SONA COLLEGE OF TECHNOLOGY, SALEM-5

(An Autonomous Institution)

B.E- Mechanical Engineering

CURRICULUM and SYLLABI

[For students admitted in 2023-2024]

B.E / B.Tech Regulations 2023

Approved by BOS and Academic Council meetings

(An Autonomous Institution)

Courses of Study for B.E/B.Tech. Semester I under Regulations 2023 (CBCS) Branch: Mechanical Engineering

S.No	Course Code	Course Title	L	Т	P	J	С	Category	Total Contact Hours	Course Type*
		Theory Cours	ses							
1.	U23ENG101B	Technical English	2	0	0	0	2	HS	30	T
2.	U23MAT102A	Linear Algebra and Calculus with MATLAB	3	0	2	0	4	BS	75	TL
3.	U23CHE104D	Chemistry For Mechanical Engineering	3	0	0	0	3	BS	45	Т
4.	U23PPR105	Problem Solving Using Python Programming	3	0	0	0	3	ES	45	Т
5.	U23BEE106B	Basics of Electrical and Electronics for Mechanical Engineering	2	0	2	0	3	ES	60	TL
6.	U23EGR107	Engineering Graphics	3	0	0	0	3	ES	45	T
7.	U23TAM101	தமிழர் மரபு / Heritage of Tamils	1	0	0	0	1	HS	15	Т
8.	U23GE101	Basic Aptitude I	2	0	0	0	0	AC	30	T
		Practical Cou	irses							
9.	U23CHL111B	Chemistry Laboratory	0	0	2	0	1	BS	30	L
10.	U23PPL112	Python Programming Laboratory	0	0	2	0	1	ES	30	L
				Total	Cre	dits	21			
		Optional Language (Cour	ses**						
11.	U23OL1101	French							15	T
12.	U23OL1102	German		0	0	_	1	OI	15	T
13.	U23OL1103	Japanese	1	U	U	0	1	OL	15	T
14.	U23OL1104	Korean							15	T

*T- Theory, TT- Theory with Tutorial, TL- Theory with Laboratory, TP- Theory with Project, TLP- Theory with Laboratory and Project, L-Laboratory, LT- Laboratory with Theory, LP- Laboratory with Project

**Students may opt for foreign languages viz., German/French/Japanese/Korean with additional one credit

(Not accounted for CGPA calculation)

Approved By

-	of. 200 = 123.	3.800	Nuvakumons	J. Alland 7	
	Chairperson, Science and Humanities BoS	Chairperson, Mechanical BoS	Member Secretary, Academic Council	Dean-Academics	Chairperson, Academic Council & Principal
1	Dr.M.Renuga	Dr. D. Senthilkumar	Dr.R.Shivakumar	Dr.J.Akilandeswari	Dr.S.R.R.Senthil
					Kumar

Copy to:-

HOD/ Mechanical Engineering, First Semester B.E. Mech, Students and Staff, COE

04.08.2023 Version 1.0 Semester I

(An Autonomous Institution)

Courses of Study for B.E/B.Tech. Semester II under Regulations 2023 (CBCS) Branch: Mechanical Engineering

S.N o	Course Code	Course Title	L	T	P	J	C	Category	Total Contact Hours	Course Type*
		Theor	y coi	ırses	61		74	2. 5		
1.	U23ENG201B	Communication Skills in English	2	0	2	0	3	HS	60	TL
2.	U23MAT202C	Vector Calculus and Differential Equations	3	1	0	0	4	BS	60	TT
3.	U23PHY203F	Physics for Mechanical Engineering	3	0	0	0	3	BS	45	Т
4.	U23ME201	Engineering Mechanics for Mechanical Engineering	3	1	0	0	4	ES	60	TT
5.	U23ME202	Manufacturing Process	3	0	0	0	3	PC	45	T
6.	U23TAM201	தமிழரும் தொழில்நுட்பமும்/ Tamils and Technology	1	0	0	0	1	HS	15	Т
7.	U23GE201	Basic Aptitude- II	2	0	0	0	0	AC	30	T
		Practi	cal c	ourses				-		-
8.	U23PHL210A	Physics Laboratory	0	0	2	0	1	BS	30	Ļ
9.	U23ME203	Workshop Practices for Mechanical Engineering	0	0	2	0	1	PC	30	L
		:			l Cre		20			***************************************
			nal I	angua	ige C	ourse	S**	8	4	
10.	U23OL1201	French - II							15 .	T
11.	U23OL1202	German - II				2			15	T
12.	U23OL1203	Japanese - II	1	0	0	0	1	OL	15	T
13.	U23OL1204	Korean - II	8	-					15	T

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(Not accounted for CGPA calculation)

Approved By

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Chairperson, Science and Humanities BoS	Chairperson, Mech BoS	Member Secretary, Academic Council	Dean-Academics	Chairperson, Academic Council & Principal
Dr.M.Renuga	Dr. D.Senthilkumar	Dr.R.Shivakumar	Dr.J.Akilandeswari	Dr.S.R.R.Senthil Kumar

Copy to:-

HOD/ Mechanical Engineering, Second Semester B.E. Mech, Students and Staff, COE

PRINCIPAL SONA COLLEGE OF TECHNOLOGY SALEM-636 005

^{**}Students may opt for foreign languages viz., German/French/Japanese/Korean with additional one credit

(An Autonomous Institution)

Courses of Study for B.E/B.Tech. Semester I under Regulations 2023 (CBCS) Branch: Mechanical Engineering

S.No	Course Code	Course Title	L	Т	P	J	С	Category	Total Contact Hours	Course Type*
		Theory Cours	ses							
1.	U23ENG101B	Technical English	2	0	0	0	2	HS	30	T
2.	U23MAT102A	Linear Algebra and Calculus with MATLAB	3	0	2	0	4	BS	75	TL
3.	U23CHE104D	Chemistry For Mechanical Engineering	3	0	0	0	3	BS	45	Т
4.	U23PPR105	Problem Solving Using Python Programming	3	0	0	0	3	ES	45	Т
5.	U23BEE106B	Basics of Electrical and Electronics for Mechanical Engineering	2	0	2	0	3	ES	60	TL
6.	U23EGR107	Engineering Graphics	3	0	0	0	3	ES	45	T
7.	U23TAM101	தமிழர் மரபு / Heritage of Tamils	1	0	0	0	1	HS	15	Т
8.	U23GE101	Basic Aptitude I	2	0	0	0	0	AC	30	T
		Practical Cou	irses							
9.	U23CHL111B	Chemistry Laboratory	0	0	2	0	1	BS	30	L
10.	U23PPL112	Python Programming Laboratory	0	0	2	0	1	ES	30	L
				Total	Cre	dits	21			
		Optional Language (Cour	ses**						
11.	U23OL1101	French							15	T
12.	U23OL1102	German		0	0	_	1	OI	15	T
13.	U23OL1103	Japanese	1	U	U	0	1	OL	15	T
14.	U23OL1104	Korean							15	T

*T- Theory, TT- Theory with Tutorial, TL- Theory with Laboratory, TP- Theory with Project, TLP- Theory with Laboratory and Project, L-Laboratory, LT- Laboratory with Theory, LP- Laboratory with Project

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HOD/ Mechanical Engineering, First Semester B.E. Mech, Students and Staff, COE

04.08.2023 Version 1.0 Semester I

Course Outcomes	U23	ENG1	01B			Tech	nical E	nglish			L	T	P	J	С
At the end of the course, the student will be able to CO1: Frame sentences correctly, both in written and spoken forms of language with accuracy and fluency. CO2: Develop effective reading skills and reinforce language skills required for using grammar and building vocabulary CO3: Develop skills for writing conversations, proposals, reports and transcoding. CO5: Read for understanding and interpreting information and to utilise information accordingly. Pre-requisite: Nowledge and Understanding of Grammar Fundamental Language Skills (LSRW) CO/PO, PSO Mapping	020	LITOI	01 D			1001	IIICUI L			_	2	0	0	0	2
CO1: Frame sentences correctly, both in written and spoken forms of language with accuracy and fluency. CO2: Develop effective reading skills and reinforce language skills required for using grammar and building vocabulary CO3: Organise ideas and supporting arguments logically. CO4: Develop skills for writing conversations, proposals, reports and transcoding. CO5: Read for understanding and interpreting information and to utilise information accordingly. Pre-requisite:															
fluency. CO2: Develop effective reading skills and reinforce language skills required for using grammar and building vocabulary															
Duilding vocabulary	CO1:	flu	ency.												
CO4: Develop skills for writing conversations, proposals, reports and transcoding.	CO2:	bui	ilding vo	ocabula	ry					skills	required	for usi	ng gran	nmar ar	ıd
CO5: Read for understanding and interpreting information and to utilise information accordingly.	CO3:														-
Pre-requisite: Nowledge and Understanding of Grammar															
Nowledge and Understanding of Grammar Fundamental Language Skills (LSRW) CO/PO, PSO Mapping (3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak				ndersta	nding a	nd inter	rpreting	inform	ation ar	id to ut	ilise info	ormatio	n accord	dingly.	
Fundamental Language Skills (LSRW) CO/PO, PSO Mapping	Pre-rec							=							
Cost			0			0		nmar	,						
Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)						(CO/PO,	PSO M	lapping	;					
PO1															
PO1 PO2 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PS	COs				I construction of the second	1	1	I CONTRACTOR OF THE PARTY OF TH	1	CONTRACTOR SPECIAL					
CO2		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	PSO2
CO3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	CO1	1	1	2	2	2	3	3	2	3	3	3	3	3	3
CO4	CO2	1	2	2	3	2	3	3	2	3	3	2	3	3	3
Course Assessment methods Course Assessment methods	CO3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Course Assessment methods Direct Indirect CIE test I (8) Objectives Test (6) CIE test II (8) Attendance (5) Course end survey CIE test III (8) Total CIE: 40 marks Assignment/seminar/Quiz (5) Semester End Examination (60) Unit 01: 6 Hours Comparative adjectives Recommendations Conversation writing Reading passages for specific information transfer Unit 02: 6 Hours Prepositions, adverbs Note making Reading passage with multiple choice questions, reading for gist and reading for specific information	CO4	1	3	1	2	2	3	3	3	3	3	3	3	3	3
CIE test I (8) CIE test II (8) CIE test III (8) CIE test III (8) Assignment/seminar/Quiz (5) Course end survey 6 Hours Comparative adjectives Recommendations Conversation writing Reading passages for specific information transfer Unit 02: Prepositions, adverbs Note making Reading passage with multiple choice questions, reading for gist and reading for specific information	CO5	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CIE test I (8) CIE test II (8) Attendance (5) CIE test III (8) Assignment/seminar/Quiz (5) Unit 01: Comparative adjectives Recommendations Conversation writing Reading passages for specific information transfer Unit 02: Prepositions, adverbs Note making Reading passage with multiple choice questions, reading for gist and reading for specific information						Cou	ırse Ass	essmer	nt meth	ods					
CIE test II (8) CIE test III (8) Assignment/seminar/Quiz (5) Unit 01: Comparative adjectives Recommendations Conversation writing Reading passages for specific information transfer Unit 02: Prepositions, adverbs Note making Reading passage with multiple choice questions, reading for gist and reading for specific information		*			I	Direct							Indir	ect	
Unit 01: Comparative adjectives Recommendations Conversation writing Reading passages for specific information transfer Unit 02: Prepositions, adverbs Note making Reading passage with multiple choice questions, reading for gist and reading for specific information	CIE tes	st II (8) st III (8)		Ouiz (5)	T	Attendar Total CI	nce (5) E: 40 ma	arks	tion (60	0)	Соі	urse end	d surve	y
 Comparative adjectives Recommendations Conversation writing Reading passages for specific information transfer Unit 02: Prepositions, adverbs Note making Reading passage with multiple choice questions, reading for gist and reading for specific information 				~ `	,		1.87							6 Hou	rs
 Recommendations Conversation writing Reading passages for specific information transfer Unit 02: Prepositions, adverbs Note making Reading passage with multiple choice questions, reading for gist and reading for specific information 			arative a	diectiv	es										
Conversation writing Reading passages for specific information transfer Unit 02: Prepositions, adverbs Note making Reading passage with multiple choice questions, reading for gist and reading for specific information.	•														
 Reading passages for specific information transfer Unit 02: Prepositions, adverbs Note making Reading passage with multiple choice questions, reading for gist and reading for specific information 	•	Conve	ersation	writing											
 Prepositions, adverbs Note making Reading passage with multiple choice questions, reading for gist and reading for specific information 	•				specific	inform	nation t	ransfer		1					170
 Note making Reading passage with multiple choice questions, reading for gist and reading for specific information 	Jnit 02:													6 Hou	rs
 Note making Reading passage with multiple choice questions, reading for gist and reading for specific information 	•	Prepos	sitions, a	dverbs					l.						
	•			ge with	multip	le choic	ce quest	ions, re	ading f	or gist a	and read	ing for	specific	inforn	nation
Unit 03 6 Hours	Jnit 03	- LVUUII	-5 Passa	D 111111	- III WILLIA	-5 -1101	- 5 40000	, 10	B	8.00		-0 -01	7	6 Hou	
Collocations, direct and indirect speech		Collor	rations 4	direct a	nd indi	ect sne	ech					-			

- Memo
- Proposal: establishing a lab, introducing a subject in the curriculum, training programme for students
- Short reading passage: gap-filling exercise related to grammar

Unit 04:

6 Hours

- · Cause and effect
- Technical report writing feasibility report, accident report, survey report
- Short reading passages for sentence matching exercises, picking out specific information in a short text

Unit 05:

6 Hours

- Pronouns
- Transcoding bar chart, pie chart, tabular column

Theory: 30 Hrs	Tutorial:	Practical:	Project:	Total Hours: 30 Hrs
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TEXT BOOKS

- 1. Technical English I & II, Dr. M. Renuga et al. Sonaversity, 2016
- 2 Extensive Reading
 - 1. Who Moved my Cheese? Spencer Johnson-G. P. Putnam's Sons
 - 2. Discover the Diamond in You Arindham Chaudhari Vikas Publishing House Pvt. Ltd.

REFERENCES

- 1. Norman Whitby, Business Benchmark Pre-Intermediate to Intermediate, Students Book, Cambridge University Press, 2006.
- 2. A Course in Communication Skills, P. Kiranmai Dutt, Geetha Rajeevan, C. L. N. Prakash, published by Cambridge University Press India Pvt. Ltd.

