interfacing: ADC Interfacing- Sensor Interfacing- DAC Interfacing - Relay interfacing – Stepper motor Interfacing – DC motor interfacing .

TEXTBOOK:

1. “THE 8051 MICROCONTROLLER AND EMBEDDED SYSTEMS USING ASSEMBLY AND C”
- Muhammad Ali Mazidi, Janice GillispieMazidi And Rollin.D.Mckinlay,phi – 2nd EDITION
2006

REFERENCE BOOK:

1. “THE 8051 MICROCONTROLLER ARCHITECTURE,PROGRAMMING AND APPLICATIONS “-Kennath J Ayala, West publishing company, 4th EDITION

Course Title : 8051 Microcontroller and Its Applications (P)	Course Code: 33P
Semester: III	Course Group: DSC-VIII
Teaching Scheme in Hrs (L:T:P) : 0:0:4	Credits: 2 Credits
Map Code: K(PRACTICAL PROGRAMMING)	Total Contact Hours : 60
CIA: 25 Marks	SEE #: 75 Marks
Programme: BSc-IoT	# - Semester End Exam

LIST OF EXPERIMENTS

1. 8 bit addition and subtraction
2. 8 bit multiplication and division
3. Logical operation
4. Up and down counter
5. Delay generation
6. Largest and smallest no in an array
7. DC Motor interfacing
8. Serial Communication
9. Stepper Motor Interfacing
10. Seven Segment Interfacing
11. LED interfacing
12. Traffic Light Controller
- 13 . Alphanumeric LCD panel and Hex keypad input interface to 8051.
14. Generate different waveforms Sine, Square, Triangular, Ramp etc. using DAC interface to 8051; change the frequency and amplitude.

TEXTBOOK:

1. "THE 8051 MICROCONTROLLER AND EMBEDDED SYSTEMS USING ASSEMBLY AND C"
- Muhammad Ali Mazidi, Janice GillispieMazidi And Rollin.D.Mckinlay,phi – 2nd EDITION
2006

Course Title : WIRELESS SENSOR NETWORK COMMUNICATION	Course Code: 33P
Semester : III	Course Group: DSC VI
Teaching Scheme in Hrs (L:T:P) : 5:1:0	Credits: 4 Credits
Map Code: C(Theory- Concepts)	Total Contact Hours : 90
CIA : 25 Marks	SEE #: 75 Marks
Programme : BSc-IoT	# - Semester End Exam

No	Course Outcome (Cos): After completion of this course, the students will be able to	PSO	Cl. Ses.	CL
CO1	Understand challenges and technologies for wireless networks	PSO1	18	U
CO2	Understand architecture and sensors	PSO1	18	U
CO3	Describe the communication, energy efficiency, computing, storage and transmission	PSO1	18	AP
CO4	Establishing infrastructure and simulations	PSO1	18	AP
CO5	Explain the concept of programming in WSN environment	PSO1	18	AP

UNIT – I: OVERVIEW OF WIRELESS SENSOR NETWORKS

LECTURE HOURS: 18

Single Node Architecture Hardware Components Network Characteristics unique constraints and challenges, Enabling Technologies for Wireless Sensor Networks Types of wireless sensor networks.

UNIT – II: ARCHITECTURES

LECTURE HOURS: 18

Network Architecture Sensor Networks Scenarios Design Principle, Physical Layer and Transceiver Design Considerations, Optimization Goals and Figures of Merit, Gateway Concepts, Operating Systems and Execution Environments introduction to Tiny OS and nesC Internet to WSN Communication.

UNIT – III: NETWORKING SENSORS

LECTURE HOURS: 18

MAC Protocols for Wireless Sensor Networks, Low Duty Cycle Protocols And Wakeup Concepts – SMAC, BMAC Protocol, IEEE 802.15.4 standard and ZigBee, the Mediation Device Protocol, Wakeup Radio Concepts, Address and Name Management, Assignment of MAC Addresses, Routing Protocols Energy Efficient Routing, Geographic Routing

UNIT – IV: INFRASTRUCTURE ESTABLISHMENT

LECTURE HOURS: 18

Topology Control, Clustering, Time Synchronization, Localization and Positioning, Sensor Tasking and Control.

UNIT – V: SENSOR NETWORK PLATFORMS AND TOOLS

LECTURE HOURS: 18

Sensor Node Hardware – Berkeley Motes, Programming Challenges, Node level software platforms, Node level Simulators, Statecentric programming.

