SONA COLLEGE OF TECHNOLOGY, SALEM-5

(An Autonomous Institution)

B.E- Computer Science and 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: BE Computer Science and Engineering

| S.No | Course Code | Course Title | L | T | P | J | C | Category | Total Contact Hours | Course Type* |
|------|-------------|---|------|------|------|---|----|----------|---------------------------|-----------------|
| | | Theory Course | S | | | | | | | |
| 1. | U23ENG101A | Communication Skills in English | 2 | 0 | 2 | 0 | 3 | HS | 60 | TL |
| 2. | U23MAT102A | Linear Algebra and Calculus with MATLAB | 3 | 0 | 2 | 0 | 4 | BS | 75 | TL |
| 3. | U23PHY103B | Engineering Physics | 3 | 0 | 0 | 0 | 3 | BS | 45 | Т |
| 4. | U23PPR105 | Problem Solving using Python Programming | 3 | 0 | 0 | 0 | 3 | ES | 45 | Т |
| 5. | U23BEE106A | Basics of Electrical and Electronics Engineering | 3 | 0 | 0 | 0 | 3 | ES | 45 | Т |
| 6. | U23TAM101 | தமிழர் மரபு / Heritage of Tamils | 1 | 0 | 0 | 0 | 1 | HS | 15 | Т |
| 7. | U23GE101 | Basic Aptitude-I | 2 | 0 | 0 | 0 | 0 | AC | 30 | T |
| | | Practical Course | es | | | | | | | |
| 8. | U23PHL110 | Engineering Physics Laboratory | 0 | 0 | 2 | 0 | 1 | BS | 30 | L |
| 9. | U23PPL112 | Python Programming Laboratory | 0 | 0 | 2 | 0 | 1 | ES | 30 | L |
| 10. | U23BEEL113 | Basics of Electrical and Electronics Engineering Laboratory | 0 | 0 | 2 | 0 | 1 | ES | 30 | L |
| | | Т | otal | Cre | dits | | 20 | | | |
| | | Optional Language Co | ours | es** | | | | , | | |
| 11. | U23OL1101 | French | | | | | | , | 15 | T |
| 12. | U23OL1102 | German | 1 | 0 | 0 | 0 | 1 | OL | 15 | T |
| 13. | U23OL1103 | 03 Japanese | | | | | 1 | OL | 15 15 | T |
| 14. | U23OL1104 | Korean | | | | | | | | 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 | O D VIGN | 23 | . // . | |
|---|-------------------------|--|--------------------|------------------------------------|
| 1/27/19/23 | Spanger | No rakment | J. Ollano 7 | Chairperson, |
| Chairperson, Science and Humanities BoS | Chairperson, CSE BoS | Member Secretary, Academic Council | Dean-Academics | Academic Council & Principal |
| Dr.M.Renuga | Dr B.Sathiyabhama | Dr.R.Shivakumar | Dr.J.Akilandeswari | Dr.S.R.R.Senthil |
| | | | | Kumar |

Copy to:-

HOD/Computer Science and Engineering, First Semester B.E. CSE Students and Staff, COE

04.08.2023 Version 1.0 Semester I B.E/B.Tech Regulations-2023

(An Autonomous Institution)

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

| S.No | Course Code | Course Title | | T | P | J | C | Category | Total Contact Hours | Course Type* |
|------|-------------|--|--------|-------|-------|------|------|----------|---------------------------|-----------------|
| | | Theory | cour | ses | | | - | | | |
| 1. | U23ENG201A | Technical English | 2 | 0 | 0 | 0 | 2 | HL | 30 | Т |
| 2. | U23MAT202D | Discrete Mathematics | 3 | 1 | 0 | 0 | 4 | BS | 60 | TT |
| 3, | U23CHE204B | Chemistry for Computer Science | 3 | 0 | 0 | 0 | 3 | BS | 45 | Т |
| 4. | U23CPR205 | Programming in C | 3 | 0 | 0 | 0 | 3 | ES | 45 | Т |
| 5. | U23EGR207 | Engineering Graphics | 3 | 0 | 0 | 0 | 3 | ES | 45 | Т |
| 6. | U23EC203 | Digital Principles and System Design | 3 | 0 | 0 | 0 | 3 | PC | 45 | T |
| 7. | U23TAM201 | தமிழரும் தொழில்நுட்பமும்/ Tamils and Technology | 1 | 0 | 0 | 0 | 1 | HS | 15 | Т |
| 8. | U23GE201 | Basic Aptitude- II | 2 | 0 | 0 | 0 | 0 | AC | 30 | T |
| | | Practica | ıl cou | irses | | | | | | |
| | U23CPL212 | C Programming Laboratory | 0 | 0 | 2 | 0 | 1 | ES | 30 | L |
| 9. | U23CHL211 | Chemistry Laboratory | 0 | 0 | 2 | 0 | 1 | BS | 30 | L |
| | | 7 | otal | Cre | dits | | 21 | | | |
| | | Options | al La | ngu | age (| ours | es** | | | |
| | U23OL1201 | French - II | | | | | | | 15 | T |
| *** | U23OL1202 | German - II | | | | | | _ | 15 | Т |
| 11 | U23OL1203 | Japanese - II | 1 | 0 | 0 | 0 | 1 | OL | 15 | T |
| | U23OL1204 | Korean - II | | | | | | | 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

Approved By

| mint. | Donni | Mirakum | J. Alban | 7 |
|--|----------------------|---------------------------------------|--------------------|---|
| Chairperson, Science and Humanities BoS | Chairperson, CSE BoS | Member Secretary, Academic Council | Dean-Academics | Chairperson, Academic Council & Principal |
| Dr.M.Renuga | Dr B.Sathiyabhama | Dr.R.Shivakumar | Dr.J.Akilandeswari | Dr.S.R.R.Senthil Kumar |

Copy to:- HOD/Computer Science and Engineering, Second Semester B.E. CSE Students and Engineering A.R. SENTHILKUMAR,

M.E.(Struct), Ph.D., MISTE, FIE, C. ENG(I), MICI.,

B.E/B.Tech Regulation of TECHNOLOGY, JUNCTION MAIN ROAD, SALEM-636 005,

^{**}Students may opt for foreign languages viz., German/French/Japanese/Korean with additional one credit (Not accounted for CGPA calculation)

(An Autonomous Institution)