HOD

Dr. M.RENUGA, Professor & Head,

Department of Humanities & Languages, Sona College of Technology, SALEM

BoS Date: 08. 07. 2023

-				В.	E. / M	ECHA	NICAL	ENGI	NEER	ING				
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Course	Outco	mes												
At the e	nd of	the cou	rse, the	student	will be	able to								
CO1:	find	the ran	k of the	matrix a	nd solve	linear s	ystem of	fequation	ons by di	rect and i	ndirect r	nethod	3	
CO2:	appl	y the co	oncepts o	of vector	spaces a	and linea	ar transfe	ormation	ns in real	world ap	plication	ns		
CO3:	appl	y the co	oncepts o	of eigenv	alues ar	d eigen	vectors o	of a real	matrix a	nd their p	ropertie	s to dia	gonalize	the
CO4:	100000	*****	lor's ser	ies eyna	nsion I	acobians	and the	mavim	and mi	nima of fi	unotions	of two	zroni obl	-
CO5:	_									and volu		or two	variable	:S
Pre-requ														
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CO3	3		2	3							2	2	la constant	3
	3		Arma California											
CO4			2	3				5.6			2	2		3
CO5	3		2	3			-				2	2		3
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CIE test CIE test CIE test Attendar Assignm	II (10) III (10) IV (10) nce (5)	(Theorem) (Theorem) (Prace	ry) ory) tical)		Seme		marks Examin (35) +			***************************************	Cours	se end s	urvey	
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	a mat	rix – so		f linear s			ons by r	natrix m	nethod, (Gauss elin	nination	, Gauss	-Jordan	Gauss-
nit 02	VEC	TORS	PACES										9 H	ours
Vector s									s – dime	ension – l	inear tra	nsform	ations (naps) –
nit 03			LUES A					-					9 H	ours
			vectors			- proper	ties of e	igenvalı	ies and	eigenvecto	ors – Ca	yley-H	amilton	heorem

Unit 04	MULTIVARIABLE CALCULUS	9 Hours
two va	ons of several variables – partial differentiation – total derivative – Jacobians – Taylor's thariables – maxima and minima of functions of two variables without constraints – contable by Lagrange's method of undetermined multipliers.	eorem for functions of nstrained maxima and
Unit 05	MULTIPLE INTEGRALS	9 Hours
	e integrals – change of order of integration – change of variables from Cartesian to polar e integrals in Cartesian coordinates – triple integrals – volume as triple integrals in Cartesian	
	List of MATLAB Programs	
1.	Programs based on elementary operations on matrices	
2.	Computing the rank of a matrix	,
3.	Finding eigenvalues and eigenvectors of a matrix	
4.	Finding partial derivatives of functions of several variables	
5.	Computing stationary points of functions of two variables	
6.	Taylors series expansion of functions of two variables	
7.	Evaluating double integrals	
8.	Finding area as double integrals	and the second s
9.	Evaluating triple integrals	
10.	Finding volume as triple integrals	
Theor	y: 45 Hrs Tutorial: - Practical: 30 Hrs Project: To	tal Hours: 75 Hrs
TEXT	BOOKS:	
1.		ers, 1 st Edition, 2018.
2.		, 1° Edition, 2019.
3.	W. Yang, Y. K. Choi, K. Jaekwon, M. C. Kim, H. J. Kim and T. Im, "Engineering Mathe MATLAB", CRC Press Publishers, 1st Edition, 2017.	matics with
REFE	ERENCE BOOKS:	
1.	S. Lipschutz and M. L. Lipson, "Linear Algebra", McGraw Hill Publishers, 6th Edition, 2	018.
2.	E. Kreyszig, "Advanced Engineering Mathematics", Wiley Publishers, 10 th Edition, Repr	int, 2017.
3.		lition, 2018.
4.		t, 2017.
5.		
6.	D. Xu, "Calculus problem solutions with MATLAB", Walter de Gruyter Publishers, 1st E	dition, 2020.

Dr. S. JAYABHARATHI

Head / Department of Mathematics Sona College of Technology Salem – 636 005 Dr. M. RENUGA

BoS - Chairperson Science and Humanities Sona College of Technology Salem – 636 005

BoS Date: 08. 07. 2023

Dr. S. JAYABHARATHI

ASSOCIATE PROFESSOR & HEAD
DEPARTMENT OF MATHEMATICS,
SONA COLLEGE OF TECHNOLOGY,
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Ph: 0427 - 4099999.

B.E B.Tech Regulations 2023 Professor & nead,

Department of Humanities & Languages, Sona College of Technology, SALEM - 636 005.

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Cours	se Ou	ıtcon	nes												
At the	e end	of th	ne cou	rse, the	studen	t will	be able	to			-				
CO1	L:	Unđ	erstan	đ the p	rinciple	, appli	ications o	of electi	rochemi	stry an	đ types	of corre	osion.		
CO	2:	Sum	marize	e the we	orking j	princij	ole and a	pplicat	ions of	energy	storage	devices	S.		
CO	3:	Desc	ribe tl	he basi	c conce	epts a	nd real	time ap	plication	ons of	surface	chemis	stry and	d cataly	sis in
		engi	neering	g and to	echnolo	gy.	×								
CO	4:		lyse th bio fue	_	osition	, calor	ific value	es, uses	of natu	ıral fue	ls and t	he man	ufactur	e of syr	thetic
COS	5:	Und	erstan	d the	stateme	ent, ir	ndustrial	impo	rtance	of pha	se rule,	types	, comp	osition	s and
		appl	ication	s of all	oys.								. 4		
Pre-re	equis	ite: B	asic kr	nowled	ge on tl	ne con	cepts of	organic	, inorga	nic and	d physic	al chem	nistry.		
							CO/PO,	PSO M	lapping	;					
			(3/2,	/1 indic	ates the	e stren	gth of co	orrelatio	on) 3-Sti	ong, 2	Mediun	n, 1-We	ak		
COs		. 1					es (POs)		T		- Control of the cont	The state of the s	Control Control Control	04160	
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CO1	3		2					2							3
CO2	2		2					2					. 1		3
СОЗ	3		2												3
CO4	3		3					2							3
CO5	3		3												3
						Co	urse Ass	essmer	nt meth	ods			181		
					E	Direct							Indir	ect	
CIE te CIE te CIE te	est II est III	(8) (8)	1				Objective Attendar Fotal CII	nce (5) E: 40 ma	arks			Соі	ırse end	d surve	у
				Quiz (5			Semester		xamina	tion (60)				
Jnit 01	l: EL	ECTE	ROCH	EMIST	RY AN	D CO	RROSIC	ON				.,		9 Hour	S
calcula electro electro	ation ode - oche ducto	i – r - glas mical	eferenc ss elect cells –	ce elec trode – EMF –	trodes measu measu	– star remen remer	derivate dard hy t of pH t of emf HCl vs l	ydrogei – electi – potei	n electr rochemi ntiomet	ode – ical ser ric titra	calome ies – sig ations (re	l electr mifican edox – l	ode – ce – ele Fe2+ vs	Ion selectrolytics dichro	ective ic and mate)

Unit 02: CHEMISTRY OF ENERGY STORAGE DEVICES

9 Hours

Reversible and Irreversible Cells – Batteries-Types of Batteries – Battery Characteristics-Voltage-Current-Capacity-Electricity Storage Density-Power-Discharge Rate-Cycle Life-Energy Efficiency and Shelf Life – Fabrication and Working of Alkaline Battery-Lead-Acid Battery-Ni-Cd - Lithium Ion Batteries and Solar cells - Fuel Cells – Hydrogen-Oxygen fuel cell – Nano Batteries- Construction-Working-Advantages and Applications.

Unit 03: SURFACE CHEMISTRY AND CATALYSIS

9 Hours

Adsorption – types-physical and chemical adsorption – adsorption of gases on solids- adsorption isotherms – Freundlich and Langmuir isotherms-adsorption of solutes from solution – applications of adsorption-role of adsorption in catalytic reactions – adsorption in industrial waste water treatment by activated carbon – catalysis – types – homogeneous and heterogeneous catalysis – autocatalysis – definition and examples.

Unit 04: FUELS

9 Hours

Fuels – calorific value – gross and net calorific values - problems based on the calculation of calorific value of a fuel – coal – proximate and ultimate analyses – metallurgical coke – manufacture by Otto-Hoffmann method – Petroleum processing and fractions – cracking – types – synthesis of petrol – Bergius process - knocking – octane number and cetane number – power alcohol – manufacture, advantages and disadvantages – biodiesel manufacture by Transesterification process – advantages and disadvantages - Gaseous fuels – Water gas, producer gas, CNG and LPG.

Unit 05: PHASE RULE AND ALLOYS

9 Hours

Statement and explanation of terms involved - limitations and applications of phase rule - Construction of phase diagram for one component system; water system - condensed phase rule - construction of phase diagram by thermal analysis - simple eutectic systems Construction of phase diagram for lead - silver system

Alloys: Introduction- Definition- Properties of alloys- Significance of alloying, Functions and effect of alloying elements - ferrous alloys – nichrome and stainless steel – heat treatment of steel, non-ferrous alloys – brass and bronze.

Theory: 45 Hrs

Tutorial: --

Practical: --

Project:--

Total Hours: 45 Hrs

TEXT BOOKS

- 1. P.C.Jain and Monica Jain, "Engineering Chemistry" Dhanpat Rai Pub, Co., New Delhi, 17th edition, 2018.
- 2. Wiley Editorial Board, "Wiley Engineering Chemistry", 2nd Edition, Wiley India Pvt.Ltd, New Delhi, Reprint 2019

REFERENCES

- 1. O G Palana, Engineering Chemistry", Tata McGraw Hill Education (India) Private Limited, Chennai, Second Edition, 2017.
- 2 B Sivasankar, "Engineering Chemistry", Tata McGraw-Hill Pub. Co. Ltd., New Delhi, 2008.
- 3 B.K. Sharma, "Engineering Chemistry", Krishna Prakasan Media (P) Ltd., Meerut, 2001.
- 4. N. Krishnamurthy, K. Jeyasubramanian and P. Vallinayagam, "Applied Chemistry", Tata McGraw-Hill Publishing Company Limited, New Delhi, 1999.

4.8.2023

Version I.0

Programme:

B.E / B.. Tech Regulations 2023

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,

SALEM - 636 005.

Professor of Physics
Head, Department of Sciences
College of Technology (Autonomo:

114-636-005.

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			(Con	nmon to	o Mech	anical,	EEE, &	FT bran	nches)	0	0	2	0	1
Cour	se Ou	tcomes												
At th	e end	of the co	urse, the	studen	t will b	e able	to							
СО	1:	Analyse	he given	water s	ample	to deter	mine th	e amou	nt of ha	ardness a	ind alka	alinity.		
CO	2:	Analyse	he quali	y of bra	ass by e	estimati	ng copp	er and	estima	te the an	nount o	f HCl i	n given	
		sample b	y pH me	try, con	ducton	netry.								
СО		Estimate of water				on in th	e given	water s	ample a	and dete	rmine t	he mole	ecular w	reight
		ite: Capal						iper, Tr	avellin	g micros	scope, S	Spectron	neter, a	ble to
handl	le bure	ette, pipet	te and sta	ındard 1	neasuri	ing flask	ζ.							
					7	CO/PO	PSO M	Iapping						
		(3	/2/1 indi	ates the						Mediun	n, 1-We	ak		
COs			The state of the s		Property and	1	The Control of the Park	1		ific Outo				
	PO		PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	
CO1	3	2		1		1		100	1					2
CO2	3	2		1		1			1					2
CO3	3	2		1		1			1					2
					Cou	ırse Ass	essmer	nt meth	ođs			Sept Marie Applica District		
					Direc	Aleja (Validura)						Ind	lirect	
CIE t	est I (15)			R	TPS (10))							
Quiz	1 (5)				R	Record (10)						ما ما	
CIE t	est II	(15)			Т	otal CII	E:60 ma	irks				Course e	ena surv	/ey
Quiz					S	emester	End E	xamina	tion (40	marks)				
-		XPERIM		, ,		1 1 177	DTA	-11				·		
1	Estim	nation of	naraness	or wate	er samp	ne by Ei	DIA m	etnoa.						
2	Estim	nation of a	alkalinity	of wate	er samp	ole by ir	ndicator	metho	d.				-	

4	Estimation of HCl acid by pH metry.						
5	Estimation of HCl by conductometry. (HCl vs NaOH)						
6	Estimation of mixture of acids by conductometry. (HCl + CH3COOH vs N	IaOH)					
7	Estimation of ferrous ion by potentiometric titration.						
8	Determination of molecular weight of a polymer by viscosity measurement	nts.					
		TOTAL: 30 HOURS					

Chall

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Head, Department of Sciences
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of for

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Department of Humanities & Languages,
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				PRO	DBLEN		LVING			HON	L	T	P	J	C
U	23P	PR10)5				GRAM						0		
				(Comm			SE, CSE(AIML), CSD, CIVIL, BME, ECE, 3 ECH and MCT Branches)							0	3
Cours	e Oı	utcor	nes												
At the	end	l of t	he cou	rse, the	studen	t will	be able	to							
CO ₁	:	Dev	elop al	gorithn	nic solu	tions	to simple	compi	ıtationa	l probl	ems				
CO	2:	Wri	ite simp	le Pyth	on prog	grams							***		
CO	3:	Wri	Write programs with the various control statements and handling strings in Python												
CO	1:	Dev	Develop Python programs using functions and files												
CO	5:	Ana	nalyze a problem and use appropriate data structures to solve it.												
Pre-re	quis	site:	NIL										-		
							COMO	DCO N							etige in a
			(3/2)	/1 indic	ates the		CO/PO,				Mediur	n, 1-We	ak		
CO			I	Progran	nme Oı	utcom	es (POs)	and Pro	ogramn	ne Spec	ific Out	comes (PSOs)		
COs	PC	01	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	PSC
CO1	2	2	2	3	1	1									1
CO2	2	-	2	3	1	1					100				1
CO3	2		2	3	1	1									1
CO4 CO5	2		2	3	1	1									1
COO		-		0	-		urse Ass	sessmer	nt meth	ods					1
					Ī	Direct							Indir	ect	
CIE te	est I ((8)					Objectiv	es Test	(6)		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				
CIE te						- 1	Attenda		,						
CIE te	est II	I (8)					Total CI	E: 40 m	arks			Cot	urse end	d surve	y
Assig	nme	nt/se	eminar/0	Quiz (5))		Semeste	r End E	xamina	tion (60))				
Jnit 01	l: AL	GO	RITHM	IIC PRO	OBLEM	1 SOL	VING						T	9 Hour	rs
Need	for	com	nuter l	anguag	es Alo	orithr	ns, build	ling blo	ocks of	algorit	hms (st	atemen	ts state	contr	ol
			_	-	_		flow ch	_		_					
				-			lgorithm	_	_			,, 0		•	
Jnit 02	2: BA	SIC	S OF P	YTHO	N PRO	GRAN	MING						T	9 Hou	rs
Introd	lucti	on-P	ython	Interpre	eter-Int	eractiv	ve and s	cript m	ode -V	alues a	nd type	es, vari	ables, c	perato	rs,
-				-			operators trings, in		-	_			input	functio	n,
Jnit 03	3: CC	TNC	ROL ST	ГАТЕМ	IENTS	AND	STRING	GS	1		1:			9 Hour	rs
	-						ed condi		if-elif-e	lse). Ite	ration-w	vhile, fo	or, infin		



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Programmer: BE & B Tech

break, continue, pass, else. Strings-String slices, immutability, string methods and operations.