TEXT & REFERENCE BOOKS

T1. Holger Karl & Andreas Willig, "Protocols And Architectures for Wireless Sensor Networks", John Wiley, 2005.

T2. Feng Zhao & Leonidas J. Guibas, "Wireless Sensor Networks- An Information Processing Approach", Elsevier, 2007.

T3. Waltenegus Dargie , Christian Poellabauer, "Fundamentals of Wireless Sensor Networks - Theory and Practice", John Wiley & Sons Publications, 2011

R1. Kazem Sohraby, Daniel Minoli, & Taieb Znati, "Wireless Sensor Networks Technology, Protocols, and Applications", John Wiley, 2007.

R2. Anna Hac, "Wireless Sensor Network Designs", John Wiley, 2003

Course Title : C PROGRAMMING	Course Code: 33C
Semester: III	Course Group: DSE-I
Teaching Scheme in Hrs (L:T:P) : 4:0:0	Credits: 4
Map Code :E(THEORY PROGRAMMING)	Total Contact Hours : 60
CIA: 25 Marks	SEE#: 75 Marks
Programme: BSc-IoT	#- Semester End Exam

No.	Course Outcome	PSO	Cl. Ses	CL
CO1	Design Flowchart and write algorithm, pseudo code and comment lines	PSO1	12	AP
CO2	Develop programs by using control structures with arithmetic, relational and logical operators	PSO1	12	AP
CO3	Explore the use of functions, recursion, storage classes and scope of variables	PSO1	12	AP
CO4	Understand the use of arrays and create programs by using arrays and functions	PSO1	12	AP
CO5	Develop programs using pointers with functions	PSO1	12	AP

UNIT : I

LECTURE HOURS: 12

Introduction: Computers and Programming (Moore's Law, Computer organization, machine languages, assembly languages, high level languages, interpreter, Built for Performance, Standardization, The new C standard, Phase 1-6, standard input-output and error streams ,comments , #include preprocessor directive ,blank lines and white space ,the main function , an output statement ,escape sequences ,variable and variable definitions, identifiers and case sensitivity , syntax error , prompting messages, the scanf function and formatted inputs , assignment Statement)-Memory, arithmetic and decision making(Introduction, memory concepts, integer division and the remainder operator , arithmetic expressions in straight line form, parentheses for grouping sub expressions , rules of operator precedence ,sample algebraic and C expressions , Decision Making)- Structured program development (Introduction, Algorithmsand Pseudocode)-Control Structures(Flow charts, Selection Statements in C ,Repetition Statements in C.)- Assignment, Increment and Decrement Operators (Several Assignment Operators ,Unary Increment and Decrement Operators)

UNIT : II

LECTURE HOURS: 12

Control Structures (Counter controlled repetition, Sentinel controlled repetition , Counter Controlled Repetition requirements, for Statement Header Components , General Format of a for Statement , Comma-Separated Lists of Expressions)-Switch Statement Details(switch Statement Flowchart ,Ignoring Newline, Tab and Blank Characters in Input, Constant Integral Expressions, Notes on Integraltypes, do...while Statement Flowchart, break Statement, continue Statement.)-Logical and Assignment operators(Logical

AND (&&) Operator, Logical OR Operator , logical negation (!) operator)-Functions (Introduction, Program Modules in C Math Library Functions, main's return Type, Function maximum ,Passing Arguments by Value and By Reference)-Storage Classes, Scope Rules (Local Variables ,Static Storage Class , Scope rules).

UNIT : III

LECTURE HOURS: 12

Introduction: Arrays (Introduction, Arrays and, Defining Arrays, Defining an Array and Using a Loop to Initialize the Array's Elements,Initializing an Array in a Definition with an Initializer List , Difference Between Passing an Entire Array and Passing an Array Element.)-Multidimensional Arrays (Two-Dimensional Array Manipulations)-Pointers(Declaring Pointers, Initializing and Assigning Values to Pointers, Pointer Representation in Memory,The Indirection (*) Operator , Demonstrating the & and * Operators , Pass-By-Value , Pass-By-Reference, Determining the Sizes of the Standard Types, an Array and a Pointer , Pointer Expressions and Pointer Arithmetic.)-

Arrays of Pointers(String Copying with Arrays and Pointers, Arrays of Pointers, Using Function Pointers to Create a Menu, Driven System).