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

| S.No | Course Code | Course Title | L | T | P | J | C | Category | Total Contact Hours | Course Type* |
|------|-------------|---|------|------|------|---|----|----------|---------------------------|-----------------|
| | | Theory Course | S | | | | | | | |
| 1. | U23ENG101A | Communication Skills in English | 2 | 0 | 2 | 0 | 3 | HS | 60 | TL |
| 2. | U23MAT102A | Linear Algebra and Calculus with MATLAB | 3 | 0 | 2 | 0 | 4 | BS | 75 | TL |
| 3. | U23PHY103B | Engineering Physics | 3 | 0 | 0 | 0 | 3 | BS | 45 | Т |
| 4. | U23PPR105 | Problem Solving using Python Programming | 3 | 0 | 0 | 0 | 3 | ES | 45 | Т |
| 5. | U23BEE106A | Basics of Electrical and Electronics Engineering | 3 | 0 | 0 | 0 | 3 | ES | 45 | Т |
| 6. | U23TAM101 | தமிழர் மரபு / Heritage of Tamils | 1 | 0 | 0 | 0 | 1 | HS | 15 | Т |
| 7. | U23GE101 | Basic Aptitude-I | 2 | 0 | 0 | 0 | 0 | AC | 30 | T |
| | | Practical Course | es | | | | | | | |
| 8. | U23PHL110 | Engineering Physics Laboratory | 0 | 0 | 2 | 0 | 1 | BS | 30 | L |
| 9. | U23PPL112 | Python Programming Laboratory | 0 | 0 | 2 | 0 | 1 | ES | 30 | L |
| 10. | U23BEEL113 | Basics of Electrical and Electronics Engineering Laboratory | 0 | 0 | 2 | 0 | 1 | ES | 30 | L |
| | | Т | otal | Cre | dits | | 20 | | | |
| | | Optional Language Co | ours | es** | | | | , | | |
| 11. | U23OL1101 | French | | | | | | , | 15 | T |
| 12. | U23OL1102 | German | 1 | 0 | 0 | 0 | 1 | OL | 15 | T |
| 13. | U23OL1103 | 03 Japanese | | | | | 1 | OL | 15 15 | T |
| 14. | U23OL1104 | Korean | | | | | | | | 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 | O D VIGN | 23 | . // . | |
|---|-------------------------|--|--------------------|------------------------------------|
| 1/27/19/23 | Spanger | No rakment | J. Ollano 7 | Chairperson, |
| Chairperson, Science and Humanities BoS | Chairperson, CSE BoS | Member Secretary, Academic Council | Dean-Academics | Academic Council & Principal |
| Dr.M.Renuga | Dr B.Sathiyabhama | Dr.R.Shivakumar | Dr.J.Akilandeswari | Dr.S.R.R.Senthil |
| | | | | Kumar |

Copy to:-

HOD/Computer Science and Engineering, First Semester B.E. CSE Students and Staff, COE

04.08.2023 Version 1.0 Semester I B.E/B.Tech Regulations-2023

| T T' | 23FN | G101A | (Com | | | cation Sk AIML, B | | _ | CIVII | L | T | P | J | C |
|----------------------------|-------------------------------|---|--|--|-----------------------|--|--|-----------|----------|---------------------|----------|----------|----------------|-----|
| 0. | ZJLIN | GIOIA | (Con | | | MCT, F | | | 2 | 0 | 2 | 0 | 3 | |
| Cours | se Ou | tcomes | | | | | | | | | | | | |
| At the | e end | of the cou | rse, the | studer | ıt will | be able | to | | | | | | | |
| CO1 | l: | Use gramı | natical | compor | nents e | effectivel | y in bo | th writte | en and | spoken | commu | nicatio | n | |
| CO | 2: | Develop s | peaking | skills f | or self | -introdu | ction, c | leliverir | ng speed | ches and | d techni | cal pre | sentatio | n |
| CO | 3: | Demonstra | ate effec | tive lis | tening | skills fo | r acade | mic and | profes | sional p | urpose | S | | |
| CO | 4: | Write ema | ils and | formal | letters | and bui | ld resu | mes and | constr | uct para | graphs | | | |
| COS | 5: | Develop s | peaking | skills l | oth in | terms o | f fluenc | y and c | ompreh | ensibili | ity | | | |
| Pre-re | quisi | ite: | | | | | | | | | | | | |
| | • | Knowledg | e and U | ndersta | anding | of Gran | nmar | * | | | | | | |
| | • | Fundamen | ital Lan | guage S | Skills (| LSRW) | | | | | | | | |
| | | | | | | CO/PO, | PSO M | lapping | 3 | | | | | |
| | | | | | | gth of co | | | | Average in contract | | | | |
| COs | | | I REPORT OF THE PARTY OF THE PA | Management of the Control of the Con | Process of the second | es (POs) | The second secon | | | | | | and the second | r |
| | PO | | PO3 | PO4 | PO5 | | PO7 | PO8 | P09 | | PO11 | | | PSO |
| CO1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 2 | 3 |
| CO2 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| СОЗ | 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 |
| | | | | | Co | urse Ass | essmer | nt meth | ods | | | | | |
| | | | | , I | Direct | | | | | | | Indir | ect | |
| CIE te CIE te CIE te | est II (est III est IV | 0) (Theory 10) (Theor (10) (Theo (10) (Pract | y) ry) ical) | | | Attendar Fotal CII Semester (SEE – TI | E: 50 ma | xamina | | | Соц | ırse end | d surve | y |
| | | t/seminar/ | Quiz (5 |) | 1 | marks) | | | | | | T | | - |
| Init 01 | : | | | | | | | | | | | | 6 Hour | :S |

- Email, fixing an appointment, cancelling appointments, conference details, hotel accommodation, order for equipment, training programme details, paper submission for seminars and conferences
- Paragraph writing Describing defining providing examples or evidences

Tenses, Sentence Patterns Instructions Letter Writing - calling for quotations, placing orders Unit 03: 6 Hours Prefixes and Suffixes Cover letter and resume writing Unit 04: 6 Hours Modal verbs, concord Checklist Letter Writing - Business communication, complaints, replies to queries from business customers Unit 05: 6 Hours If conditionals Letter Writing - inviting dignitaries, accepting and declining invitations Lab component: 1. Self-introduction, personal information, name, home background, study details, area of interest, hobbies, strengths and weaknesses, projects and paper presentations, likes and dislikes in food, travel, clothes, special features of home town. 2. Mini presentation - Office Arrangements, Facilities, Office Functions, Sales, Purchases, Training Recruitment, Advertising, Applying for financial assistance, applying for a job. 3. Listening - understanding short conversations or monologues, taking down phone messages, orders, notes, etc. 4. Listening – entering information in tabular form 5. Loud Reading Theory: 30 Hrs Tutorial: --Practical: 30 hours-Project:--Total Hours: 60 Hrs **TEXT BOOKS** Technical English I & II, Dr. M. Renuga et al. Sonaversity, 2016 **Extensive Reading** 1. She is Dancing Back to Life – A Short Story" 2. The Story of Google - Sara Gilbert, published by Jaico 3. The Story of Amazon.com- Sara Gilbert, published by Jaico **REFERENCES** 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.