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PROFESSOR & HEAD
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SONA COLLEGE OF TECHNOLOGY
SALEM-636 005

Unit 04: FUNCTIONS, FILES AND MODULES

9 Hours

Functions - Introduction, inbuilt functions, user defined functions, passing parameters - positional arguments, default arguments, keyword arguments, return values, local scope, global scope and recursion. Files -Text files, reading and writing files. Modules - create - import.

Unit 05: DATA STRUCTURES: LISTS, SETS, TUPLES, DICTIONARIES

9 Hours

Lists-creating lists, list operations, list methods, mutability list functions, searching and sorting, Sets-creating sets, set operations. Tuples-Tuple assignment, Operations on Tuples, lists and tuples, Tuple as return value- Dictionaries-operations and methods, Nested Dictionaries, Union Operation.

7	Theory: 45 Hrs	Tutorial:	Practical:	Project:	Total Hours: 45 Hrs		
TEX	Г ВООКЅ						
1.	Reema Thareja, "Edition 2023.	Problem Solving a	and Programming	with Python" Oxi	ford University Press, 2 nd		
REFI	ERENCES						
1.	Ashok Namdev k Python" Mc-Graw			"Programming an	d Problem Solving with		
2.	Charles Dierbach, "Introduction to Computer Science using Python: A Computational Problem Solving Focus" Wiley India Edition, 2013.						
3.	Allen Downey, "Think Python: How to Think Like a Computer Scientist" O'Reilly Media, 2nd Edition 2016.						
4.	Timothy A Rudd	" Evploring Putho	n" Mc-Graw Hill	Education (India)	Drivata Ltd. 2015		

Dr. J. AKILANDESWARI
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SALEM-636 005



U23PPL112

PYTHON PROGRAMMING LABORATORY

L T P J C
0 0 2 0 1

(Common to ADS, IT, CSE, CSE(AIML), CSD, CIVIL, BME, ECE, EEE, MECH and MCT Branches)

Course Outcomes

At the end of the course, the student will be able to

CO1:	Implement the algorithms using basic control structures in Python

CO2: Develop Python programs to use functions, strings and data structures to solve different types of problems

CO3: Implement persistent storing information through file operations

Pre-requisite: NIL

CO/PO, PSO Mapping

(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

CO-		Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)												
COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	2	3	2	1								1
CO2	3	3	3	3	2	2								1
CO3	3	3	3	3	2	2								1

Course Assessment methods

	Indirect	
CIE test I (15) Quiz I- (5) CIE test II (15) Quiz II- (5)	RTPS (10) Record (10) Total CIE: 60 marks Semester End Examination (40 marks)	Course end survey

LIST OF EXPERIMENTS

- 1. Draw flowchart using any open source software.
- 2. Implement programs with simple language features.
- 3. Implement various branching statements in python.
- 4. Implement various looping statements in python.
- Develop python programs to perform various string operations like concatenation, slicing, indexing.
- 6. Implement user defined functions using python.
- 7. Implement recursion using python.
- 8. Implement python program to perform operations on file and module.
- 9. Develop python programs to perform operations on list and tuples.
- 10. Implement dictionary and set in python.

Theory: -- Tutorial: -- Practical: 30Hrs Project: -- Total Hours: 30 Hs

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U.	ZJDEI	2100D		ELECI		NICS FOR MECHANICAL ENGINEERING 2					0	2	0	3	
Cours	e Out	comes							1,17%						
At the	end o	f the cours	se, the st	tudent v	vill be	able to									
CO1	: 2	Analyse the	various	DC and	AC c	ircuits and	find th	e circuit	parame	ters.		Aug 1		ji i i	
CO2	2: 1	Discuss the	constru	ction and	d work	cing princi	ples of	DC mac	hines.			, 1			
CO3	CO3: Explain the construction and working principles of transformers and induction motors														
CO4: Explain the basics of semiconductor devices for various applications.															
COS	5:]	Discuss the	types of	electric	drive	and the so	olid state	speed o	control o	of DC mo	otors and	AC mo	otors.		
Pre-re	eanisit	e: Physics									05 M L		1.73	<u> </u>	
		. I manaan					wat								
						CO/PO,	PSO M	apping		ig the i					
		(ten i Puri i House de	the President Control of the St	THE PLEASE OF THE PARTY OF THE	ength of co		CONTROL OF STREET							
COs	PO	PO2	Progr	PO4	PO5	nes (POs) PO6	and Pro	gramme PO8	Specifi P09	PO10	PO11		PSO1	PSO	
CO1	3	3	3	3	1	-		-		-	1	1	3	3	
CO2	3	3	3	3	1	- 1		<u>.</u>	-	•	1. ,	1	3	3	
СОЗ	3	3	2	3	-1	-				-	1	1	3	3	
CO4	3	3	2	3	1	- 1	2	_	_	-	2	3	3	3	
CO5	3	3	1	3	1	-	•	-	-	-	2	3	3	3	
7311		30 12 13 25 2			C	ourse Ass	essmen	t metho	ds				15 TE A		
	1 :	350-36 30 1			Dire							Ind	irect		
	1	(Theory)				Total CIE	: 50 ma	rks							
		0) (Theory				Semester	End Exa	aminatio	n (50 m	arks)					
	- 14	10) (Theory	3.1			[SEE-The	eory (25) + Lab((25)]			Course end survey			
		10) (Practio	cai)		1 1						Es a	Course C	ara sur v	J	
Attend		Maria large a dis-	18												
Assign	ment/	Quiz/Semir	nar (5)	le bi						, il					
nit 01	: DC	& AC FU	NDAM	ENTA	LS	11 1 P.E	27.77						6 Hour	s	

Electrical components and parameters – Resistance, Conductance – Ohm's law, Kirchhoff's law – Power – Energy – resistors in series and parallel – comparison of series and parallel circuits – standard terminologies in AC circuits – RMS and average value of Sinusoidal waveform.

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Mechanical Engineering

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Sona College of Technology
Salem-636 005. Tamil Nadu.

Unit 02: DC MACHINES

6 Hours

DC Generator: Construction of DC generator – Working principle of DC generator – EMF equation – Types of DC generator- Applications

DC Motor: Working principle of DC motor - Back EMF- Types of DC motor- Applications.

Unit 03: TRANSFORMER AND INDUCTION MOTORS

6 Hours

Transformer: Construction and working principle of single phase transformer - EMF equation - Applications.

Induction Motors: Construction and working principle of single phase & three phase induction motor-Applications.

Unit 04: SEMICONDUCTOR DEVICES AND APPLICATIONS

6 Hours

Introduction to semiconductors - PN junction Diode- V-I characteristics- Applications: half wave rectifier, full wave rectifier- SCR- V-I characteristics of SCR.

Unit 05: ELECTRIC DRIVES

6 Hours

Basic Elements – Types of Electric Drives – Factors influencing the choice of electric drives –Single phase half controlled and fully controlled bridge rectifier fed DC drives- voltage source inverter (VSI) and current source inverter (CSI) fed induction motor drives.

LIST OF EXPERIMENTS

- 1. Verification of Ohm's law.
- 2. Verification of Kirchhoff's laws.
- 3. V-I characteristics of PN junction diode.
- 4. V-I characteristics of SCR.
- 5. Load test on DC Shunt motor.
- 6. Speed control of DC shunt motor.
- 7. Load test on single phase transformer.
- 8. Speed control of three phase induction Motor.
- 9. Single phase half controlled converter using R, RL Loads.
- 10. Single phase fully controlled converter using R, RL Loads.

T	heory: 30 Hrs	Tutorial:	Practical: 30 Hrs	Project:	Total Hours: 60 Hrs				
ГЕХТ	BOOKS		1	1					
1.	B.L. Theraja, "Fund	lamentals of Elec	trical Engineering & E	ectronics", S. Char	nd & Co Ltd, 2022.				
2.	Gopal K.Dubey, Fu	ndamentals of Ele	ectrical Drives", 2nd E	dition, Alpha Scien	nce International Ltd, 2022				
REFE	ERENCES		And the second s		The state of the s				
1.	Mehta V.K, Rohit N	Aehta, "Principles	of Electrical Engineer	ing & Electronics",	S.Chand & Co. Ltd., 2020.				
2.	S.K. Bhattacharya, '	Electrical Machi	nes", 3 rd Edition, Tata	MC Graw Hill & C	Co ltd, 2017				
3.									
	PHI publications, 20	010							
4.	Vedam Subrahmany ltd, 2017	yam, "Electric Dr	rives: Concept and App	olications", 2 nd Ed	ition, Tata MC Graw Hill &				

Professor and Head,
Department of EEE,
Sona College of Technology
She Back College No. 1000

0	3									
	- 0									
Construct –Ellipse, Parabola, Hyperbola, Cycloids and Involutes. Draw the projection of Point, Line and Plane surfaces.										
Develop the section of simple solids and lateral surface of truncated solids.										
Draw the isometric view to orthographic projection.										
PSO1 PS	PSO									
1	30									
1										
2	2									
1 2	2									
1 2	2									
1										
ct										
survey										
Hours										
s	t survey									

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Programme: B.E - Mechanical Engineering

Regulations 2023

PROFESSOR & HEAD
DEPT. OF MECHANICAL ENGG.
SONA COLLEGE OF TECHNOLOGY
JUNCTION MAIN ROAD, SALEM-5,

Unit 02: PROJECTION C	OF POINTS, LINE	ES AND PLANE S	URFACES (CAD		182 27
software). Orthographic projection-	main aimles mainsir	aal planas First an	ale projection-pro	jection of	
points. Projection of stra	ight lines (only)	First angle projec	tions) inclined to	both the	9 Hours
principal planes -Determ	ination of true le	engths and true in	nclinations by rot	ating line	
method. Projection of pl	anes (polygonal a	and circular surfa	ces) inclined to o	ne of the	
principal plane by rotatir			1		
		-	8		
Unit 03: PROJECTION O	OF SOLIDS (CAI) software).			
Projection of simple soli		9 Hours			
inclined to one of the pr	incipal planes and	d parallel to the o	ther by change o	f position	Filouis
method.					
II 's OA DDOIEGEIGE	DE CECTIONIED	COLIDE AND DE	VEI ODMENIT O	E	<u> </u>
Unit 04: PROJECTION C SURFACES (CAD softw		SOLIDS AND DE	VELOTIVIENT O		
Section of solids in simp		when the cutting	plane is inclined	to one of	
the principal planes and					9 Hours
is not required). Deve					
pyramids cylinders and o	_	10			
	191	E 10.7 (1			
Unit 05: ISOMETRIC	TO ORTHOGRA	APHICS PROJEC	TION- (Manual	drafting).	
Representation of three of					
of multiple views - First					× 8
view to orthographic vie	ws.				9 Hours
814					Filouis
Practicing three dimension	onal modelling of	simple objects us	ing CAD Software	e (Not for	
examination)					9
				1	
Theory: 45 Hrs	Tutorial:	Practical:	Project:	Total F	Iours: 45 Hrs
TEXT BOOKS		2			2 2
1. Bhatt N.D. and F 2019.	Panchal V.M., "E	ngineering Drawi	ng", Charotar Pul	olishing Hou	se, 53rd Edition,
2. Natrajan K.V., "A	Text Book of En	gineering Graphic	s", Dhanalakshmi	Publishers, C	Chennai, 2018.
3. Parthasarathy, N.	S. and Vela Mura	li, "Engineering D	rawing", Oxford U	Jniversity Pro	ess, 2015
4. P.Suresh., "Engin	neering Graphics	and Drawing",	Sonaversity, So	na College	of Technology,
Salem, Revised ed	lition, 2012.				

4.8.2023 Version I.0

Programme: B.E - Mechanical Engineering

Regulations 2023

Dr. D. SENTHIL KUMAR, M.E., Ph.D PROFESSOR & HEAD DEPT. OF MECHANICAL ENGG. SONA COLLEGE OF TECHNOLOGY JUNCTION MAIN ROAD, SALEM-5.

REFERENCES

- 1. BasantAgarwal and Agarwal C.M., "Engineering Drawing", McGraw Hill, 2nd Edition, 2019.
- 2. Gopalakrishna K.R., "Engineering Drawing" (Vol. I&II combined), Subhas Publications, Bangalore, 27thEdition, 2017.
- 3. Luzzader, Warren.J. and Duff, John M., "Fundamentals of Engineering Drawing with an introduction to Interactive Computer Graphics for Design and Production, Eastern Economy Edition, Prentice Hall of India Pvt. Ltd, New Delhi, 2005.
- 4. Parthasarathy N. S. and Vela Murali, "Engineering Graphics", Oxford University, Press, New Delhi, 2015.
- 5. Shah M.B., and Rana B.C., "Engineering Drawing", Pearson Education India, 2nd Edition, 2009.
- 6. Venugopal K. and Prabhu Raja V., "Engineering Graphics", New Age International (P) Limited, 2008.