UNIT : IV

LECTURE HOURS: 12

Character and String Handling: Introduction- Fundamentals of Strings and Characters(Functions isdigit, isalpha, isalnum and isxdigit, Functions islower- isupper-tolower and toupper, Functions isspace, iscntrl-ispunct, isprint and isgraph, Functions fgetc and putchar|, Function getchar,Functionsstrcpy and strncpy|, Functions strcat and strncat, Comparison Functions of the StringHandling Library)-Structures(Self-Referential Structures, Defining variables of Structure Types, Structure Tag Names Operations that can be performed on structures)-Initializing Structure(Introduction, Accessing Structure Members, Using Structures with Functions, typedef.).

UNIT : V

LECTURE HOURS: 12

Unions and Enumeration :(Union Declarations, Operations That Can Be Performed on Unions ,Initializing Unions in Declarations, Demonstrating Unions)- Introduction(Enumeration Constants)- Files and Streams (Introduction, Files and Streams.).

Creating and Reading Sequential File: Introduction(Creating a Sequential Access File, Resetting the File Position Pointer)-Command Line Arguments (Introduction.)

TEXT BOOK:

T1: C - How to program, Paul and Harvey Deitel, 7th Edition, Pearson Education-Inc., 2013.

Course Title: C PROGRAMMING(P)	Course Code: 33Q
Semester: III	Course Group: DSE-I
Teaching Scheme in Hrs (L:T:P) : 0:0:4	Credits: 2
Map Code: K(PRACTICAL PROGRAMMING)	Total Contact Hours : 60
CIA: 25	SEE: 75 Marks
Programme: BSc-IoT	

LIST OF EXPERIMENTS

1. Area and perimeter of triangle
2. Prime number between 1 to n.
- 3 .Sum and average of n numbers
4. Factorial of a number
5. Conversion of temperature
6. Palindrome check
7. Reverse of the integer
8. Arithmetic calculation
9. Sum of even numbers between 1 to n.
10. Cube of a number

TEXT BOOK:

T1: C - How to program, Paul and Harvey Deitel, 7th Edition, Pearson Education- Inc., 2013.

Course Titl : INTRODUCTION TO JAVA SCRIPT (T)	Course Code: 33E
Semester: III	Course Group: DSE-I
Teaching Scheme in Hrs (L:T:P) : 4:0:0	Credits: 4 Credits
Map Code: F(THEORY PROGRAMMING)	Total Contact Hours : 60
CIA: 25 Marks	SEE#: 75 Marks
Programme: BSc-IoT	# Semester End Exam

No.	Course Outcome	PSOs	Cl. Ses	CL
CO1	To understand the web architecture and web services	PSO3	12	AP
CO2	To practical latest web technologies and tools by conducting experiments	PSO3	12	AP
CO3	To design interactive web pages using HTML and Style sheets.	PSO3	12	AP
CO4	To study the frame work and building blocks of .NET Integrated Development Environment	PSO3	12	AP
CO5	To provide solutions by identifying and formulating IT related problems	PSO3	12	AP

Unit-I:

LECTURE HOURS:12

Introduction: HTML, XML, and WWW, Topologies, Bus, Star, Ring, Hybrid, Tree, LAN, WAN, MAN. HTML: Basic HTML, Document body, Text, Hyperlinks, Adding more formatting, Lists, Tables using colors and images. More HTML: Multimedia objects, Frames, Forms towards interactive, HTML document heading.

Unit-II:

LECTURE HOURS:12

Cascading Style Sheets: Introduction, using Styles, simple examples, your own styles, properties and values in styles, style sheet – a worked example.

Unit-III:

LECTURE HOURS:12

Introduction to JavaScript: JavaScript, basics, variables, string manipulations.

Unit-IV:

LECTURE HOURS:12

Functions and Arrays: Mathematical functions, statements, operators, arrays, functions.

Unit-V:

LECTURE HOURS:12

Objects in JavaScript: Data and objects in JavaScript, regular expressions, exceptionhandling, built-in objects, and events in java scrip. Introduction to DHTML.

Additional Inputs:

DHTML with JavaScript: Data validation, opening a new window, messages and confirmations, the status bar, different frames, rollover buttons, moving images, multiple pages in single download, text only menu system.

TEXT BOOKS:

- T1. Uttam Kumar Roy, Web Technologies, Oxford University Press.
- T2. Black Book HTML 5.0
- T3. Complete reference HTML 5.0
- T4. Web Technology, PHI Publications.