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,
SALEM - 6"

6 Hours

Unit 02:

BoS Date: 08. 07. 2023

| SEME | STEP | - T | | | | 7 1 | | | | | | L | ГР | J | С |
|--|---------------------------------------|---|----------------------|-----------|------------|-----------------------------------|-------------------------------|--|------------------------|--------------|-------------------------------------|----------|----------|----------|---------|
| | | - | LINE | AR AL | GEBRA | AND | CALCU | LUS W | TH N | IATLA | | | - | \vdash | |
| U23MA | | | | | | | | No. | | | | 3 | 0 2 | 0 | 4 |
| Course | | | | | | 200 200 | | | | | | | | | |
| At the e | | | rse, the | | | | 13 | 10 | | | | | | | |
| CO1: | | | k of the | | | | | | | | | | ods | | |
| CO2: | 1 | | oncepts o | | - | - | -34 | | | | | | | | |
| CO3: | | | oncepts o | | | | | | | | | | | | natrix. |
| CO4: | 1 | | lor's ser | | | | | | | | | ons of t | wo varia | bles | |
| CO5: | appl | y the ap | propriat | e technic | ques of | multiple | integral | s to find | the ar | ea and v | olume. | | | × | |
| Pre-req | uisites | ; : | | | | | | | | | | | | | |
| | | | of elem | | gebra | | | | | nentals o | | | | | |
| • | runda | mentals | of calcu | lus | onersterin | ************ | | TOWN SHAMES | | iciitais o | r trigoric | Jilicu y | | | |
| | | | (3 | /2/1 indi | eates the | | | O Mappi | | 2-Mediu | m 1-Wes | ak | | | |
| CO- | | | (3 | | | and the second second second | Control of the Control of the | The Control of the Co | The profit of the con- | ecific Ou | APPLIES AND RESIDENCE AND RESIDENCE | PSOs) | | | |
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | P09 | PO10 | PO11 | PO12 | PSO1 | PSO2 | PSO |
| CO1 | 3 | 3 | | 3 | 2 | | | 7 17 | | | | 2 | 2 | 2 | 3 |
| CO2 | 3 | 3 | | 3 | 2 | | | | | | | 2 | 2 | 2 | 3 |
| CO3 | 3 | 3 | | 3 | 2 | | | | | | | 2 | 2 | 2 | 3 |
| CO4 | 3 | 3 | | 3 | 2 | | | | | | | 2 | 2 | 2 | 3 |
| CO5 | 3 | 3 | | 3 | 2 | | | | | | | 2 | 2 | 2 | 3. |
| | | | (| Course a | ssessm | ent met | hods [T | heory v | vith lal | boratory | course | | | | |
| | | asia in the | | Đi | rect | | | | | 30 | | In | direct | | |
| CIE test CIE test CIE test CIE test Attenda Assignn | II (10 III (10 IV (1) IV (5) | (Theo (Theo (Theo (Prac ()) | ry) ory) | | Sem | 1 CIE: 50 ester En E- Theor | d Exam | ination (| - | s] | | Course | end surv | vey | |
| Jnit 01 | LIN | EAR S | YSTEM | OF EQ | UATIO | ONS | | | | | | | | 9 Ho | ars |
| Rank of | a ma | trix – s | solution del meth | of linea | r systen | n of equ | ations 1 | by matri | ix met | hod, Ga | uss elim | ination, | Gauss- | Jordan, | Gauss |
| Jnit 02 | VEC | CTOR | SPACES | 3 | | | | | | | | | | 9 Ho | urs |
| Vector | space | - linea | r indepe | ndence | and dep | endence | of vec | etors – 1 | oasis – | dimens | ion – li | near tra | nsforma | tions (n | naps) - |
| | | | h a linear | | | | | iear map |). | | | | | 9 Ho | urs |
| Jnit 03 | | | envectors | | | | | | | | | | | | |

| Jnit 04 | 4 MULTIVARIABLE CALCULUS | 9 Hours | | | | | | | | | | | |
|---------|--|---------------------------------------|--|--|--|--|--|--|--|--|--|--|--|
| variab | tions of several variables – partial differentiation – total derivative – Jacobians oles – maxima and minima of functions of two variables without constraints unge's method of undetermined multipliers. | | | | | | | | | | | | |
| nit 05 | 5 MULTIPLE INTEGRALS | 9 Hours | | | | | | | | | | | |
| | le integrals – change of order of integration – change of variables from Cartes rals in Cartesian coordinates – triple integrals – volume as triple integrals in Cartesian coordinates – triple integrals – volume as triple integrals in Cartesian coordinates – triple integrals – volume as triple integrals in Cartesian coordinates – triple integrals – volume as triple integrals in Cartesian coordinates – triple integrals – volume as triple integrals in Cartesian coordinates – triple integrals – volume as triple integrals in Cartesian coordinates – triple integrals – volume as triple integrals in Cartesian coordinates – triple integrals – volume as triple integrals in Cartesian coordinates – triple integrals – volume as triple integrals – volume as triple integrals in Cartesian coordinates – triple integrals – volume as t | | | | | | | | | | | | |
| | 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. | | £ | | | | | | | | | | | |
| 6. | Taylors series expansion of functions of two variables | | | | | | | | | | | | |
| 7. | Evaluating double integrals | | | | | | | | | | | | |
| 8. | | 4 6 | | | | | | | | | | | |
| 9. | Evaluating triple integrals | | | | | | | | | | | | |
| 10. | Finding volume as triple integrals | | | | | | | | | | | | |
| | ry: 45 Hrs Tutorial: - Practical: 30 Hrs Project:- | Total Hours: 75 Hrs | | | | | | | | | | | |
| | T BOOKS: | | | | | | | | | | | | |
| 1. | . T. Veerarajan, "Linear Algebra and Partial Differential Equations", McGra | w Hill Publishers, 1st Edition, 2018. | | | | | | | | | | | |
| 2. | T. Veerarajan, "Engineering Mathematics for Semesters I & II", McGraw F | Iill Publishers, 1st Edition, 2019. | | | | | | | | | | | |
| 3. | THE COLUMN THE PROPERTY OF THE COLUMN THE CO | neering Mathematics with MATLAB", | | | | | | | | | | | |
| REFI | ERENCE BOOKS: | 4 | | | | | | | | | | | |
| 1. | | 6 th Edition, 2018. | | | | | | | | | | | |
| 2. | 2. E. Kreyszig, "Advanced Engineering Mathematics", Wiley Publishers, 10 th | Edition, Reprint, 2017. | | | | | | | | | | | |
| 3. | B. C. Prasad and R. Garg, "Advanced Engineering Mathematics", Khanna Pul | olishers, 1st Edition, 2018. | | | | | | | | | | | |
| 4. | B. V. Ramana, "Higher Engineering Mathematics", McGraw Hill Publisher | rs, 29 th Reprint, 2017. | | | | | | | | | | | |
| 5. | | Edition, 2018. | | | | | | | | | | | |
| 6. | 5. D. Xu, "Calculus problem solutions with MATLAB", Walter de Gruyter Po | ablishers, 1st Edition, 2020. | | | | | | | | | | | |

Dr. S. JAYABHARATHI

Head / Department of Mathematics Sona College of Technology Salem - 636 005

Dr. S. JAYABHARATHI BOSASSACIATE PROFESSOR & HEAD DEPARTMENT OF MATHEMATICS, SONA COLLEGE OF TECHNOLOGY, SALEM-636 005. Tamilnadu.

Ph: 0427 - 4099999.