Dr. D. SENTHIL KUMAR, ME, Ph.D. PROFESSOR & HEAD

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	TAM101	கமிமர்	மரபு / Heritage of Tamils	L	T	P	J	С	
		2		1	0	0	0	1	
Course C	Outcomes								
At the en	d of the cour	se, the student w	vill be able to						
CO1:	Describe Tamil Language and Literature								
CO2:	Analyse Heritage - Rock Art Paintings To Modern Art - Sculpture								
CO3:	Explain Fo	Explain Folk and Martial Arts							
CO4:	Describe Thinai Concept of Tamils								
CO5:	Analyse C	ontribution of Ta	mils to Indian National Movement	and Ind	ian Cult	ture			
			Course Assessment methods						
		Dire	ect			Indire	ct		
CIE test I	CIE test I (30) CIE test II (30) CIE test II (30) CIE test III (40) Total CIE: 100 marks Semester End Examination: NIL Course								
	` /	மற்றும் இ	லக்கியம்			3	Hours	3	
கருத்து	Jக்கள் -	இலக்கியத்த தமிழ்க்	க்கியங்கள் - சங்க இலக் நில் பகிர்தல் அறம் - தி காப்பியங்கள், தமிழக நி இலக்கியம், ஆழ்வார்கள	ருக்கு நத்தில்	தளில் சப	மேல ஹ	ாண் பெ	மைக் எத்த	
கருத்து சமயங் சிற்றில வளர்ச்ச	ுக்கள் - களின் தா கக்கியங்கல சியில் பார	இலக்கியத்த தமிழ்க் க்கம் - பக்தீ ர் - தமிழில் தியார் மற்றுட	நில் பகிர்தல் அறம் - தி காப்பியங்கள், தமிழக நி இலக்கியம், ஆழ்வார்கள நவீன இலக்கியத்தின் வ ம் பாரதிதாசன் ஆகியோரிக	ருக்குற த்தில் ர் மற் வார்ச்சி ர் பங்	தளில் சப நும் ந ி - த களிப்ப	மேல தண நாயன் நமிழ் 1.	ாண் பெ மார்க இலக்	மைக் எத்த ள் கிய	
கருத்து சமயங் சிற்றில வளர்ச்ச	த்கள் - களின் தா க்கியங்கள சியில் பார 2 : மரபு - சி ற்	இலக்கியத்த தமிழ்க் க்கம் - பக்தி ர் - தமிழில் தியார் மற்றும - பாறை ஓவி ப க் கலை	நில் பகிர்தல் அறம் - தி காப்பியங்கள், தமிழக நி இலக்கியம், ஆழ்வார்கள நவீன இலக்கியத்தின் வ ம் பாரதிதாசன் ஆகியோரிவ யங்கள் முதல் ஓவியங்க ை	ருக்குற த்தில் ர் மற் பளர்ச்சி ர் பங்	தளில் சப நும் ந ப – த களிப்ப	மேல தன் தாயன் தமிழ் 1.	ாண் பெ மார்க இலக் Hour	மைக் எத்த ள் ககிய	
கருத்து சமயங் சிற்றில வளர்ச்ச அலகு 2 மற்றும் செய்யு குமரிமு வீணை	தக்கள் - களின் தா க்கியங்கள சியில் பார 2 : மரபு - சிற் நடுகல் பு அவர்கள ம் களை சனையில்	இலக்கியத்த தமிழ்க் க்கம் - பக்தி ர் - தமிழில் தியார் மற்றுட - பாறை ஓவி பக் கலை pதல் சிற்பங்க ந தயாரிக்கும் திருவள்ளுவ நாதஸ்வரம்	தில் பகிர்தல் அறம் - தி காப்பியங்கள், தமிழக இலக்கியம், ஆழ்வார்கள நவீன இலக்கியத்தின் வ ம் பாரதிதாசன் ஆகியோரிவ ய ங்கள் முதல் ஓவியங்கள கள் வரை – ஐம்பொன் ம் கைவினைப் பொருட்க சிற்பங்கள் - நாட்டு ர் சிலை - இசைக் கருவ	ருக்குற த்தில் ப் மற் பார்ச்சி ப் பங் சிலை எர், செ ப்புறத்	தளில் நும் ந களிப்ப கள் - பாம்ன - மிரு	மேல் தை தமிழ் பழங் தம்வா து்	on ண்ன பெ மார்க இலக் Hour பகுடிய பக்கள் ம், ப	மைக் ாத்த ள் க்கிய க பினர் தேர்	
கருத்து சமயங் சிற்றில வளர்ச்ச அலகு 2 மற்றும் செய்யு குமரிமு வீணை கோவி	தக்கள் - களின் தா க்கியங்கள் சியில் பார 2 : மரபு - சிந் நடுகல் பு அவர்கள ம் கலை நனையில் , யாழ், ல்களின் ப 3: நாட்டுப் பு	இலக்கியத்த தமிழ்க் க்கம் - பக்தி ர் - தமிழில் தியார் மற்றுட - பாறை ஓவி பக் கலை pதல் சிற்பங்க ந தயாரிக்குட ந சடுமண் திருவள்ளுவ நாதஸ்வரம் ங்கு	தில் பகிர்தல் அறம் - தி காப்பியங்கள், தமிழக இலக்கியம், ஆழ்வார்கள நவீன இலக்கியத்தின் வ ம் பாரதிதாசன் ஆகியோரின் யங்கள் முதல் ஓவியங்கள கள் வரை — ஐம்பொன் ம் கைவினைப் பொருட்க சிற்பங்கள் - நாட்டு ர் சிலை - இசைக் கருவ - தமிழர்களின் சமூக	ருக்குற த்தில் ர் மற் பளர்ச்சி ர் வண சிலை எர், செ ப்புறத் பெடு	தளில் தும் ந தனிப்ப தள் – தள் – பாம்ன 5 செ	மேல் தன் தமிழ் பழங் தம்வர் தம்வ தரங்க தார	் பெரும் இலக் இலக் பெரும் பகுடிய பகுடிய பக்கள் ம், ப வாழ்	மைக் எத்த எர் கேய தேர் ஹேற	
கருத்து சமயங் சிற்றில வளர்ச்ச அலகு 2 மற்றும் செய்யு குமரிமு வீணை கோவிச	தக்கள் - களின் தா க்கியங்கள சியில் பார 2 : மரபு - சிற் நடுகல் பு அவர்கள ம் களை நனையில் , யாழ், ல்களின் ப சேருக்கத	இலக்கியத்த தமிழ்க் க்கம் - பக்தி ர் - தமிழில் தியார் மற்றும் பாறை ஓவி பக் கலை நதல் சிற்பங்கும் திருவள்ளுவம் நாதஸ்வரம் ங்கு தக் கலைகள்	தில் பகிர்தல் அறம் - தி காப்பியங்கள், தமிழக இலக்கியம், ஆழ்வார்கள் நவீன இலக்கியத்தின் வ ம் பாரதிதாசன் ஆகியோரின் யங்கள் முதல் ஓவியங்கள கள் வரை — ஐம்பொன் ம் கைவினைப் பொருட்க சிற்பங்கள் - நாட்டு ர் சிலை - இசைக் கருவ - தமிழர்களின் சமூக	ருக்குற த்தில் ர் மற் பளர்ச்சி ர் பங் சிலை எர், செ பெறத் கெள் பெற	தளில் தும் ந தன் - த களிப்ப தள் - பாம்ன - மிரு ாருளா	மேல் தன் தமிழ் பழங் தம்வ தகங்க தார	ாண் பெ மார்க இலக் பகுடிய ங்கள் ம், ப வாழ் Hour	மைக் எத்த ள் கேய் தேர் வில்	
கருத்து சமயங் சிற்றில் வளர்ச்ச அலகு 2 மற்றும் செய்யு குமரிமு வீணை கோவிச அலகு 3	பக்கள் - களின் தா க்கியங்கள சியில் பார 2 : மரபு - சிற் நடுகல் பு அவர்கள ம் களை அவர்கள ம் களை அவர்கள ம் களை அவர்கள சனையில் , யாழ், ல்களின் ப செருக்குவ	இலக்கியத்த தமிழ்க் க்கம் - பக்தி ர் - தமிழில் தியார் மற்றும் பாழை ஓவி பக் கலை நதல் சிற்பங்க ந தயாரிக்கும் திருவள்ளுவ திருவள்ளுவ நாதஸ்வரம் ங்கு மக் கலைகள் த்து, கரகாட்டா	தில் பகிர்தல் அறம் - தி காப்பியங்கள், தமிழக இலக்கியம், ஆழ்வார்கள் நவீன இலக்கியத்தின் வ ம் பாரதிதாசன் ஆகியோரின் யங்கள் முதல் ஓவியங்கள் கள் வரை — ஐம்பொன் ம் கைவினைப் பொருட்க சிற்பங்கள் - நாட்டு ர் சிலை - இசைக் கருவ - தமிழர்களின் சமூக ர் மந்றும் வீர விளையாட்டு	ருக்குற த்தில் ப் மந் ப் பங் சிலை எ், செ ப்புறத் கள் பெ தகள் கத்த	தளில் தம் ந தனிப்ப தள் – தள் – பாம்ன - மிரு எருளா	மேல் தன் தமிழ் பழங் தம்வா தகங்க தார	பாண் பெர்க இலக் Hour ங்கள் ம், ப வாழ் Hour	மைக் எத்த எர் கேப்ப தேர் வில் கள்	

1	நால நகரங்களும் துறை முகங்களும் - சங்ககாலத்தில் ஏ <u>ற்று</u> மதி ம <u>ற்று</u> ம்							
இறக்(தமதி — கடல்கடந்த நாடுகளில் சோழர்களின் வெற்றி.							
	5: இந்திய தேசிய இயக்கம் மற்றும் இந்திய பண்பாட்டிற்குத் களின் பங்களிப்பு							
	இந்திய விடுதலைப்போரில் தமிழர்களின் பங்கு - இந்தியாவின்							
பிறப்ப	பகுதிகளில் தமிழ்ப் பண்பாட்டின் தாக்கம் - சுயமரியாதை இயக்கம் - இந்திய							
மருத்	மருத்துவத்தில், சித்த மருத்துவத்தின் பங்கு – கல்வெட்டுகள்							
கைவ	பழுத்துப்படிகள் - தமிழ்ப் புத்தகங்களின் அச்சு வரலாறு.							
	eory: 15 Hrs Tutorial: Practical: Project: Total Hours: 15 Hrs							
REFER	RENCES							
1	தமிழக வரலாறு — மக்களும் பண்பாடு — கே.கே. பிள்ளை (வெளியீடு: தமிழ்நாடு பாடநூல் மற்றும் கல்வியியல் பணிகள் கழகம்).							
2	கணினித் தமிழ் - முனைவர் இல.சுந்தரம்.(விகடன் பிரசுரம்).							
3	கீழடி — வைகை நதிக்கரையில் சங்ககால நகர நாகரிகம் (தொல்லியல் துறை வெளியீடு)							
4	பொருநை —ஆற்றங்னரை நாகரிகம். (தொல்லியல் துறை வெளியீடு)							
5	Social Life of Tamils (Dr.K.K.Pillay) A joint publication of TNTB & ESC and RMRL – (in print)							
6	Social Life of the Tamils - The Classical Period (Dr.S.Singaravelu) (Published by:							
	International Institute of Tamil Studies							
7	Historical Heritage of the Tamils (Dr.S.V.Subatamanian, Dr.K.D. Thirunavukkarasu) (Published by: International Institute of Tamil Studies).							
8	The Contributions of the Tamils to Indian Culture (Dr.M.Valarmathi) (Published by:							
	International Institute of Tamil Studies.)							
9	Keeladi - 'Sangam City C ivilization on the banks of river Vaigai' (Jointly Published by:							
	Department of Archaeology & Tamil Nadu Text Book and Educational Services Corporation, Tamil Nadu)							
10	Studies in the History of India with Special Reference to Tamil Nadu (Dr.K.K.Pillay)							
10	(Published by: The Author)							
11	Porunai Civilization (Jointly Published by: Department of Archaeology & Tamil Nadu Text							
	Book and Educational Services Corporation, Tamil Nadu)							
12	Journey of Civilization Indus to Vaigai (R.Balakrishnan) (Published by: RMRL) - Reference							
	Book.							

HOD HOD

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SALEM - 650 005.