CHANGE OF SYLLABUS (2023- BATCH IoT)

Course Title : Embedded Systems and PIC Microcontroller (T)	Course Code : 43A
Semester: IV	Course Group : DSC-VII
Teaching Scheme in Hrs (L:T:P) : 4:0:0	Credits : 4
Map Code: F (THEORY-PROGRAMMING)	Total Contact Hours : 60
CIA : 25 Marks	SEE # : 75 Marks
Programme: B.Sc., (IoT)	# - Semester End Exam

No	Course Outcome (Cos): After completion of this course, the students will be able to	POS & PSOs	Cl.Ses	CL
CO1	Understand the core concepts of Embedded systems and their applications	PS01	12	U
CO2	Describe the hardware details of PIC16F87X microcontroller family.	PS01	12	U
CO3	Identify and practice the various instruction set, programming techniques of PIC microcontroller.	PS01	12	AP
CO4	Illustrate the concept of software architecture for embedded systems.	PS01	12	AP
CO5	Demonstrate the design and development tools of RTOS.	PS01	12	AP

UNIT I: Embedded Systems**LECTURE HOURS: 12**

Definition and classification – Overview of microprocessor, Microcontroller, and DSP – exemplary high performance processors – CISC and RISC architecture – hardware unit in an embedded System- software embedded into a system – exemplary applications – embedded systems on a chip and in VLSI circuit

UNIT II: PIC 16F877 Architecture and Instruction Set**LECTURE HOURS: 12**

Device Overview - Architecture - Memory Organization - Status Register - Option Register - INTCON Register - PCON Register - I/O Ports - Data EEPROM

Instruction Set: Byte Oriented Operations - Bit Oriented Operations Literal and Control Operations.

UNIT III: PIC Peripheral Features**LECTURE HOURS: 12**

TIMER 0 Module - TIMER 1 Module - TIMER 2 Module - Capture/Compare/ PWM Modules - I²C transmission and reception - USART – SPI - ADC Module.

Special features of the CPU: Oscillator Selection — Power on Reset — Power up Timer — Oscillator Startup Timer — Brownout Reset— Interrupts — Watchdog Timer — Sleep.

UNIT IV: Interfacing And Applications**LECTURE HOURS: 12**

Interfacing of Switch and LEDs – Relay and Solenoid Interfacing – Hex Keyboard Interfacing - 7 Segment Display Interfacing - LCD interfacing – DAC interfacing – Stepper motor interfacing – DC motor interfacing -ADC application -PWM applications. (Use Embedded C Programming)

UNIT V: Embedded Software Architecture & Operating System**LECTURE HOURS: 12**

Round Robin — Round Robin with Interrupts — Function Queue Scheduling Architecture— Real Time Operating Systems (RTOS) — Tasks and Data —Semaphores and Shared Data— Message Queues, Mail Box and Pipes —Timer Function — Events — Memory Management - Types of RTOS – Study of Micro C/OS-II - Vx Works.

TEXT BOOKS:

1. Embedded Systems Architecture, Programming and Design-3rd Edission Rajkamal, TATA McGraw-Hill -2017.
2. PIC 16F87X data book, Microchip Technology Inc.,
3. Programming 8 bit PIC microcontroller in C- Martin P. Bates

REFERENCE BOOKS:

1. Embedded Controller Hardware Design - Ken Arnold
2. Designing Embedded Systems with PIC Microcontrollers Principles and applications – Tim Wilmshurst.
3. Programming and customizing PIC micro controllers- by Mykepredrco – 2nd edition –Tata McGraw Hill .

CHANGE OF SYLLABUS (2023- BATCH IoT)	
Course Title : Embedded Systems and PIC Microcontroller (P)	Course Code: 43P
Semester : IV	Course Group : DSC-VII
Teaching Scheme in Hrs (L:T:P) : 0:0:4	Credits: 2
Map Code : G (PRACTICAL PROGRAMMING)	Total Contact Hours: 60
CIA : 25 Marks	SEE #: 75 Marks
Programme: B.Sc., (IoT)	# - Semester End Exam

LIST OF EXPERIMENTS

1. Addition and Subtraction
2. Multiplication and Division
3. Logical Operations
4. Switch and LED Interfacing.
5. Delay generation using Timer 0 / Timer1 / Timer 2.
6. Relay / Solenoid Interfacing.
7. Seven Segment Display Interfacing.
8. LCD Interfacing.
9. Stepper Motor Interfacing.
10. Speed Control of DC Motor Interfacing using PWM.
11. ADC Programming.
12. DAC Interfacing.
13. Temperature measurement using LM35.
14. Digital Clock.
15. Electronic Weighing Machine.