Dr. M. RENUGA BoS - Chairperson Science and Humanities Sona College of Technology Salem - 636 005

B.E / B. Tech Regulations 2023

Department of Humanities & Languages, Sona College of Technology, SALEM - 636 000.

| | | | T | | | | | | | | 1 | | T | |
|----------|----------|---|-----------|----------|---------|-----------|------------|----------|----------|-----------|-----------|----------|--------------|---------|
| U2 | 23PH | Y103B | | | | EERIN(| | | CE) | L | T | P | J | C |
| | | | (0 | ommo | n to C | CSE, CS | D, AIN | IL & E | CE) | 3 | 0 | 0 | 0 | 3 |
| Cours | se Ou | comes | | | | | | | | | | | | |
| At the | e end | of the cou | rse, the | studer | ıt will | be able | to | | | | | | | |
| CO | l: | Analyse th | e relati | on betw | een ar | rangeme | ent of at | oms an | d mater | rial prop | erties. | | | |
| CO | 2:] | Discuss the | e dual n | ature o | f matte | er and ra | diation | and the | applica | ation of | wave n | ature of | partic | les. |
| CO | 3: 1 | Describe the | he basic | compo | nents | of lasers | | | | | · | | | |
| CO4 | 4: I | Differentia | ite the e | lectrica | l and t | hermal c | conduct | ivity of | metals | | | | - | |
| CO | 5: l | Elucidate the classification and theory of semiconducting materials | | | | | | | | | | | | |
| Pre-re | quisi | te: | | | | | | | | | | | | |
| | F | Basic know | vledge i | n atom | ic phy | sics and | optics. | | | | | | | |
| | | | | | | CO/PO, | PSO M | lapping | } | | | | | |
| | | (3/2 | /1 indic | ates the | e stren | gth of co | rrelatio | n) 3-Sti | rong, 2- | Mediun | n, 1-We | ak | | |
| COs | | Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) | | | | | | | | | | | | |
| COS | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | P09 | PO10 | PO11 | PO12 | PSO1 | PSC |
| CO1 | 3 | 2 | - | - | - | 2 | 2 | | - | 2 | • | 2 | | 3 |
| CO2 | 3 | 2 | - | - | - | 2 | 2 | - | - | 2 | • | 2 | - | 3 |
| соз | 3 | 2 | | | - | 2 | 2 | - | - | 2 | • | 2 | | 3 |
| CO4 | 3 | 2 | | - | _ | 2 | 2 | - | - | 2 | - | 2 | - | 3 |
| CO5 | 3 | 2 | - | - | - * | 2 | 2 | - | - | 2 | · we | 2 | - | 3 |
| | | 1 | | | Co | urse Ass | essmer | t meth | ods | | | | CLEST STATES | |
| | | | | T | Direct | | | | | | | Indir | ect | |
| CIE te | st I (8 |) | | | (| Objective | es Test | (6) | | | | | | |
| CIE te | st II (8 | 3) | | | - 1 | Attendar | | | | | Con | E | J C | |
| CIE te | | | | | | Total CII | E: 40 ma | arks | | | Cot | irse End | d Surve | У |
| Assign | nment | /Seminar/ | Quiz (5 |) | | Semester | End E | xamina | tion (60 |) | | | | |
| | | STAL P | | | | | | | | | | | 9 Hou | |
| Impor | tance | of crystals | s - Type | es of cr | ystals | - Basic o | definition | ons in c | rystallo | graphy | (Lattice | e -space | e lattice | - uni |
| cell - l | lattice | parameter | rs - basi | s) - Bra | vais la | attices - | Lattice | planes a | and Mil | ller indi | ces - In | terplana | ır distar | 1ce - (|
| spacin | g in c | ubic lattic | e - Calc | ulation | of nur | nber of a | atoms p | er unit | cell - A | tomic ra | idius - (| Coordin | ation n | umbe |
| - Ator | nic Pa | acking Fa | ctor for | SC. B | CC. F | CC and | HCP s | tructure | s - Pol | ymorph | ism and | d allotr | opy - C | rvsta |

imperfections - Point, line and surface defects - Burger vector.

Unit 02: OUANTUM 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 - Schrodinger'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 - 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.

Unit 04: CONDUCTING MATERIALS

9 Hours

Basic definitions - Classical free electron theory of metals - Expression for electrical conductivity and thermal conductivity - Wiedemann Franz law - Lorentz number - Drawbacks of classical free electron theory - Quantum theory - band theory of solids (qualitative treatment only) - Fermi energy and Fermi distribution function - Effect of temperature on Fermi function - Density of energy states - Carrier concentration in metals.

Unit 05: SEMICONDUCTING MATERIALS

9 Hours

Intrinsic semiconductors - Energy band diagram - Direct and indirect band gap semiconductors - Carrier concentration in intrinsic semiconductors - Fermi level - Variation of Fermi level with temperature - Electrical conductivity - Band gap determination - Extrinsic semiconductors - Carrier concentration in n-type and p-type semiconductors (Qualitative Treatment only) - Variation of Fermi level with temperature and impurity concentration - Hall effect - Determination of Hall coefficient - Applications.

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. D. K. Bhattacharya, Poonam Tandon "Engineering Physics", Oxford University Press 2017.

REFERENCES

1. "Engineering Physics", Sonaversity, Sona College of Technology, Salem, Revised Edition 2018.

B. K. Pandey and S. Chaturvedi, "Engineering Physics", Cengage Learning India Pvt. Ltd., Delhi, 2021.
 V. Raghavan, "Materials Science and Engineering: A First Course" Prentice Hall India Learning Private Limited, 6th Edison, 2015.
 William D. Callister Jr., David G. Rethwisch, "Callister's Materials Science and Engineering", 10th Edition, Global Edition 2019.
 R.Wolfson, "Essential University Physics", Volume 1 & 2. Pearson Education (Indian Edition), 2009.

Chul

Professor of Physics
Head, Department of Sciences
Sona College of Technology (Autonomous)
SALEM-636 005.