U23T.	AM101	தமிழர் மர	니 / Heritage of Tamils	L	T	P	J	С
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Course O	utcomes						•	
At the end		se, the student will						
CO1:	Describe T	amil Language and I	Literature					
CO2:	Analyse H	eritage - Rock Art Pa	intings To Modern Art – Sc	ulpture				
CO3:	Explain Fol	k and Martial Arts						
CO4:	Describe Tl	ninai Concept of Tan	nils					
CO5:	Analyse Co	ontribution of Tamils	to Indian National Moveme	ent and I	ndian Cul	lture		
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Land - Balliterature in Unit 02: HECULPTU Hero stone making - Making of Temples in Unit 03: Therukoot Tiger dance Unit 04: Temples and Concept of Export and Export and Content of Export and Content	ment Principle of this Literature of Tamil - Co ERITAGE - RE of to modern so Massive Ter musical instance in Social and FOLK ANI hu, Karagatt the - Sports and THINAI CO Fauna of Tamils - Ed Import duri	es in Thirukural - Tare Azhwars and Nayantribution of Bharather ROCK ART PAIN Coulpture - Bronze icontacotta sculptures, Varuments - Mridhanga Economic Life of Tare MARTIAL ARTS am, Villu Pattu, Kand Games of Tamils NCEPT OF TAMIL mils & Aham and Pullucation and Literacyng Sangam Age - Over	mil Epics and Impact of Budinmars - Forms of minor Poolingar and Bharathidhasan TINGS TO MODERN AFTOMS - Tribes and their handically forms - Tribes and their handically f	eather pu	t Jainism velopmen rt of temp t Kanyak waram - I	in Tam nt of Mo 3 ble car umari, Role of 3 Gilambat 3 m Litera	Hours tam, Va	alari,
Land - Balliterature in Unit 02: H CULPTU Hero stone making Making of Temples in Unit 03: Therukoot Tiger dance Unit 04: T Flora and Concept of Export and Unit 05: C	ment Principle of this Literature of Tamil - Co ERITAGE - RE of to modern so Massive Ter musical instance in Social and FOLK AND thu, Karagatt the - Sports and FINAL CO Fauna of Tamils - Ed Import duri ONTRIBUT	es in Thirukural - Tare Azhwars and Nayantribution of Bharath ROCK ART PAIN Coulpture - Bronze icoracotta sculptures, Varuments - Mridhanga Economic Life of Tare MARTIAL ARTS am, Villu Pattu, Kand Games of Tamils NCEPT OF TAMII mils & Aham and Pulucation and Literacy ang Sangam Age - Ox TION OF TAMILS	mil Epics and Impact of Bud inmars - Forms of minor Pool initial and Bharathidhasan TINGS TO MODERN AF ons - Tribes and their handic fillage deities, Thiruvalluvar am, Parai, Veenai, Yazh and mils iyan Koothu, Oyillattam, Lo LS aram Concept from Tholkap of during Sangam Age - Ancient	eather pu	t Jainism velopmen rt of temp t Kanyak waram - I	in Tam nt of Mo 3 ple car umari, Role of 3 Silambat 3 m Litera rts of Sa	Hours tam, Va	Aram Age -
Land - Balliterature in Juit 02: H CULPTU Hero stone making Making of Temples in Unit 03: Therukoot Tiger dance for the Unit 04: T Flora and Concept of Export and Init 05: C Init 05: C IND INDI	nent Principle Athi Literatur In Tamil - Co ERITAGE - RE In to modern so Massive Ter In Social and FOLK AND In Karagatt In E - Sports and	es in Thirukural - Tare Azhwars and Nayantribution of Bharathe ROCK ART PAIN Coulpture - Bronze iconacotta sculptures, Voruments - Mridhanga Economic Life of Tare MARTIAL ARTS and Games of Tamils NCEPT OF TAMIL mils & Aham and Publication and Literacyng Sangam Age - Out TION OF TAMILS	mil Epics and Impact of Budinmars - Forms of minor Poolingar and Bharathidhasan. TINGS TO MODERN AFTOMS - Tribes and their handicallage deities, Thiruvalluvar am, Parai, Veenai, Yazh and mils iyan Koothu, Oyillattam, Loverseas Conquest of Cholas. TO INDIAN NATIONAL	eather pu	t Jainism velopmen rt of temp t Kanyak waram - I appetry, S ad Sangar is and Por	in Tam nt of Mo 3 ble car umari, Role of 3 Gilambat Tam and Litera and Silambat 3 Tam and Silambat 3	Hours tam, Va	Aram Aram
Land - Bal- literature in finit 02: H CULPTU Hero stone making Making of Temples in Unit 03: Therukoot Tiger dance (nit 04: T Flora and Concept of Export and Init 05: C ND INDICOntribution	ment Principle of thi Literature of Tamil - Co ERITAGE - RE of to modern so Massive Ter musical insternation of Tamils - Eco I Import duri ONTRIBUT ON TAMILS	es in Thirukural - Tare Azhwars and Nayar et Azhwars and Nayar et Azhwars and Nayar et Azhwars and Nayar et Azhwars and Paragracotta sculpture - Bronze ico tracotta sculptures, Viruments - Mridhanga Economic Life of Tare et Azhwars	mil Epics and Impact of Budinmars - Forms of minor Poolingar and Bharathidhasan TINGS TO MODERN AFTOMS - Tribes and their handically forms - Tribes and their handically f	eather pu	t Jainism velopmen rt of temp t Kanyak waram - I appetry, S ad Sangar s and Por MENT Tamils ov	in Tam nt of Mo 3 ple car umari, Role of 3 Silambat 3 m Litera rts of Sa ger the o	Hours Hours tam, Va	Aram Aram Age -
Land - Balliterature in Unit 02: H CULPTU Hero stone making Making of Temples in Unit 03: Therukoot Tiger dance Unit 04: T Flora and Concept of Export and Init 05: C IND INDICONTRIBUTION CONTRIBUTION CONTRIBUT	ment Principle withi Literatur in Tamil - Co ERITAGE - RE to modern s Massive Ter musical instance in Social and FOLK AND hu, Karagatt ice - Sports and HINAI CO Fauna of Tamils - Ed Import duri ONTRIBUT AN CULTU on of Tamils If-Respect M	es in Thirukural - Tare Azhwars and Nayar et Azhwars and Nayar et Azhwars and Nayar et Azhwars and Nayar et Azhwars and Paragracotta sculpture - Bronze ico tracotta sculptures, Viruments - Mridhanga Economic Life of Tare et Azhwars	mil Epics and Impact of Buchmars - Forms of minor Pooling and Bharathidhasan TINGS TO MODERN AFTORS - Tribes and their handically and Parai, Veenai, Yazh and mils iyan Koothu, Oyillattam, Lowerseas Conquest of Cholas. TO INDIAN NATIONAL Struggle - The Cultural Influiddha Medicine in Indigenous	eather pu	t Jainism velopmen rt of temp t Kanyak waram - I appetry, S ad Sangar s and Por MENT Tamils ov	in Tam nt of Mo 3 ple car umari, Role of 3 Silambat 3 m Litera rts of Sa ger the o	Hours Hours tam, Va	Aram Aram Age
Land - Balliterature in Unit 02: H CULPTU Hero stone making Making of Temples in Unit 03: Therukoot Tiger dance Unit 04: T Flora and Concept of Export and Unit 05: Contribute Unit 05	ment Principle withi Literatur in Tamil - Co ERITAGE - RE to modern so Massive Ter musical instant Social and FOLK AND hu, Karagatt ice - Sports and HINAI CO Fauna of Tamils - Eco id Import duri ONTRIBUT AN CULTU on of Tamils if-Respect M ripts - Print y: 15 Hrs	es in Thirukural - Tare Azhwars and Nayantribution of Bharath ROCK ART PAIN Coulpture - Bronze ico tracotta sculptures, Varuments - Mridhanga Economic Life of Tare December 19 MARTIAL ARTS am, Villu Pattu, Kand Games of Tamils NCEPT OF TAMIL mils & Aham and Publication and Literacy in Sangam Age - Out TION OF TAMILS TRE	mil Epics and Impact of Buchmars - Forms of minor Pooling and Bharathidhasan TINGS TO MODERN AFTORS - Tribes and their handically and Parai, Veenai, Yazh and mils iyan Koothu, Oyillattam, Lowerseas Conquest of Cholas. TO INDIAN NATIONAL Struggle - The Cultural Influiddha Medicine in Indigenous	eather pu	t Jainism velopmen rt of temp t Kanyak waram - I appetry, S ad Sangar s and Por MENT Famils ovens of Mea	in Tam nt of Mo 3 ple car umari, Role of 3 Silambat 3 m Litera rts of Sa ger the o	Hours Hours tam, Va	Aram Aram Tts o
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Land - Balliterature in Unit 02: H CULPTU Hero stone making Making of Temples in Unit 03: Therukoot Tiger dance Unit 04: T Flora and Concept of Export and Unit 05: Contribute Unit 05: Contribute Unit 05: Contribute Unit 05: Contribute Unit 05: Theory REFEREN 1 5	nent Principle this Literature Tamil - Co ERITAGE - RE to modern so Massive Tere musical instance and social and FOLK AND the total the social and the soci	es in Thirukural - Tare Azhwars and Nayantribution of Bharath ROCK ART PAIN Coulpture - Bronze ico tracotta sculptures, Vruments - Mridhanga Economic Life of Tare MARTIAL ARTS am, Villu Pattu, Kand Games of Tamils NCEPT OF TAMIL mils & Aham and Pulucation and Literacy ng Sangam Age - Out TON OF TAMILS TO Indian Freedom Sovement - Role of Schistory of Tamil Book Tutorial:	mil Epics and Impact of Budinmars - Forms of minor Poolingar and Bharathidhasan. TINGS TO MODERN AFTORMS - Tribes and their handicallage deities, Thiruvalluvar am, Parai, Veenai, Yazh and mils iyan Koothu, Oyillattam, Loverseas Conquest of Cholas. TO INDIAN NATIONAL Struggle - The Cultural Influiddha Medicine in Indigenouslys.	eather purply am ar ent Cities MOVEN Talisitude Talisitude	t Jainism velopmen rt of temp t Kanyak waram - I uppetry, S ad Sangar s and Por MENT Famils ov ns of Med Tota	in Tam nt of Mo 3 ole car umari, Role of 3 silambat 3 m Litera rts of Sa ger the of dicine —	Hours Hours tam, Va	Aran Aran Age

3	கீழடி – மவமக நதிக்கமரயில் ெங்ககொல நகர நொகரிகம் (ததொல்லியல் துமறதவளியீடு)
4	பாருமந – ஆற்றங்கமர நொகரிகம். (ததொல்லியல் துமற தவளியீடு)
5	Social Life of Tamils (Dr.K.K.Pillay) A joint publication of TNTB & ESC and RMRL – (in print)
6	Social Life of the Tamils - The Classical Period (Dr.S.Singaravelu) (Published by: International Institute of Tamil Studies
7	Historical Heritage of the Tamils (Dr.S.V.Subatamanian, Dr.K.D. Thirunavukkarasu) (Published by: International Institute of Tamil Studies).
8	The Contributions of the Tamils to Indian Culture (Dr.M.Valarmathi) (Published by: International Institute of Tamil Studies.)
9	Keeladi - 'Sangam City C ivilization on the banks of river Vaigai' (Jointly Published by: Department of Archaeology & Tamil Nadu Text Book and Educational Services Corporation, Tamil Nadu)
10	Studies in the History of India with Special Reference to Tamil Nadu (Dr.K.K.Pillay) (Published by: The Author)
11	Porunai Civilization (Jointly Published by: Department of Archaeology & Tamil Nadu Text Book and Educational Services Corporation, Tamil Nadu)
12	Journey of Civilization Indus to Vaigai (R.Balakrishnan) (Published by: RMRL) - Reference Book.

HOD

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,
SALEM - 636 (**)

1122CE101	DACIC ADTITUDE 1	L	T	P	J	C
U23GE101	BASIC APTITUDE-1	2	0	0	0	0

Course Outcomes

At the end of the course, the student will be able to

- CO1: Solve the problems in Divisibility, Division algorithm, Successive Division and HCF & LCM. Identify Synonyms and Antonyms.
- CO2: Elucidate the problems in BODMAS rule, Approximation, Surds and Indices, Algebraic Simplification and Square root and Cube root.

Choose appropriate Verbal Analogies and edit the given passages.

- Crack the problems involving Ratio and Proportion, and discuss Proportionality Theorems.

 Comprehend the given passages for Reading Comprehension activity and answer the questions correctly.
- Deduce the problems involving Linear equation and Quadratic equation.

 Demonstrate good vocabulary skill by doing the one word substitution and sentence filler exercise with high degree of accuracy.
- CO5: Interpret the logical reasoning problems from Number series ,Coding and Decoding and Exhibit good expertise in detecting errors in the given sentences.

Pre-requisite:

- Basic English language and Grammar knowledge
- Knowledge in Basic Mathematics

CO/PO, PSO Mapping

(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

		Pr	ogramm	e Outco	mes (PO	s) and P	rogramm	e Specif	ic Outc	omes (PS	Os)	
COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO 11	PO12
CO1	3	3-	3-	2	1	1	1	3	3	3-	2	3
CO2	3	3	3	2	1	1	1	3	3	3	2	3
CO3	3	3	3	2	1	1	1	3	3	3	2	3
CO4	3	3	3	2	1	1	1	3	3	3	2	3
CO5	3	3	3	2	1	1	1	3	3	3	2	3

Course Assessment methods

	Direct	Indirect
CIE test I (30) - Theory	Total CIE: 100 marks	
CIE test II (30) - Theory	Semester End Examination – NIL	Course end survey
CIE test III (40) – Theory		

Unit 01

. .

6 Hours

Number Properties: Classification of numbers - Divisibility - Division algorithm - Successive Division -

HCF and LCM -Problems

Verbal Aptitude: Synonyms and b. Antonyms

Unit 02

6 Hours

Simplification: BODMAS Rule - Approximation - Surds and Indices - Algebraic Simplification - Square

root and Cube root - Problems

Verbal Aptitude: Verbal analogy, Editing passages

Unit 03

6 Hours

Ratio and Proportion: Ratio - Properties of Ratios - Compound Ratio - Coin based problems - Proportion - Proportionality Test - Proportionality Theorems - Inverse Proportion - Variation - Problems

Verbal Aptitude: Reading Comprehension

Unit 04

6 Hours

Equations:

- a. Linear equation: Simultaneous Linear Equations Consistent System Inconsistent System Problems
- b. Quadratic Equation: Different Ways to Express the Quadratic Equation Discriminant of the Quadratic Equations Roots Nature of the Roots Relation between roots and coefficient of equation Formation of a Quadratic Equation Problems

Verbal Aptitude: One word substitution, Sentence filler words

Unit 05

6 Hours

Logical Reasoning: Number series - Coding and Decoding - Problem

Verbal Aptitude: Error detection

Theory: 30 Hrs

Tutorial: 0

Practical: 0

Project: 0

Total Hours: 30 Hrs

TEXT BOOKS

- 1. S.Chand and Dr.R.S.Aggarwal, "Quantitative Aptitude for competitive examinations", S Chand and Company Limited 2019.
- Nishit K.Sinha, "Logical Reasoning and Data Interpretation", Pearson 2021.

Dr.S.Anita

Head/Training Dr. S. ANITA

Professor and Head
Department of Training,
SONA COLLEGE OF TECHNOLOGY,

B.E / B.. Tech Regulations 2023

U23	OL1101	French		L	T	P	J	C
	021101			1	0	0	0	1
Course (Outcomes							
At the er		se, the student wi						
CO1:	Read Frenc English sou		ench phonitis, pract	ice French accents	different	iate Fre	nch and	ì
CO2:		neself, talk about s I politely in a conv	omeone, ask others ersation	personal informati	on, identi	fy an ob	ject, as	k
CO3:			cement, describe abo	out neighbours, wr	te a small	portrai	t	
CO4:	justify a cho	oice, express one's	out one's hobbies, a preferences, write a	list of needs				blog
CO5:	Suggest to	do something, appr	eciate something, ta	lk about a movie,	write a po	stal card	1	
		C	ourse Assessment i	nethods				
		Direc	t			Indire	ct	
CIE test	I (30)		Total CIE: 100 mai	ks	- Alexandre			
CIE test	II (30)		Semester End Exa	mination: NIL	Cou	rse end	survey	,
CIE test	III (40)	3.040			**************************************			
nit 01:						3	Hours	1
Hr 6: De		countries, colors, numbers 0-20, wri	days & months te about one's ident	ification		1		
nit 02:		, st				3	Hours	
Hr 10: Pr	reposition of p	lace, identity card,	verbs, indefinite artinegative sentence ephatitic pronouns, s		line			
nit 03:	inigs around t	as, subjective and c	phanic pronouns, s	en muoduction of		3	Hours	
Hr 16: A	djective's gen	der, noun's gender	gation: aller and ver t, things in a room, s accommodation, wr	imple prepositions				
nit 04:	ily broat debert	onon, op war wood t		was a seri bearant		3	Hours	
1111 04.								
Hr 20: H Hr 22: In	terrogative ad	jectives, daily activ	vities, time and seas		erbs	*		
Hr 20: H Hr 22: In Hr 24: N	terrogative ad	jectives, daily activ			erbs	3	Hours	
Hr 20: H Hr 22: In Hr 24: N I nit 05:	terrogative ad ear future tens	jectives, daily actives, talk about prefe	vities, time and seas rences, write a mail	ons, pronominal vo	erbs	3	Hours	S
Hr 20: H Hr 22: In Hr 24: N Init 05: Hr 26: O Hr 28: A	terrogative ad ear future tens uting activitie dverbs of freq	jectives, daily active, talk about prefers, conjugation: fair juency, family men	vities, time and seas	ons, pronominal vo			Hours	5
Hr 20: H Hr 22: In Hr 24: N nit 05: Hr 26: O Hr 28: A Hr 30: F	terrogative ad ear future tens uting activitie dverbs of freq	jectives, daily active, talk about prefers, conjugation: fair juency, family men	vities, time and seas rences, write a mail re and sortir, demon nbers, past tenses (p	ons, pronominal vo	imparfait			
Hr 20: H Hr 22: In Hr 24: N Init 05: Hr 26: O Hr 28: A Hr 30: Fr	ear future tense tuting activitie dverbs of frequench arts, talk bry: 15 Hrs	se, talk about prefers, conjugation: fair uency, family ment about a film, and	rences, write a mail re and sortir, demon- nbers, past tenses (p write a postal card	ons, pronominal ve strative adjectives assé composé and	imparfait)		
Hr 20: H Hr 22: In Hr 24: N Init 05: Hr 26: O Hr 28: A Hr 30: Fr Thee	terrogative ad ear future tens ruting activitie dverbs of freq rench arts, talk ory: 15 Hrs	se, talk about prefers, conjugation: fair quency, family ment about a film, and	rences, write a mail re and sortir, demon- nbers, past tenses (p write a postal card	strative adjectives assé composé and	imparfait) Tota)		
Hr 20: H Hr 22: In Hr 24: N Init 05: Hr 26: O Hr 28: A Hr 30: Fr Thee	terrogative adear future tense tuting activitie dverbs of frequench arts, talk ory: 15 Hrs OOKS he course facu	se, talk about prefers, conjugation: fair quency, family ment about a film, and Tutorial:	rences, write a mail re and sortir, demon	strative adjectives assé composé and Project: s, handouts and no	imparfait) Tota)		