TEXT BOOKS:

1. Embedded Systems Architecture, Programming and Design-3rd Edission Rajkamal, TATA McGraw-Hill -2017.
2. PIC 16F87X data book, Microchip Technology Inc.,
3. Programming 8 bit PIC microcontroller in C- Martin P. Bates

REFERENCE BOOKS:

1. Embedded Controller Hardware Design - Ken Arnold
2. Designing Embedded Systems with PIC Microcontrollers Principles and applications – Tim Wilmshurst.
3. Programming and customizing PIC micro controllers- by My kepredrco – 2nd edition –Tata McGraw Hill .

Course Title : Arduino and Sensors (T)	Course Code : 43B
Semester : IV	Course Group : DSC-VIII
Teaching Scheme in Hrs (L:T:P) : 4:0:0	Credits : 4 Credits
Map Code : F (THEORY-PROGRAMMING)	Total Contact Hours : 60
CIA : 25 Marks	SEE # : 75 Marks
Programme: B.Sc., (IoT)	# - Semester End Exam

No.	Course Outcome (Cos): After completion of this course, the students will be able to	PSOs	Cl.Ses	CL
CO1	Categorizing the basics of AVR microcontroller and to develop the source code in IDE.	PSO1	12	AN
CO2	Summarize the basic Embedded C language extensions.	PSO1	12	U
CO3	Interpret the operation of the input devices such as push buttons and potentiometer.	PSO1	12	AP
CO4	Construct and interface the output devices such as Sound and Display devices.	PSO1	12	AP
CO5	Developing and interfacing concepts by utilizing the sensors.	PSO1	12	AP

UNIT – I: Getting Started

LECTURE HOURS: 12

Microcontroller - Install the Software - The Integrated Development Environment (IDE) - Our first circuit-Updated Circuit-Our First Program-Comments- Gotchas

UNIT- II: EMBEDDED "C"

LECTURE HOURS: 12

“Blinky” - IF Statements - ELSE Statements- WHILE statements - What is truth (true) - Combinations - FOR statements - Our New Circuit - Introducing Arrays

UNIT – III: INPUT AND OUTPUT

LECTURE HOURS: 12

Input - Pushbuttons- Potentiometers - RGB LEDs- Sound Circuit - Simple note - Music - Music with functions – Making a digital thermometer - Serial Monitor - Measuring the temperature - Hooking up the LCD - Talking to the LCD - Bringing it all together

UNIT - IV SENSORS 1

LECTURE HOURS: 12

Introduction - Photo Cell (Light Sensor) - Tilt Sensor Reed Switch (Magnetic Field Detector) - Piezo Element (Vibration sensor)

UNIT V SENSORS 2

LECTURE HOURS: 12

One Servo - Joystick Pan/Tilt bracket - Adding a firing mechanism

TEXT BOOK :

“Introduction to Arduino”, Alan G. Smith, 2011,ISBN: 1463698348 and ISBN-13: 978-1463698348.

CHANGE OF SYLLABUS (2023- BATCH IoT)	
Course Title : Arduino and Sensors (P)	Course Code : 43Q
Semester : IV	Course Group : DSC-VIII
Teaching Scheme in Hrs (L:T:P) : 0:0:4	Credits : 2
Map Code : G (PRACTICAL PROGRAMMING)	Total Contact Hours : 60
CIA : 40 Marks	SEE # : 60 Marks
Programme : B.Sc (IoT)	# - Semester End Exam

LIST OF EXPERIMENTS

1. Installation and Library Management.
2. LED interfacing. [i] Blinking [ii] Running Light.
3. Switch Interfacing [i] Without Interrupt [ii] With Interrupt.
4. Serial Communication & Plotter.
5. ADC Interfacing.
6. Buzzer interfacing.
7. LCD Interfacing.
8. 7 Segment Interfacing.
9. Servo Motor interfacing.
10. Temperature interfacing.
11. PIR Sensor interfacing.
12. Ultrasonic Sensor interfacing.

TEXT BOOK:

1. "Introduction to Arduino", Alan G. Smith, 2011, ISBN: 1463698348 and ISBN-13: 978-1463698348.