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

| 1 | 1122DF | II 110 | | | | PHYSI | | | | L | T | P | J | С |
|-------|--|---|--|--|-----------------------|------------------|-----------|-----------|----------|----------------|----------|----------|----------|---------|
| | U23PF | HL110 | (Co | mmon | to 1 Ye | ar B.E. & CSI | | CSE (A | IWIL), | 0 | 0 | 2 | 0 | 1 |
| Cou | rse Ou | tcomes | | | 100000 | u 001 | | | | | | | | |
| At tl | ne end | of the cou | rse, the | studer | ıt will | be able | to | | | | | | | |
| CC |)1: | Determine | the opt | ical, the | ermal a | nd elect | trical pr | operties | s of ma | terials by | y variou | ıs physi | cs labo | ratory |
| | | equipment | | | | | | | | | | | | |
| CC |)2: | Access, pr | ocess ar | nd analy | yse scie | entific in | nformat | ion. | ~ | | | -, | | |
| CC |)3: | Solve prob | olems in | dividua | lly and | collabo | orativel | y. | | | | | 1 | |
| | requisile bure | ite: Capabl | e of usi | ng Scre | ew gau | ge, Ven | nier call | liper, Tr | ravellin | g micro | scope, S | Spectro | meter, a | ible to |
| | | | | | | | | | | | | | | |
| | | | | | (| CO/PO, | PSO M | lapping | 3 | | | | | |
| | | (3/2 | 2/1 indic | ates the | e stren | gth of co | orrelatio | on) 3-Str | rong, 2- | -Mediun | n, 1-We | ak | | |
| COs | | CONTRACTOR | Victoria de la constitución de l | 27. 19. 19. 19. 19. 19. 19. 19. 19. 19. 19 | Total Control Control | | 7 | 7 | | ific Out | - | | | |
| | PO | 1 PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | P09 | PO10 | PO11 | PO12 | PSO1 | PSO: |
| CO1 | 3 | 2 | | 1 | | 1 | | | 1 | | | | | 2 |
| CO2 | 3 | 2 | | 1 | | 1 | | | 1 | | | | | 2 |
| CO3 | 3 | 2 | | 1 | | 1 | | 1.0 | 1 | | | | | 2 |
| | | | | Designation and the | Coı | ırse Ass | essmer | nt meth | ods | Seylo Bases on | | | | |
| | | | | | Direc | t | | | | | | Ind | irect | |
| CIE | test I (| 15) | | | F | RTPS (1 | 0) | ε . | | | | | - | |
| Quiz | 1 (5) | | | | F | Record (| 10) | | | | | | | |
| CIE | test II | (15) | | | ר | Total CI | E:60 m | arks | | | C | ourse e | nd surv | /ey |
| Quiz | 2 (5) | | | | S | Semester | r End E | xaminat | tion (40 |) marks) | | | | |
| LIST | OFI | EXPERIM | ENTS | | | | | | | | | | - | |
| 1 | appar | | | | | | | | | | | | | |
| 2 | Determination of velocity of ultrasonic waves and compressibility of the given liquid using ultrasonic interferometer. | | | | | | | | | | | | | |
| 3 | | mination o | | | | | | ising Ca | rey Fo | ster's br | idge. | | | |
| 4 | | mination o | | | | | | | | | | | | |
| 5 | Deter | mination o | f particl | e size c | of lycop | odium | powder | using d | liode la | ser. | | | | - |

| 6 | Determination of acceptance angle and numerical aperture of an optical fibre using diode laser. | | | | | | | | |
|---|---|-----------------|--|--|--|--|--|--|--|
| 7 | Determination of Wavelength of Mercury spectrum using spectrometer. | | | | | | | | |
| 8 | Determination of band gap of the given semiconductor diode. | | | | | | | | |
| | | TOTAL: 30 HOURS | | | | | | | |

Chall

Professor of Physics
Head, Department of Sciences
Sona College of Technology (Autonomous)
SALEM-636 005.

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages
Sona College of Technology,
SALEM - 636 005.

| | | | | PRO | DBLEN | | LVING | | | HON | L | T | P | J | C |
|-----------------|---------|---|----------|----------|--------------|---------|-------------------------|-----------|-----------|-----------|---|-----------|-----------|---|------------|
| U | 23P | PR10 |)5 | | | | GRAM | | | | | | | | |
| | | (Common to ADS, IT, CSE, CSE(AIML), CSD, CIVIL, BME, ECE, EEE, MECH and MCT Branches) Outcomes | | | | | | | | | | 0 | 0 | 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 | ole Pyth | on prog | grams | | | | | | | *** | | |
| CO | 3: | Wri | ite prog | rams w | ith the | vario | us contro | ol staten | nents ar | nd hand | lling str | ings in | Python | | |
| CO | 1: | Dev | elop Py | ython p | rogram | s usir | g function | ons and | files | | | | | *************************************** | |
| CO | 5: | Ana | alyze a | problen | n and u | ise apj | propriate | e data si | ructure | s to sol | ve 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 | | | | |
| 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: | | | 9 Hour | rs |
| | - | | | | | | ed condi | | if-elif-e | lse). Ite | ration-w | vhile, fo | or, infin | | |



4.8.2023 Version I.0

Programmer: BE & B Tech

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

B.E / B.. Tech Regulations 2023



PROFESSOR & HEAD
Department of Information Technology
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 | т воокs | | | | |
| 1. | Reema Thareja, "Edition 2023. | Problem Solving a | and Programming | with Python" Oxf | Ford University Press, 2 nd |
| REFI | ERENCES | | | | |
| 1. | Ashok Namdev K Python" Mc-Graw | | | "Programming an | d Problem Solving with |
| 2. | Charles Dierbach, Solving Focus" W | | | e using Python: A | Computational Problem |
| 3. | Allen Downey, "Edition 2016. | Think Python: H | ow to Think Lik | e a Computer Sc | ientist" O'Reilly Media, 2nd |
| 4. | Timothy A. Budd, | " Evaloring Dutho | n" Mc Graw Hill | Education (India) | Private I td. 2015 |

Dr. J. AKILANDESWARI
PROFESSOR & HEAD
Department of Information Technology
SONA COLLEGE OF TECHNOLOGY
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- | | | Progran | nme Oi | itcome | s (POs) | and Pro | ogramm | ne Spec | ific Out | comes (| 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