1122	DL1102	Germa	ın .		L	T	P	J	С
0230	JL1102		<i>:</i>		1	0	0	0	1
Course C	utcomes								
At the en	d of the cou	se, the student wil	l be able to						
CO1:	Use comme	on, everyday expres	ssions to greet others	s and introduc	ce them:	selves.			
CO2:	Construct s	imple sentences /qu	estions.				· · · · · · · · · · · · · · · · · · ·		
CO3:	Initiate and	sustain basic conv	ersation based on fa	mily, professi	ions,				*
CO4:	Hobbies an	d food.							
CO5:	Identify dif	ferences in using n	ouns based on gende	er.					
	1	C	ourse Assessment r	nethods					
		Direc					Indire	et	
CIE test I CIE test I CIE test I	I (30)		Total CIE: 100 mar Semester End Exar			Cou	rse end	survey	e.
Unit 01:	11 (40)						3	Hours	 3
• G	reeting and ta	aking leave, introdu	cing oneself, introd	ucing others					
Unit 02:		A STATE OF THE STA	1				3	Hours	 3
• A	lphabets, spe	lling, numbers							
Unit 03:							3	Hours	3
• A	ge, Telephon	e/mobile numbers,	Month, Date, Time		8				
Unit 04:							3	Hours	3
. • L	anguages, Fa	mily, Asking/giving	g information about	family memb	ers				
Unit 05:							3	Hours	3
• H	obbies, Profe	essions							
Theo	ry: 15 Hrs	Tutorial:	Practical:	Project:-	-	Tota	1 Hours	: 15 H	rs
TEXT BO									
1. N	etzwerk A1		6						

HOD

Dr. M.RENUGA, Professor & Head,

Department of Humanities & Languages, Sona College of Technology, SALEM - 63

					L	T	P	I	C
U230	OL1103	Japanes	se		1	0	0	0	1
Course C	Outcomes		·						
		se, the student wi	ll be able to						
CO1:			eting in Japanese, wr			lphabet	t, identi	fy nam	es of
			tion using short and s						
CO2:			elated words and ver	b conjunctions	and n	nake lig	tht conv	ersatio	n
COL		lirections and answ	vering questions arough the day and the	osa usad for a	vina t	hings o	and don	nonetro	to
CO3:	the use of a		nough the day and th	iose used for g	vilig t	ımıgs, a	and den	10115114	ie
CO4:		-	anese language, des	scribe the loc	ations	of di	fferent	things	an
CO 1.		e counting in Japar	0 0						
CO5:	Make comp	parisons of stated th	nings, express a willi	ngness to go to	Japar	and us	se 'Te-f	orm' v	erbs
		C	Course Assessment n	nethods					
		Direc	t				Indire	ct	
CIE test I	(30)		Total CIE: 100 mark	ks			1000 707 100 700 700		
CIE test I			Semester End Exan	nination: NIL		Cour	rse end	survey	
CIE test I	II (40)	**************************************							
								Hours	
Hr 1-2: G			Japanese alphabet: 10	04 Hiragana an	d 104	Kataka			.
Hr 1-2: G Hr 3-4: Io Hr 5-6: S		rds from pictures of		04 Hiragana an	d 104	Kataka	na lette	rs	
Hr 1-2: G Hr 3-4: Io Hr 5-6: S J nit 02:	dentifying wo elf-introducti	rds from pictures con	or objects shown	04 Hiragana an	d 104	Kataka	na lette		
Hr 1-2: G Hr 3-4: Id Hr 5-6: S J nit 02: Hr 7-8: A	dentifying wo lelf-introducti	rds from pictures con	or objects shown	04 Hiragana an	d 104	Kataka	na lette	rs	
Hr 1-2: G Hr 3-4: Id Hr 5-6: S Jnit 02: Hr 7-8: A Hr 9-10:	dentifying wo elf-introducti asking for dire Time words a	rds from pictures con ections when shopped verb Conjugation	or objects shown	04 Hiragana an	d 104	Kataka	na lette	rs	
Hr 3-4: Io Hr 5-6: S Jnit 02: Hr 7-8: A Hr 9-10:	dentifying wo elf-introducti asking for dire Time words a	rds from pictures con	or objects shown	04 Hiragana an	d 104	Kataka	na lette	rs	3
Hr 1-2: G Hr 3-4: Id Hr 5-6: S Jnit 02: Hr 7-8: A Hr 9-10: Hr 11-12 Jnit 03:	dentifying wo self-introducti asking for dire Time words a : Making ligh	rds from pictures con ections when shopped verb Conjugation	ping ions	04 Hiragana an	d 104	Kataka	na lette	rs B Hours	3
Hr 1-2: G Hr 3-4: Id Hr 5-6: S Jnit 02: Hr 7-8: A Hr 9-10: Hr 11-12 Jnit 03: Hr 13-14 Hr 15-16	dentifying wo elf-introduction asking for direction asking for direction words at Making light Expressions: Verbs used	rds from pictures of on ections when shopp nd Verb Conjugate t conversation	ping ions	04 Hiragana an	d 104	Kataka	na lette	rs B Hours	3
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Dr. M.RENUGA,
Professor & Head, Department of Humanities & Lan

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At the end			-		1 0		0 0	1
CO1:								
		e, the student wi						
CO2:			ants syllable structu	re.				
		and introduce the	mselves.					
CO3:		, date and week	= °					
CO4:		tion and places						
CO5:	Construct sin	nple sentences / c	luestions.					
		C	ourse Assessment	methods				
		Direc	t			Ind	irect	
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ntroducin	g my family r	nembers						
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Talkin	g about locati	on	>	·			1	
		and days of the w	reek					
Talkin	g about doing	something in the	past					
nit 04: L	ocation and F	laces		a a			3 Hou	rs
alking ab	out location							
alking ab	out doing sor	nething at a locati	ion	*				
	out directions							
nit 05: Fu	ture						3 Hou	rs
		something in the	future					
	g about plans							
Talkin	g about hope	for the future						
Theor	y: 15 Hrs	Tutorial:	Practical:	Project:	To	tal Ho	urs: 15 I	Irs
REFEREN	NCES							
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Dr. M.RENUGA, Professor & Head,

Department of Humanities & Languages, Sona College of Technology, B.E / B.Tech Regulation 2023 6 105.

(An Autonomous Institution)

Courses of Study for B.E/B.Tech. Semester II under Regulations 2023 (CBCS) Branch: Mechanical Engineering

S.N o	Course Code	Course Title	L	T	P	J	C	Category	Total Contact Hours	Course Type*
		Theor	y coi	ırses	61		74	2. 5		
1.	U23ENG201B	Communication Skills in English	2	0	2	0	3	HS	60	TL
2.	Equations		3	1	0	0	4	BS	60	TT
3.	U23PHY203F	Physics for Mechanical Engineering	3	0	0	0	3	BS	45	Т
4.	U23ME201	Engineering Mechanics for Mechanical Engineering	3	1	0	0	4	ES	60	TT
5.	U23ME202	Manufacturing Process	3	0	0	0	3	PC	45	T
6.	U23TAM201	தமிழரும் தொழில்நுட்பமும்/ Tamils and Technology	1	0	0	0	1	HS	15	Т
7.	U23GE201	Basic Aptitude- II	2	0	0	0	0	AC	30	T
		Practi	cal c	ourses				-		-
8.	U23PHL210A	Physics Laboratory	0	0	2	0	1	BS	30	Ļ
9.	U23ME203	Workshop Practices for Mechanical Engineering	0	0	2	0	1	PC	30	L
		:			l Cre		20			***************************************
			nal I	angua	ige C	ourse	S**	8	4	
10.	U23OL1201	French - II							15 .	T
11.	U23OL1202	German - II				2			15	T
12. U23OL1203 Japanese - II		1	0	0	0	1	OL	15	T	
13. U23OL1204 Korean - II		8	-					15	T	

*T- Theory, TT- Theory with Tutorial, TL- Theory with Laboratory, TP- Theory with Project, TLP- Theory with Laboratory and Project, L-Laboratory, LT- Laboratory with Theory, LP- Laboratory with Project

(Not accounted for CGPA calculation)

Approved By

My on's	3.8	Mirakuman	J. Sulano	3:20
Chairperson, Science and Humanities BoS	Chairperson, Mech BoS	Member Secretary, Academic Council	Dean-Academics	Chairperson, Academic Council & Principal
Dr.M.Renuga	Dr. D.Senthilkumar	Dr.R.Shivakumar	Dr.J.Akilandeswari	Dr.S.R.R.Senthil Kumar

Copy to:-

HOD/ Mechanical Engineering, Second Semester B.E. Mech, Students and Staff, COE

PRINCIPAL SONA COLLEGE OF TECHNOLOGY SALEM-636 005

^{**}Students may opt for foreign languages viz., German/French/Japanese/Korean with additional one credit

U2	3ENG													
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										2	0	2	0	3
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CO2	: D	evelop sp	peaking	skills f	or sel	f-introdu	ction, c	leliverin	ng spee	ches and	d techni	cal pres	sentatio	n
CO3	: D	emonstra	ate effec	ctive lis	tening	skills fo	r acade	mic and	d profes	sional p	urpose	S		
CO4	: W	rite ema	ils and	formal	letters	and bui	ld resu	mes and	l consti	uct para	graphs	3		
CO5	: D	evelop sp	peaking	skills b	oth ir	terms o	f fluenc	y and c	ompre	nensibili	ty			У.
Pre-rec	quisite	:			7.1						 ,			
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CO2	1	1	1	1	1	3	3	3	3	3	3 ·	3	3	3
CO3	1	2	3	2	2	3	3	2	3	3	3	3	3	3
CO4	1	2	1	2	2	3	3	3	3	3	3	3	3	3
CO5	1	2	2	3	2	3	3	3	3	3	3	3	3	3
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• Letter Writing -	calling for quotation	ons, placing orders	×								
nit 03:				6 Hours							
 Prefixes and Suf 	fixes										
 Cover letter and 	resume writing										
nit 04:				6 Hours							
 Modal verbs, cor 	icord	5 3*									
 Checklist 											
• Letter Writing -]	Business communi	cation, complaints, repli	es to queries fr	om business customers							
nit 05:				6 Hours							
 If conditionals 				B							
 Letter Writing - 	inviting dignitaries	s, accepting and declining	g invitations	,							
		Lab component:									
hobbies, strength clothes, special f 2. Mini presentation Recruitment, Ad 3. Listening - under notes, etc. 4. Listening - enter 5. Loud Reading	is and weaknesses, eatures of home to in - Office Arrange vertising, Applying estanding short conting information in	ements, Facilities, Office g for financial assistance aversations or monologue tabular form	Functions, likes Functions, Sale, applying for a es, taking down	and dislikes in food, tra les, Purchases, Training a job. n phone messages, order							
Theory: 30 Hrs	Tutorial:	Practical: 30 hours-	Project:	Total Hours: 60 Hr							
TEXT BOOKS											
1. Technical English	1 I & II, Dr. M. Re	nuga et al. Sonaversity,	2016								
2. Extensive Readi											
1	1. She is Dancing Back to Life – A Short Story										
	2. The Story of Google – Sara Gilbert, published by Jaico										
3. The S	tory of Amazon.co	om- Sara Gilbert, publish	ed by Jaico								
REFERENCES											
1. Norman Whitby, University Press,		ark – Pre-Intermediate to	Intermediate,	Students Book, Cambri							
2. A Course in Com	munication Skills,	P. Kiranmai Dutt, Geet	ha Rajeevan, C	L. N. Prakash, publish							

HOD 13/7/24.

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languag
Sona Cellege of Technology,
SALEM - 63:

by Cambridge University Press India Pvt. Ltd.