Course Title : Python Programming (T)	Course Code : 43C
Semester: IV	Course Group : DSE- II
Teaching Scheme in Hrs (L:T:P) : 4:0:0	Credits : 4
Map Code: F (THEORY-PROGRAMMING)	Total Contact Hours: 60
CIA: 25 Marks	SEE #: 75 Marks
Programme: B.Sc.,(IoT)	# - Semester End Exam

No	Course Outcome (Cos): After completion of this course, the students will be able to	PSO's	Cl. Ses	CL
CO1	Understand the basic concepts of python and elementary programming	PSO1	12	UN
CO2	Summarize the concept of functions, strings and objects	PSO1	12	UN
CO3	Apply the concept of Loops, functions and variables	PSO3	12	AP
CO4	Analyze the concepts of strings ,lists, file and exception handling	PSO3	12	AN
CO5	Evaluate a GUI Programming using Tkinter	PSO2	12	CR

UNIT - I: Introduction to Computers

LECTURE HOURS: 12

Introduction-Computer - Programming Languages - operating systems - Introduction to python - History - Started with python - Programming style and documentation - Programming errors - Graphics Programming - Elementary Programming - Writing a simple program - reading input from the console-identifiers - variables, assignment statements and expressions - simultaneous assignments - named constants - Numeric Data Types and operators - Evaluating expressions and operator precedence - Augmented Assignment Operators.

UNIT – II: Mathematical Functions and Strings

LECTURE HOURS: 12

Introduction - Common python functions - Strings and Characters – Objects - Introduction to objects and methods - formatting numbers and string - Shapes - Drawing various Shapes - Drawing with color and fonts – Selections - Boolean types, values and expressions - if statements - Two way if - else statements, nested if, multi-way if-elif-else statements - Logical operations (not-and-or)

UNIT – III: Loops and Functions

LECTURE HOURS: 12

Loops – Introduction - The while loop - The for Loop - Nested Loops - Functions - Defining a function - Calling a function - functions with/without return values - The Scope of variables - Default arguments - Returning multiple values - Objects and Classes - Defining Classes for objects - Immutable objects vs mutable objects.

UNIT - IV: Strings and Files

LECTURE HOURS: 12

Strings (The Str Class) – Lists (Introduction-List Basics-copying lists-Passing lists to functions-returning a list from a function) –Files and Exception Handling (Text Input and Output-Opening a file-Writing data-Testing a file's Existence-Reading data-Appending data-Writing and reading Numeric Data)

UNIT – V: GUI Programming using Tkinter**LECTURE HOURS: 12**

Introduction - Getting started with Tkinter - Processing Events - GUI-Buttons and callbacks - Canvas Widgets (Widget Classes) - Coordinate sequences - more widgets-packing widgets-menus and callables - Binding-Debugging

TEXT BOOKS:

1. Y. Daniel Liang, "Introduction to Programming using Python", Pearson Publications, 2018.
2. Allen B. Downey, "Python for software Design", Cambridge University Press, 2018.

REFERENCE BOOKS:

1. Martin C. Brown, "Python: The Complete Reference", McGraw Hill Publications 2022.
2. Allen B. Downey, "Think Python: How to Think like a Computer Scientist", 2nd Edition, O'Reilly Publishers, 2016.

CHANGE OF SYLLABUS (2023- BATCH IoT)	
Course Title : PYTHON PROGRAMMING (P)	Course Code : 43S
Semester: IV	Course Group : DSE- II
Teaching Scheme in Hrs (L:T:P) : 0:0:4	Credits : 2
Map Code: G (PRACTICAL PROGRAMMING)	Total Contact Hours: 60
CIA: 25 Marks	SEE #: 75 Marks
Programme: B.Sc., (IoT)	# - Semester End Exam

LIST OF EXPERIMENTS

1. Find sum of two numbers
2. Calculate average of n numbers
3. Find the area of Triangle
4. Calculate the age of a person
5. Check the number is divisible by 5 or not
6. Check the number is Even or odd
7. Find the minimum and maximum among two numbers
8. Find the maximum number among three number
9. Calculate area of a circle
10. Swap two numbers using bitwise operator
11. Check a number is prime number or not
12. Find factorial of a given number
13. Convert decimal to binary
14. Print fibonacci series
15. Sum of first 'N' natural number

TEXT BOOKS:

1. Y. Daniel Liang, "Introduction to Programming using Python", Pearson Publications, 2018.
2. Allen B. Downey, "Python for software Design", Cambridge University Press, 2018.

REFERENCE BOOKS:

1. Martin C. Brown, "Python: The Complete Reference", McGraw Hill Publications 2022.
2. Allen B. Downey, "Think Python: How to Think like a Computer Scientist", 2nd Edition, O'Reilly Publishers, 2016.