| | Direct. | 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

4.8.2023 Version I.0

Programmer: BE & B Tech

B.E / B. Tech Regulations 2023



| U23F | BEE106 | SA | BASIC | S OF E | | RICAL | | LECTR | ONICS | L | T | P | J | C |
|-------------------|----------|-----------|--------------|------------|-----------|-----------|----------|------------|----------|------------------------|-------------|------------|----------|---------|
| | | 0.37 | | | ENG | GINEER | RING | | | 3 | 0 | 0 | 0 | 3 |
| | | | | | (Co | mmon to | CSE,I | T and A | DS) | | | | | |
| Course | Outcon | 1es | | | | - | | | | | | | a desire | 571 |
| At the e | nd of th | ie cours | se, the st | udent w | vill be a | ble to | | | | | | | | |
| CO1: | Ana | alyse th | e basic | circuit l | aws ar | nd find t | he DC | circuit p | aramet | ers. | - 4 | | LICH | - FI |
| CO2: | Ana | alyse th | e AC ci | rcuits a | nd dete | ermine t | he vari | ous para | meters | of AC | circuits. | la sula | | |
| CO3: | Exp | olain th | e constr | uction a | and wo | rking pr | inciple | of Elec | trical n | nachines | and Tr | ansform | ner. | 2014 |
| CO4: | Des | scribe th | he work | ing prin | ciples | and cha | racteris | stics of s | semicor | nductor | devices | -51 0 79 Î | er av | nar L |
| CO5: | Des | scribe t | he work | ing prin | cinles | of oner | ational | amnlifie | ers and | UPS wit | th annli | cations | | |
| | | ME TO | sud a Jr. | | - Pies | 1617.38 | | р | 15 4114 | | п пррп | graff | In the | 4 |
| Pre-requered Phys | | Ī | State of the | o (2°3 kg) | | X | A STATE | - | 576 | 1 2 2 1 | , ** | Chil-Jilli | nieli i | 1 |
| Filys | ics | 13427.1 | | | | CO/PO, | DSO N | lannina | | Total Control | | | | |
| | | (| 3/2/1 inc | dicates th | | | | | ng, 2-N | 1edium, | l-Weak | | | |
| COs | | | | | | 7 | and Pro | gramme | | c Outcor | | Os) | | |
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | P09 | PO10 | | PO12 | PSO1 | PSO |
| CO1 | 3 | 3 | 2 | | 3 | 2 | 2 | 2 | 3 | | 1 | 2 | 3 | 3 |
| CO2 | 3 | 3 | 2 | | 3 | 2 | 2 | 2 | 3 | | 1 | 2 | 3 | 3 |
| CO3 | 2 | 3 | 2 | | 2 | 2 | 2 | 2 | 3 | | 1 | 2 | 3 | 3 |
| CO4 | 2 | 3 | 2 | | 2 | 2 | 2 | 2 | 3 | | 1 | 3 | 3 | 3 |
| CO5 | 2 | 3 | 2 | | 2 | 2 | 2 | 2 | 3 | | 1 | 3 | 3 | 3 |
| | | | | | Co | urse Ass | essmen | t metho | ds | | | . Anton L | . While | |
| | | | | D | irect | | | | 100 | | September 1 | Indire | ect | |
| CIE test | | | | | | Objective | | o) | | | | | | |
| CIE test | | | | | | Attendanc | 10.115 | | | | Co | urse end | survey | |
| CIE test | III (8) | | | | T | otal CIE | : 40 ma | rks | | | | arse erre | . survey | |
| Assignm | ent/sem | inar/Qu | iiz (5) | | S | emester | End Ex | aminatio | n (60) | | | | | |
| nit 01: 1 | OC FU | NDAM | IENTA | LS | u, A | | | | | | ~ | | 9 Hour | S |
| | | | | | | | | | | 's law – Oelta trar | | | w – Res | sistors |
| nit 02: A | C FU | NDAN | IENTA | LS | | | | | | | | T | 9 Hour | s |
| | eforms | | | | | DMC c | L | | , , | | 111 7 | | | |

04.08.2023 Version I.0 Computer Science /Information Technology B.E / B.Tech Regulations 2023

Dr.S.PADMA, M.E., Ph.D.,
Professor and Head,
Department of EEE,
Sona College of Technology
Salem-636 005. Tamil Nadu,

Unit 03: ELECTRICAL MACHINES

9 Hours

DC Generator: Construction and Working principle - EMF equation, Types and Applications. DC Motor: Working Principle of DC motor, Types and Applications. Single Phase Transformer: Construction, Working principle and Applications.

Unit 04: SEMICONDUCTOR DEVICES

9 Hours

Introduction to semiconductors – PN junction diode, Zener diode, BJT - Operations of NPN and PNP Transistors – Characteristics of Transistors in CE, CB and CC configuration, SCR, MOSFET, I-V characteristics. Diode Rectifiers: Working principle of half wave rectifier, Full wave rectifier, and Bridge rectifier.

Unit 05: POWER SUPPLY AND OPERATIONAL AMPLIFIERS

9 Hours

UPS: Components of UPS – Working principle of UPS – Types of UPS - Applications. SMPS - Block diagram- Principle of operation – Applications. Operational Amplifier: Ideal characteristics of Op-Amp – Inverting amplifier, non-Inverting amplifier – Voltage follower – Summing amplifier.

| T | heory: 45 Hrs | Tutorial: | Practical: | Project: | Total Hours: 45 Hrs |
|------|---------------------------------------|--------------------|----------------------|---------------------|-------------------------------------|
| TEXT | BOOKS | m. '-' mir- | | an des 6 glada. | |
| 1. | B.L. Theraja, "Fu Edition 2018 | ndamentals of Ele | ectrical Engineering | g & Electronics", S | S. Chand & Co Ltd, 28 th |
| 2. | J.B. Gupta, "Func Kataria & Sons. | lamentals of Elect | rical and Electroni | cs Engineering", R | evised edition 2012, S.K. |
| REFE | CRENCES | 7 | | | |
| 1. | Mehta V.K, Rohi 2016. | t Mehta, "Princip | les of Electrical E | ngineering & Elec | tronics", S.Chand& Co. Ltd., |
| 2. | D. Roy Choudhur 2021. | ry and Shail Jain, | "Linear Integrated | Circuits", sixth ed | dition, New age international, |
| 3. | S. Padma, C. Sar Sonaversity, Revi | | S. Purushotham, " | Basic Electrical a | nd Electronics Engineering", |
| 4. | P S Subramaniyar Edition, 2016. | m, "Basic concept | s of Electrical and | Electronics Engine | eering ", BS Publications, I |

Dr.S.PADMA, M.E., Ph.D.,

Professor and Head, Department of EEE, Sona College of Technology Salem-636 005. Tamil Nadu.

| III | 3BEEL | 113 | BASIC | S OF E | LECTI | RICAL | AND E | LECTR | ONICS | L | T | P | J | C |
|--------|-----------|------------|-----------|-----------|--------------------|-----------|-----------|----------------------|------------|----------|---------|-----------|--------|-------|
| UZ | JDEEL | 113 | | ENGI | NEERING LABORATORY | | | | | 0 | 0 | 2 | 0 | 1 |
| | A** | | Private | | (Cor | nmon to | CSE,I | T and A | DS) | | | | | |
| Cours | se Outc | omes | Value - | | | | 210 00000 | | | | | | | |
| At the | e end o | the cou | ırse, the | studen | ıt will k | e able | to | | | | | | | |
| CO | l: A | pply the | basic ci | rcuit la | ws and | calcula | te vario | us parai | neters o | of DC a | nd AC | circuits. | | |
| CO | | nalyse t | | ormanc | e chara | acteristi | cs of | electron | ic devi | ces, DO | C Moto | or and | Single | Phase |
| CO | 3: A | oply the b | oasic con | cepts of | electric | al and e | lectronic | es for rea | ıl time pı | roblem s | olving. | | | |
| | | (3/2 | 2/1 indic | cates the | | | | lapping on) 3-Str | | Mediun | n, 1-We | ak | | |
| 00 | | | Progran | nme Oı | atcome | s (POs) | and Pro | ogramm | e Speci | fic Outo | omes (| PSOs) | | |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | P09 | PO10 | PO11 | PO12 | PSO1 | PSO: |
| CO1 | 3 | | 2 | | | 3 | 2 | | 3 | | 3 | 3 | 3 | 3 |
| CO2 | 2 | 2 | 2 | | 3 | | | | 3 | | 2 | 3 | 2 | 3 |
| CO3 | . 3 | 2 | 2 | | 3 | | 1.0 | | 3 | | 2 | 3 | 3 | 3 |
| | | | | | Cou | rse Ass | essmer | nt meth | ods | | | | | |
| | | | | I | Direct | | | | | | | Indir | ect | |
| Quiz 1 | est II (1 | | | | Total | rd (10) | 0 marks | | | | ourse e | nd surv | ey | |

LIST OF EXPERIMENTS

- 1. Verification of Ohm's Law and Kirchhoff's Law.
- Measurement of power and power factor for RLC series circuit.
- Characteristics of PN Junction Diode and Zener Diode.
- Characteristics of BJT in CB and CE Configurations.
- Characteristics of SCR
- Characteristics of MOSFET.
- 7. Measurement of ripple factor for half wave and full wave rectifier circuits.
- Characteristics of operational amplifier as inverting and non-inverting amplifiers.
- 9. Load test on shunt motor.
- 10. Load test on single phase transformer.
- 11. Line and load regulation of SMPS.