COUTS OUTCOMES At the end of the course, the student will be able to CO1: apply the concepts of vector differentiation and integration to determine the line, surfar and volume integrals. CO2: apply the classical methods to solve linear ordinary differential equations. CO3: apply the appropriate numerical methods to solve ordinary differential equations. CO4: apply the appropriate numerical methods to solve partial differential equations. CO5: apply the appropriate finite difference schemes to solve partial differential equations. CO6: apply the appropriate finite difference schemes to solve partial differential equations. CO7: apply the appropriate finite difference schemes to solve partial differential equations. CO8: apply the appropriate finite difference schemes to solve partial differential equations. CO9: apply the appropriate finite difference schemes to solve partial differential equations. CO9: apply the appropriate finite difference schemes to solve partial differential equations. CO9: apply the appropriate finite difference schemes to solve partial differential equations. CO9: apply the appropriate finite difference schemes to solve partial differential equations. CO9: apply the appropriate finite difference schemes to solve partial differential equations. CO9: apply the appropriate finite difference schemes to solve partial differential equations. CO9: apply the appropriate finite difference schemes to solve partial differential equations. CO9: apply the appropriate finite difference schemes to solve partial differential equations. CO9: apply the appropriate finite difference schemes to solve partial differential equations. CO9: apply the appropriate finite difference schemes to solve partial differential equations. CO9: apply the appropriate finite difference schemes to solve partial differential equations. CO9: apply the appropriate finite difference schemes to solve partial differential equations. CO9: apply the appropriate finite difference schemes to solve partial different	SENIE	ESTER	- 11	V	ЕСТО	n CA			IONS		LKEN	HAL		L	T	P	J
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	2. T. Veerarajan, "Engineering Mathematics for Semesters I & II", McGraw Hill Publishers, 1 st Edition, 2019.												
3.	T. Veerarajan, "	Numerical Metho	ds", McGraw F	Iill Publishers, 1st	Edition, 201	8.							
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1.	J. Stewart, "Calc	ulus", Cengage P	ublishers, 8 th E	dition, 2016.									
		R. Garg, "Advan			Khanna Pi	uhlishers 1st							
	Edition, 2018.												
- 1	Reprint, 2017.	Advanced Engin											
4.	B. S. Grewal, "H	ligher Engineering	g Mathematics'	', Khanna Publish	ers, 44 th Edit	ion, 2018.							
5.	B. V. Ramana, "	Higher Engineeri	ng Mathematic	es", McGraw Hill	Publishers,	29 th Reprint,							
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Unit 02: QUANTUM PHYSICS

9 Hours

Limitations of classical theory - Dual nature of matter and radiation - Compton effect - Expression for Compton shift (no derivation) - de Broglie waves - Heisenberg's Uncertainty Principle - Schrödinger's time independent and time dependent wave equations - Physical significance of wave function - Energy and wave function of an electron trapped in one dimensional box - Application of wave nature of particles - Electron microscope - Comparison of optical and electron microscope - Scanning electron microscope - Transmission electron microscope - Limitations of electron microscope.

Unit 03: LASERS

9 Hours

Energy level - Stimulated absorption - Population inversion - Meta stable state - Spontaneous emission - Stimulated emission - Basic components of a laser - Einstein's theory of spontaneous and stimulated emission of radiation - Types of lasers - Solid state laser - Nd:YAG laser - Gas laser - CO2 laser - Semiconductor laser - Homojunction and hetero junction laser - Holography - Construction and reconstruction of hologram - Application of laser in industry - Cutting, welding and drilling - Medical applications - Lasik - Laser in 3D printing - Operation and its applications.

Unit 04: MAGNETIC MATERIALS

9 Hours

Basic definitions - Magnetic moment - Magnetic field - Magnetic field intensity - Magnetic permeability - Magnetization - Intensity of magnetization - Magnetic susceptibility - Types of magnetic materials - Dia , Para and Ferromagnetic materials - Domain theory of ferromagnetism - Origin of domains - Antiferromagnetic materials- Ferrites - Structure, properties and applications - Hysteresis - Hard and soft magnetic materials.

Unit 05: THERMAL PHYSICS

9 Hours

Heat and temperature - Modes of heat transfer - Conduction, convection and radiation - Specific heat capacity - Thermal capacity and coefficient of linear thermal expansion - Thermal conductivity - Measurement of thermal conductivity of a good conductor - Forbe's method - Measurement of thermal conductivity of a bad conductor - Lee's disc method - Radial flow of heat - Cylindrical flow of heat - Practical applications of conduction of heat - Thermal radiations - Properties and applications of thermal radiations.

Theory: 45 Hrs Tutorial: -- Practical: -- Project:-- Total Hours: 45 Hrs

TEXT BOOKS

- 1. M.N. Avadhanulu, P.G. Kshirsagar, "A Textbook of Engineering Physics", S.Chand & Company Ltd, New Delhi 2014.
- 2. B D. K. Bhattacharya, Poonam Tandon "Engineering Physics", Oxford University Press 2017.

REFERENCES

- 1. "Engineering Physics", Sonaversity, Sona College of Technology, Salem, Revised Edition 2018.
- 2. B. K. Pandey and S. Chaturvedi, "Engineering Physics", Cengage Learning India Pvt. Ltd., Delhi, 2021.
- 3. Arthur Beiser, Shobhit Mahajan, S. Rai Choudhury, "Concepts of Modern Physics", McGraw-Hill (Indian Edition), 2017.

- 4. R.Wolfson, "Essential University Physics", Volume 1 & 2. Pearson Education (Indian Edition), 2009.
- 5. R. Murugeshan, Kiruthiga Sivaprasath, "Thermal Physics", S.Chand & Company Ltd, New Delhi 2018.

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Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,
SALEM - 636 00

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Unit 03: CENTRIODS AND AREA MOMENT OF INERTIA

12 Hours

12 Hours

Introduction - Centroids of simple Plane Areas and Curves (rectangle, triangle, circle, hollow circle, Tsection & I-section) - Area moment of inertia for rectangle, circle, hollow circle, triangle, I-Section, C-Section, and T-Section.

Unit 04: FRICTION

Types of friction - laws of sliding friction - Equilibrium analyses of simple systems with sliding friction -Angle of friction - cone of friction - Equilibrium of bodies on an inclined plane - Ladder friction-Applications of friction (Qualitative treatment only).

Unit 05: KINETICS AND KINEMATICS OF PARTICLES

12 Hours

Displacement, velocity, acceleration, and their relationship - Rectilinear and Curvilinear motion- Newton's laws of motion (fundamentals) - Work-Energy principle - introduction to Impulse and momentum analyses of the impact of elastic bodies.

Т	heory: 45 Hrs	Tutorial: 15	Practical:	Project:	Total Hours: 60 Hrs
TEXT	BOOKS		an Artis	designant services	w Jasunsoniquib
1.	Bansal R K, "A T	extbook of Engine	ering Mechanics"-	6th edition, 2022,	Laxmi publications (P) LTD.
2.	R. C. Hibbler, En	gineering Mechani	cs: Statics & Dyna	mics, Person Pren	tice hall, 14th edition, 2017.
3.	Kumar, K.L., "E Company, New I	-		sed Edition, Ta	ta McGraw-Hill Publishing
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1.	S. Timoshenko, F	Ingineering Mecha	nics (In SI Units) (SIE) ,5th Edition,2	017, McGraw Hill Education.
2.		nston Jr. E.R., "Vec ta McGraw-Hill Pu			Jnits): Statics and Dynamics",).
3.	The second second	s and Krishna Moh son Education (201	100	ineering Mechanic	cs - Statics and Dynamics",
4.	Meriam J.L. and Wiley & Sons, (20		neering Mechanic	s- Statics' - Volum	e 1, & 'Dynamics' , John
5.		d Sankarasubrama iblishing House Pv		ring Mechanics St	atics and Dynamics", 3rd
6.	Bhavikatti, S.S "I	Engineering Mecha	nics", 8th New Ag	ge International (P	Limited Publishers, (2021).

Dr. D. SENTHIL KUMAR, ME.Ph.D. PROFESSOR & HEAD DEPT. OF MECHANICAL ENGG. SONA COLLEGE OF TECHNOLOGY JUNCTION MAIN ROAD, SALEM-5.

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Unit 03: METAL JOINING PROCESS

9 Hours

Gas welding: Types- oxy- acetylene, Flame characteristics- Arc welding: Types- Metal arc welding-TIG welding- MIG welding-Plasma arc welding- Submerged arc welding- Electro slag welding - Melting efficiency - Resistance welding: Butt-Spot-Seam welding, Heat generated calculations - Friction welding-Electron beam welding. Thermit Welding - Brazing- Soldering- Welding defects.

Unit 04: METAL CASTING

9 Hours

Sand Casting- Moulding Tools- Types of Patterns- Pattern Materials- Pattern Allowances- Pattern Allowances Calculations- Types of Moulding Sand- Properties- Core Making- Methods of Sand Testing-Pouring time calculations- Moulding Machines: Types- Melting Furnaces: Cupola, Crucible and Electric arc furnace- Special Casting Process: Shell, Investment Casting - Lost Wax Process- Pressure Die Casting-Centrifugal Casting-CO2 Process-Sand Casting Defects-Inspection Methods.

Unit 05: MANUFACTURING OF PLASTIC COMPONENTS

9 Hours

Types and characteristics of plastics - Moulding of thermoplastics - working principles and typical applications - injection moulding - Plunger and screw machines - Compression moulding, Transfer Moulding – Typical industrial applications – Introduction to blow moulding – Rotational moulding – Film blowing - Extrusion.

T	heory: 45 Hrs	Tutorial:	Practical:	Project:	Total Hours: 45 Hrs
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1.		facturing Technol Private Limited, 5		rming, and Weldi	ng, Volume 1", McGraw-Hill
2.		facturing Technology Private Limited, 4		g and Machine To	ols, Volume 2", McGraw-Hill
3.	J.P .Kaushish "Ma	anufacturing Proce	esses" PHI Learnir	ng Private limited,	second edition 2010.
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1.	B.S. Magendran India, 2003.	parashar & R.K. I	Mittal, "Elements	of Manufacturing	Processes", Prentice Hall of
2	Haira Choudhur	"Flements of W	Jorkshop Technolo	ov. Vol. I Media	Promoters & Publishers nyt

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படிவமைப் ந்றிய வி ந்றும் பிற துரை மீ	பு— சங்க காவ வரங்கள் — ப ந வழிபாட்டுத் னாட்சி அம்மன்	மாமல்லபுரச் சிற்பங் தலங்கள் – நாயக்க ர் ஆலயம் மற்றும்		லப்பதிகாரத் நர் காலத்த ரி கட்டபை	தில் மே நப் பெரு மப்பகள்	ங்கோய பள்ளி •	மும்ப்பு பில்கள் மிகல்	
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ளல்நடைச செயல்பாடு	ரி, குளங்கள், எஞ்க்காக வடி	மத்கு – சோழர்கா தவமைக்கப்பட்ட க ார் அறிவு – மீன்வ	<mark>சனத் தொழில் நுட்பம்</mark> : rலக் குமுழித் தூம்பின் முக்கியத் கிணறுகள் – வேளாண்மை ப மாம் – முத்து மற்றும் முத்துக்கு	ommin G	வளான்க	பராமர்	3 Núy –	
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T	heory: 15 Hrs	Tutorial:	Practical:	Project:	Total Hours: 15 Hrs
TEXT	BOOKS				
1.	தமிழக வரலாறு கே.கே. பிள்ளை (– மக்களும் பண்ட வெளியீடு: தமிழ்நா		ம் கல்வியியல் ப	ணிகள் கழகம்).
2.	கணினித் தமிழ் – கீழடி –வைகை ந பொருநை – ஆற்ற	முனைவர் இல. க திக்கரையில் சங்க	சுந்தரம். (விகடன் ககால நகர நாகரி	பிரசுரம்). கம் (தொல்லியல் ந	
REFE	RENCES	× ×		a 2	
3.	Social Life of Tamils	(Dr.K.K.Pillay) A joi	nt publication of TN	TB & ESC and RMRL	– (in print)
4.	Social Life of the Tar Studies.	mils - The Classical F	Period (Dr.S.Singara	velu) (Published by:	International Institute of Tamil
5.	Historical Heritage of International Institu	of the Tamils (Dr.S.V te of Tamil Studies)	.Subatamanian, Dr.	K.D. Thirunavukkara	su) (Published by:
6.	The Contributions of Tamil Studies.)	f the Tamils to India	an Culture (Dr.M.Va	larmathi) (Published	by: International Institute of
7.	Keeladi - 'Sangam Ci Archaeology & Tami	ty Civilization on th I Nadu Text Book ar	e banks of river Vai nd Educational Serv	gai' (Jointly Publishe ices Corporation, Ta	d by: Department of mil Nadu)
8.	Studies in the Histor	y of India with Spec	cial Reference to Tai	mil Nadu (Dr.K.K.Pilla	ay) (Published by: The Author)
9.	Porunai Civilization (Educational Services	Jointly Published by Corporation, Tamil	y: Department of Ar Nadu)	chaeology & Tamil N	Nadu Text Book and
10	Journey of Civilizatio	n Indus to Vaigai (R	R.Ramakrishna) (Pub	lished by: RMRL) – F	Reference Book.

HOD HOD

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SALEM - 636 005.

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CO2:	Explain the	design and	construction	on technology				***************************************		
CO3:	Analyse the	manufactur	ing techno	logy	98-81-81-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-			************	***************************************	
CO4:	Describe the	e agriculture	and irriga	ation technology					No.	3 7
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REFE	RENCES
1.	Social Life of Tamils (Dr.K.K.Pillay) A joint publication of TNTB & ESC and RMRL – (in print)
2.	Social Life of the Tamils - The Classical Period (Dr.S.Singaravelu) (Published by: International Institute of Tamil Studies.
3.	Historical Heritage of the Tamils (Dr.S.V.Subatamanian, Dr.K.D. Thirunavukkarasu) (Published by: International Institute of Tamil Studies).
4.	The Contributions of the Tamils to Indian Culture (Dr.M.Valarmathi) (Published by: International Institute of Tamil Studies.)
5.	Keeladi - 'Sangam City C ivilization on the banks of river Vaigai' (Jointly Published by: Department of Archaeology & Tamil Nadu Text Book and Educational Services Corporation, Tamil Nadu)
6.	Studies in the History of India with Special Reference to Tamil Nadu (Dr.K.K.Pillay) (Published by: The Author)
7.	Porunai Civilization (Jointly Published by: Department of Archaeology & Tamil Nadu Text Book and Educational Services Corporation, Tamil Nadu)
8.	Journey of Civilization Indus to Vaigai (R.Ramakrishna) (Published by: RMRL) – Reference Book.

Dr. M.RENUGA, Professor & Head, Department of Humanities & Languages, Demonstrate of Technology, LEM - 63-005.

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CIE test II (30) - Theory

CIE test III (40) – Theory

Semester End Examination - NIL

Course end survey

Unit 01 6 Hours Percentage: Conversion of a Percentage into a Fraction - Conversion of a Percentage into a Ratio -Conversion of a Ratio into a Percentage - Percentage Change - Successive percentage - Problems Verbal Aptitude: Jumbled sentences & Reconstructions of sentences (PQRS) Unit 02 6 Hours Profit Loss: Types of prices - Profit - Loss - Percentage of Profit and Loss - Common Gain or Loss -Selling Price and Cost Price Equality – Successive Profit and Loss – Problems Verbal Aptitude: Sentence fillers two words & Idioms and phrase Unit 03 6 Hours Geometry: Angles – Complementary and Supplementary angles – Lines – Triangle – Types of triangles – Properties of Triangles – Problems Area, Perimeter / Circumference: Triangles - Rectangles and Squares - Parallelogram, Rhombus and Trapezium – Circles – Problems Surface area, curved surface area & Volume: Cuboid – Cube – Right circular cylinder – Right circular cone – Sphere – Hemisphere – Problems Verbal Aptitude: Reading comprehension. Unit 04 6 Hours Trigonometry: Value of Trigonometry ratios for particular values - Sign of Trigonometrical ratios -Trigonometrical ratios for sum or difference of angles Problems Verbal Aptitude: Spotting errors Unit 05 6 Hours Averages – Problems on ages – Logarithm - Logical Reasoning: Alpha Series – Venn diagram – Problems Verbal Aptitude: Writing captions for given pictures. **Total Hours: 30 Hrs** Tutorial: 0 Practical: 0 Project: 0 Theory: 30 Hrs **TEXT BOOKS** S.Chand and Dr.R.S.Aggarwal, "Quantitative Aptitude for competitive examinations", S Chand and 1.