TOTAL: 30 Hours

Professor and Head,

Computer Science / Information Technologe partment of Technology

Sona College of Technology

Salem-636 005. Tamil Nadu

| 0431 | TAM101 | கமிமர் | மரபு / Heritage of Tamils | L | T | P | J | С |
|---|--|--|---|--|--|--|---|---|
| | | 2 g | | 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 T | amil Language ar | nd Literature | | | | | |
| CO2: | Analyse H | eritage - Rock Ar | t Paintings To Modern Art - Sculp | ture | | | | |
| CO3: | Explain Fo | lk and Martial Ar | ts | | | | v | |
| CO4: | Describe T | hinai 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 | II (30) | | Total CIE: 100 marks Semester End Examination: NI | L | Cou | rse end | survey | |
| | ` / | மற்றும் இ | லக்கியம் | | | 3 | Hour | 3 |
| கருத்து | ் - சங்க நக்கள் - | இலக்கியத்த தமிழ்க் | க்கியங்கள் - சங்க இலக் நில் பகிர்தல் அறம் - தி காப்பியங்கள், தமிழக நி இலக்கியம், ஆழ்வார்கள | ருக்கு நத்தில் | தளில் சப | மேல ந ண | ாண் பெ | மைக் எத்த |
| கருத்து சமயங் சிற்றில வளர்ச்ச | ் - சங்க நக்கள் - களின் தா கக்கியங்கள் 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 | ருக்கு தத்தில் ர மற் பளர்ச்சி ர் பங் | தளில் சப நும் ந ி – த களிப்ப | மேல நண நாயன் நமிழ் 1. | ாண் பெ மார்க இலக் | மைக் எத்த ள் கிய |
| கருத்து சமயங் சிற்றில வளர்ச்ச | ் - சங்க நக்கள் - 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 ை | ருக்கு? த்தில் ர் மற் பளர்ச்சி ர் பங் | தளில் சப நும் ந சி – த களிப்ப | மேல் நண் நாயன் நமிழ் 1. | ாண் பெ மார்க இலக் Hour | மைக் எத்த ள் ககிய |
| கருத்து சமயங் சிற்றில வளர்ச்ச அலகு 2 மற்றும் செய்யு குமரிமு வீணை | ் - சங்க நக்கள் - களின் தா க்கியங்கள சியில் பார 2 : மரபு - சிழ் நடுகல் பு அவர்கள ம் களை தனையில் | 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 | ருக்கு த்தில் ப் மற் பளர்ச்சி ப் பங் சிலை எர், செ ப்புறத் | தளில் நும் ந களிப்ப கள் - பாம்ன - மிரு | மேல் நண் நாயன் நமிழ் பழங் நமகள் தய்வா ததங்க | on ண் பெ மார்க இலக் Hour பகுடிய பக்கள் ம், ப | மைக் ாத்த ள் ககிய க பினர் தேர் |
| கருத்து சமயங் சிற்றில வளர்ச்ச அலகு 2 மற்றும் செய்யு குமரிமு வீணை கோவி | ் - சங்க நக்கள் - களின் தா க்கியங்கள சியில் பார 2 : மரபு - சிற் நடுகல் பூ அவர்கள ம் களை நனையில் , யாழ், ல்களின் ப | 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 | ருக்கு த்தில் ப் மந் பார்ச்சி ப் பங் சிலை எர், செ ப்புநத் பெ | தளில் தம் ந தன் - த களிப்ப கள் - பாம்ன - மிரு எருளா | மேல் நண் நாயன் நமிழ் பழங் நமகள் தய்வா நதங்க தார | ாண் பெ மார்க இலக் Hour ங்கள் ம், ப வாழ் | மைக் எத்த எர் கேயி தேர் வில் |
| கருத்து சமயங் சிற்றில வளர்ச்ச அலகு 2 மற்றும் செய்யு குமரிமு வீணை கோவிச | ் - சங்க நக்கள் - களின் தா க்கியங்கள சியில் பார 2 : மரபு - சிற் நடுகல் பு அவர்கள ம் களை நனையில் , யாழ், ல்களின் ப சேருக்கு | 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 | ருக்கு த்தில் ர் மற் பளர்ச்சி ர் பங் சிலை ள், செ பெறத் கள் பெ | தளில் நும் ந தளிப்ப கள் - பாம்ன - மிரு எருளா | மேல் நண் நாயன் நமிழ் பு. பழங் நமகள் தய்வா நதங்க தார | பாண் பெ மார்க இலக் Hour ங்கள் ம், ப வாழ் Hour | மைக் எத்த ள் கேய் தேர் வில் |
| கருத்து சமயங் சிற்றில வளர்ச்ச அலகு 2 மற்றும் செய்யு குமரிமு வீணை கோவிச அலகு 3 | ் - சங்க நக்கள் - 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 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 ம் கைவினைப் பொருட்க சிற்பங்கள் - நாட்டு ர் சிலை - இசைக் கருவ - தமிழர்களின் சமூக ர் மற்றும் வீர விளையாட்டு | ருக்கு த்தில் ப் மந் ப் பங் சிலை எ், செ ப்புறத் கள் பெ தகள் கத்த | தளில் தம் ந களிப்ப தள் – கள் – பாம்ன - மிரு எருளா | மேல் நண் நாயன் நமிழ் பழங் நைங்க தார இலாட்ட | பாண் பெ மார்க 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 | துவத்தில், 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

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,
SALEM - 650 005.