Dr.S.Anita

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Professor & Head
Department of Training
Dr. S. ANITA

Professor and Head
Department of Training,
SONA COLLEGE OF TECHNOLOGY,
SALEM-636 005.

Company Limited 2019.

2.

Nishit K.Sinha, "Logical Reasoning and Data Interpretation", Pearson 2021.

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	Determi nterfero		of veloc	ity of u	ıltraso	nic wave	s and c	ompres	sibility	of the g	given li	quid us	ing ultr	asonic
3 I						of given								
	Determi	nation o	of coeffi	cient o	f visco	sity of li	auid by	Poiseu	ille's m	nethod.				
	the filth of					of the ma								-tage to the contract of

7	Determination of particle size of lycopodium powder using diode laser.	
8	Determination of acceptance angle and numerical aperture of an optical fibre using diode laser	•
9 -	Determination of the thermal conductivity of a bad conductor using Lee's Disc apparatus.	
10	Determination of hysteresis using B-H curve method.	
11	TOTAL : 30 HO	OURS

水子对流

Dr. M.RENUGA,
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SALEM - 6

Charles Man ME P

Dr. C. SHANTHI, M.Sc.,M.E.,Ph.D.,
Professor of Physics
Head, Department of Sciences
Sona College of Technology (Autonomous)
SALEM-636 005.

Programme: B.E / B.Tech

Semester II F

Regulations 2023

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Cours	e Ot	utco	mes						31714	TE I		of order	Ki secon	27	
At the	end	l of t	he cou	rse, the	studer	ıt will l	be able	to							
CC	01:	Dev	relop a	differe	nt shape	es of joi	ints in fi	tting, a	nd dus	t pan in	sheet m	netal			-
CO2	2:	Cre	ate a v	arious j	oints in	carpen	try and	integra	ate the n	netals b	y differ	ent Arc	weldin	g proce	ess
CO3	3:	Pre	pare a	desired	shapes	of give	n work	piece u	ising La	the ma	chine	-		**************************************	
Pre-re	quis	ite:	Nil		- mpuli			7	313000	-		The second	D. D. D.		
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COs		. 1									ific Outo			line p	
	PC		PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	PSO
CO1	3		3	3				A	3	3	3	3	1	3	
CO2	3		3	3	2				3	3	3	3	3	3	
CO3	3		3	3					3	3	3	3	3	3	
						Cou	rse Ass	essmer	t meth	ods					
					T	irect							Indir	ect	
CIE tes		15)	na ace				TPS (10								
Quiz I- CIE tes		(15)					ecord (1 otal CIE		arks						
Quiz I	I- (5)		AHUS NO SE MI SON			S	SALE OF THE SALE O		xaminat	ion (40		Cou	irse end	survey	,
LIST (OF E	XPE	RIME	NTS											
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priz-	3007000	-0	orane Mosta										p	- 1101	
or orre	ONT	D. (CLIEET	META	Ť										

SECTION B: SHEET METAL

Making of Dust Pan

3 Hours

SECTION C: CARPENTRY

Making of Half Lap Joint 3.

3 Hours

	Theory:	Tutorial:	Practical: 30 Hrs	Project:	Total Hou	rs: 30 Hrs
					Total Numbe	r of hours: 30
11.						3 Hours
10.			Cutting Operation		Later Park	3 Hours
9.		and Taper Turnir				3 Hours
8.		ple Facing and Tu				2 Hours
	PION E: LATHE					
7.	Exercise on MIC					3 Hours
6.	Exercise on TIG	Welding				3 Hours
5.	Exercise on Arc	welding of Lap Jo	int			2 Hours
4.	Exercise on Arc	welding of Butt Jo	oint Management			2 Hours
SEC	TION D: WELDII	NG	PPRACTICES PO	PAGETCALC		CARACT .

Dr. D. SENTHIL KUMAR, ME., Ph.D. PROFESSOR & HEAD DEPT. OF MECHANICAL ENGG. SONA COLLEGE OF TECHNOLOGY JUNCTION MAIN ROAD, SALEM-5.

<u> </u>									
11230	OL1201		French - II		L	T	P	J	С
	OLIZOI				1	0	0	0	1
Course C	Outcomes								
At the en	d of the cour	se, the student w	ill be able to			-			
CO1:	Accept and	refuse of an invita	ation, give some ins	truction of do's	and do	n'ts, co	nverse	in	
600	commercia	centres, write an	invitation						
CO2:	Talls about	city, locate a place	in a city, ask further	er details, descri	be one	's home	etown		
CO3:	express ohl	inings around us, i	recite a past event, i ition, sell an object	dentify sign boa	rds, ex	press a	gree and	d disag	ree,
CO4:	Talk about	one's goals expre	ss one's feelings, w	rite a list of thin	on to d				4 11
001.	about weath	ner, draft a mail re	sponse	inte a fist of tilling	gs to d	o, expr	ess an o	pinion	, talk
CO5:	Express on	e's interest and	wish, describe a p	et animal, expr	ess of	ne's av	ersions	encoi	irage
	others, write	e to ask for a help.	narrate a past even	t, write a biograp	ohy		•1010110,	011000	nugo
			Course Assessment						
		Direc	t				Indirec	f	
CIE test I	(30)		Total CIE: 100 ma	rks					
	CIE test II (30)		Semester End Exa	mination: NIL	Course end survey				
CIE test II	II (40)								
Unit 01:			8		•		3	Hours	
Hr 2: City	shopping and	d services, conjuga	ation: payer, mange	r and acheter, ne	gative	senten	ce		
Hr 4: Impe	erative senter	ice, food and beve	rages, utensils, cutle	eries corckeries					
Unit 02:	mmanve arno	ies, quantities, pro	onoun 'en', express	appreciation, wr	ite an i	nvitatio			
	and localitie	Cominantian	1. 1'	-,			3]	Hours	
Hr 10: Tra	nsport leisur	s, Conjugation: pr	endre, adjectives of sition of place, degr	place, pronoun	'y'				
Hr 12: Asl	king informat	ion about a new p	lace, describe a city	ces of compans	OH				
Unit 03:			,				3 1	Hours	
Hr 14: Thi	ings in a store	, conjugation : fai	re, imparfait 2, pass	é composé	-4			iouis	
Hr 16: Thi	ings in a repa	iring shop, compu	ter, relative pronour	ns: que and qui					
Hr 18: Imp	perative negative	ive, express oblig	ation and interdiction	on, online sale ar	nd resp	onse			
Jnit 04:							3 I	Hours	
Hr 20: Pro	fessions, con	ugation: croire, v	oir, recent past tense	2					
Hr 24: 1ra	veling forma	lities, expressing a	bout health condition	on, future tense					
Jnit 05:	noun COD, u	ark about weather	condition, write abo	out one's plans a	nd pro	jections		-	
	izenship and	solidarity conjuga	tion: connaitre and	cavoir denuis ve	nande	nnt	3 1	Iours	
Hr 28: Imp	parfait vs pass	é composé, nature	e and environment,	indirect pronoun	s COI	anı			
Hr 30: Ani	mals, conditi	onal, talk on supp	orting others, write	a biography	5 001				
Theor	y: 15 Hrs	Tutorial:	Practical:	Project:		Total	Hours:	15 Hrs	
TEXT BOO									
1. The	course facul	ty will provide rel	evant audios, videos	s, handouts and a	notes.				
2. Boo	oks : Saison (1	Méthode de frança	is, cachier d'activit	és)					
3. Ref	erence books	: La conjugaison,	Dondon, Echo	8					

Dr. M.RENUGA,
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Sona College of Technology

B.E / B. Tech Regularione 10236

U23	OL1202	* "	German - II		L	T	P	J	C
					1	0	0	0	1
Course (Outcomes				2	-		1	
At the en	nd of the cour	se, the student wi	ll be able to	*					
CO1:	Use gramm	atical expressions	appropriately in da	y-to-day convers	sation.	2			
CO2:	Make them	frame simple sente	ences /questions.		-				
CO3:	Accentuate	to start and sustain	basic conversation	1	-				
CO4:	Helps them	articulate thoughts	in German				-		
CO5:	Identify the	different forms of	the verb						
		C	ourse Assessment	methods					
		Direct					Indirec	f	
CIE test I			Total CIE: 100 ma	rks			•		
CIE test I	` '		Semester End Exa	mination: NIL		Cours	se end s	urvey	
Unit 01:	11 (10)						2.1	Hours	
Nominati	ve/accusative	case, adjectives					<u> </u>	ilouis	
Unit 02:							31	Hours	
Modes of	transportation	n, orientation, givin	g/understanding si	mple directions		L			
Unit 03:							3 1	Hours	
• Fo	ood and bevera	iges, Modal verbs,	Separable verbs					180 0	j.
Jnit 04:							3 I	Hours	
• Sin	mple sentence	s using modal / sep	parable verbs				10	-	
Jnit 05:							3 H	lours	
• Ar	ticles of cloth	ing							
Theor	ry: 15 Hrs	Tutorial:	Practical:	Project:		Total 1	Hours:	15 Hrs	
TEXT BO	OKS						Α		
1. Net	tzwerk A1	100		2 1	,				

HOD 13 July.

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Department of Humanities & Languages,
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SALEM - 636

CO1: Use CO2: Der des CO3: Use CO4: Exp recc CO5: Rea and CIE test I (30) CIE test III (40) Unit 01: Hr 1-2: Words Hr 3-4: Asking Hr 5-6: Describ Unit 02: Hr 7-8: Verbs Hr 9-10: Verbs Hr 9-10: Verbs Hr 9-10: Verbs Hr 11-12: Desc Unit 03: Hr 13-14: Plain Hr 15-16: Expr Hr 17-18: Qual Unit 04:	the course e verbs in monstrate scribe expe plain-streeved and 126 led III to pas of the press sent being for permise bing two set that expense which e	the application of the eriences Ale expressions, the tences that use 'vectors of Kanji, and is the Japanese Landard Comparison of the Landard Comparison of the Japanese Landard Comparison of the Landard Comparison of the Japanese Landard Comparison of the Landard Comparison of th	on or for dissuasion of causative verbs and fose that state opinion when and 'if' and demonstrate adequage Proficiency ourse Assessment of the Total CIE: 100 mar Semester End Examples of Kanji 1-10 atements to prohibit 21-30	ons, and verbs and those that describuate knowledge of Test (JLPT) for the methods	d adjective be how so of the less he N5 Less Co	t activities or possible tes that go ervices ar sons learnt vel Indirect ourse end s	with note given	ouns n and vels I
At the end of CO1: Use des CO2: Der des CO3: Use CO4: Express and CIE test II (30) CIE test III (40) C	e verbs in monstrate scribe expe plain-streeved ad 126 led II to pas of the press sentieved are pressent to the press sentieved and the pressent even and verb groups for permise that expenses which everbs which everbs in the pressent even and verb groups and verb groups which ever the pressent even and verb groups which even	polite conversation of the application of eriences yle expressions, the ences that use 'verters of Kanji, and is the Japanese Land Comparison of the Japanese	on or for dissuasion of causative verbs and fose that state opinion when and 'if' and demonstrate adequage Proficiency ourse Assessment of the Total CIE: 100 mar Semester End Examples of Kanji 1-10 atements to prohibit 21-30	ons, and verbs and those that describuate knowledge of Test (JLPT) for the methods	d adjective be how so of the less he N5 Less Co	res that go ervices ar sons learning vel Indirection ourse end sourse end source end so	with no e giver in Lev	nd ouns n and vels
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Hr 13-14: Plain Hr 15-16: Expr Hr 17-18: Qual J nit 04:		perience / Kanji 5	oossibility / Kanji 41 51-60	1-50				
Hr 15-16: Expr Hr 17-18: Qual J nit 04:			3 - 1			3	Hours	
Jnit 04:	ressions li	pressions / Kanji (ke 'I think that uns with verbs an		81-90		* v ,	2 8	
II 10 00 E						3	Hours	
Hr 21-22: Desc	cribing the	sing 'When' / e giving and receiving 'If' / Kar	ving of services / K	anji 101 - 110				
Jnit 05:		, , , , , , , , , , , , , , , , , , ,	iji 111-120			3	Hours	
Hr 25-26: Prepa Hr 27-28: Prepa	aring for	ILPT N5						
Hr 29-30: Prepa		T	T		T			-
Theory: 15		Tutorial:	Practical:	Project:	Tot	al Hours:	15 Hrs	3
1. The cour		v will provide har	ndouts / notes / cour	se material				
		apanese language		se material.				

Dr. M.RENUGA,
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B.E / B.. Tech Regulations 2626 005.

U23	OL1204	* * * * * * * * * * * * * * * * * * *	Korean - II		L	Т	P	J	С	
0					1	0	0	0	1	
	Outcomes									
		se, the student w	ill be able to							
CO1:	Identify tim									
CO2:		date and days of	the week							
CO3:		ation and places		and the second s						
CO4:	Explain des									
CO5:	Construct si	imple sentences /								
		(Course Assessment	methods						
		Dire	ct				Indirec	t		
CIE test I			Total CIE: 100 ma	rks						
CIE test II (30)			Semester End Examination: NIL			Course end survey				
CIE test I	II (40)									
Unit 01: 7	ime			3			3	Hours		
Talking a	bout time								-	
Unit 02: I	Date					·	3	Hours		
		d days of the weel								
Talking a	bout doing so	mething in the pas	st				6			
Unit 03:	Location		u Nama				3	Hours		
Talking a		mething at a locat	ion			u s,				
Jnit 04:	Direction	*					3]	Hours		
Talking al	out direction	S					***************************************			
Jnit 05: F			•				31	Hours		
		nething in the fut	ure				-	,		
	oout plans for out hope for									
	y: 15 Hrs	Tutorial:	Practical:	Project:	T	T . 13	т	4F TT		
111001	y. 15 ms	i utoriai:	1 factical.	110,661	1	Total 1	dours:	15 Hrs	3	
REFERENC		i utoriai:	1 factical.	110,666		1 otal 1	iours:	15 Hrs		

M- 7 7 2 2 24.

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