| U23T. | AM101 | தமிழர் மர | 니 / Heritage of Tamils | L | T | P | J | С |
|---|--|--|---|---|--|--|---------------------|------------------------|
| | | | | 1 | 0 | 0 | 0 | 1 |
| 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 | | |
| | | Cou | irse Assessment methods | | | | - | |
| 2000 To 100 | | Direct | | | | Indire | ct | |
| CIE test I (CIE test II CIE test III | (30) | 1 | Cotal CIE: 100 marks demester End Examination: 1 | NIL | Cou | rse end | survey | |
| Init 01: LA | NGUAGE AND | LITERATURE | | • | | 3 | Hours | |
| Land - Bak literature i | nent Principl kthi Literatur n Tamil - Co | es in Thirukural - Ta e Azhwars and Naya ntribution of Bharath | gam Literature – Distributiv mil Epics and Impact of Bu inmars - Forms of minor Pool niyar and Bharathidhasan | ddhism & etry - De | ¿ Jainism | in Tam nt of Mo | il dern | |
| Land - Bak literature in Unit 02: H CULPTU Hero stone making | nent Principle (thi Literature n Tamil - Co ERITAGE - RE e to modern s Massive Ter | es in Thirukural - Ta re Azhwars and Naya ntribution of Bharath ROCK ART PAIN sculpture - Bronze ico rracotta sculptures, V | mil Epics and Impact of Bud inmars - Forms of minor Poolingar and Bharathidhasan TINGS TO MODERN AF ons - Tribes and their handic fillage deities, Thiruvalluvar | ddhism & etry - De RT - crafts - A Statue a | t Jainism velopmen rt of temp t Kanyak | in Tam at of Mo | il | |
| Land - Balliterature in Unit 02: HECULPTU Hero stone making Making of | nent Principle Athi Literatur In Tamil - Co ERITAGE - RE In to modern so Massive Ter The musical inst | es in Thirukural - Ta re Azhwars and Naya ntribution of Bharath ROCK ART PAIN sculpture - Bronze ico rracotta sculptures, V | mil Epics and Impact of Buchmars - Forms of minor Poolingar and Bharathidhasan TINGS TO MODERN AFTOMS - Tribes and their handically delities, Thiruvalluvaram, Parai, Veenai, Yazh and | ddhism & etry - De RT - crafts - A Statue a | t Jainism velopmen rt of temp t Kanyak | in Tam at of Mo | il dern | |
| Land - Balliterature in Junit 02: HECULPTU Hero stone making Making of Temples in | nent Principle Athi Literatur In Tamil - Co ERITAGE - RE In to modern so Massive Ter In musical institution of the social and | es in Thirukural - Ta re Azhwars and Naya ntribution of Bharath ROCK ART PAIN sculpture - Bronze ico tracotta sculptures, V ruments - Mridhanga | mil Epics and Impact of Buchmars - Forms of minor Poeniyar and Bharathidhasan TINGS TO MODERN AFTOMS - Tribes and their handically delities, Thiruvalluvaram, Parai, Veenai, Yazh and mils | ddhism & etry - De RT - crafts - A Statue a | t Jainism velopmen rt of temp t Kanyak | in Tam nt of Mo 3 ble car umari, Role of | il dern | |
| Land - Bak literature in Init 02: H CULPTU Hero stone making Making of Temples in Unit 03: | nent Principle of the Literature of Tamil - Control of ERITAGE - RE of the Massive Termusical instance of Social and FOLK ANI hu, Karagatt | es in Thirukural - Ta re Azhwars and Naya ntribution of Bharath ROCK ART PAIN sculpture - Bronze ico tracotta sculptures, V ruments - Mridhanga Economic Life of Ta MARTIAL ARTS | mil Epics and Impact of Buchmars - Forms of minor Poeniyar and Bharathidhasan TINGS TO MODERN AFTOMS - Tribes and their handically delities, Thiruvalluvaram, Parai, Veenai, Yazh and mils | ddhism é etry - De RT – erafts - A Statue a Nadhas | t Jainism velopmen rt of temp t Kanyak waram - I | in Tam nt of Mo 3 ple car umari, Role of | il dern Hours | |
| Land - Balliterature in Unit 02: HECULPTU Hero stone making Making of Temples in Unit 03: Therukoot Tiger dance | nent Principle Athi Literatur In Tamil - Co ERITAGE - RE The to modern so Massive Ter The musical instruction of Social and FOLK AND Thu, Karagatt The Sports and | es in Thirukural - Ta re Azhwars and Naya ntribution of Bharath ROCK ART PAIN sculpture - Bronze ico rracotta sculptures, V ruments - Mridhanga Economic Life of Ta MARTIAL ARTS am, Villu Pattu, Kan | mil Epics and Impact of Bud inmars - Forms of minor Poolingar and Bharathidhasan TINGS TO MODERN AF ons - Tribes and their handic fillage deities, Thiruvalluvar am, Parai, Veenai, Yazh and mils | ddhism é etry - De RT – erafts - A Statue a Nadhas | t Jainism velopmen rt of temp t Kanyak waram - I | in Tam nt of Mo | il dern Hours | alari |
| 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, Voruments - 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 | etry - De RT – rafts - A Statue a Nadhas 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 tram Concept from Tholkap of during Sangam Age - Ancient | etry - De RT – rafts - A Statue a Nadhas 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 Poolingar 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 Literature in Tamil - Co ERITAGE - RE to modern so Massive Ter musical instance in 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 Miles & Aham and Publication and Literacy and Sangam Age - Out TION OF TAMILS TRE | mil Epics and Impact of Buchmars - Forms of minor Poolingar 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 |
| Land - Balliterature in Unit 02: H GCULPTU Hero stone making Making of Temples in Unit 03: Therukoot Tiger dance Unit 04: T Flora and Concept of Export and Unit 05: C AND INDI Contribution of Export and Unit 05: C AND INDI CONTRIBUTION OF THE OTHER EXPORT AND INDI CONTRIBUTION OF THE OTHER EXPORT AND THE OTHER EXPORT A | ment Principle with Literature in Tamil - Co ERITAGE - RE et to modern so Massive Teres in Social and FOLK AND Thu, Karagatt the - Sports and THINAI CO Fauna of Tamils - Edd Import duri ONTRIBUT AN CULTUON of Tamils of Tamils of Tamils - Print ty: 15 Hrs | es in Thirukural - Tare Azhwars and Nayar et Azhwars and Nayar et Azhwars and Nayar et Azhwars and Nayar et Azhwars and Barath ROCK ART PAIN eculpture - Bronze icontracotta sculptures, Varuments - Mridhanga Economic Life of Tare et Azhward Artial Arts am, Villu Pattu, Kand Games of Tamils NCEPT OF TAMIL et Azham and Publication and Literacy eng Sangam Age - Over ION OF TAMILS over ent - Role of Selection 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 Practical: Project | eather pu piyam ar ent Citie MOVEN ence of as System | t Jainism velopmen rt of temp t Kanyak waram - I appetry, S ad Sangar s and Por MENT Tamils ov ns of Mea | 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 | Aram Aram Tts of |
| 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 terms of Tamils - End Import during Tamils - End Import during Tamils - End Import during Tamils - Print Service Servic | 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 | பொருமந – 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 | | | Ĺ | T | P | J | C |
|--|--|--|--|------------------------------|---------|---------|-----------|----------|--------------|
| | 021101 | , | | | 1 | 0 | 0 | 0 | 1 |
| Course (| Outcomes | | | | e: | | | | |
| At the er | | se, the student wi | | | | | | | |
| CO1: | Read Frence English sou | | ench phonitis, pract | ice French accent | s, dif | ferenti | ate Frei | nch and | i |
| CO2: | | neself, talk about s d politely in a conv | omeone, ask others ersation | personal informa | tion, i | identif | y an ob | ject, as | k |
| CO3: | | | cement, describe abo | out neighbours, w | rite a | small | portrait | t | |
| CO4: | justify a ch | oice, express one's | out one's hobbies, a preferences, write a | list of needs | | | | | blog |
| CO5: | Suggest to | do something, appr | reciate something, ta | lk about a movie | , write | e a pos | stal card | 1 | |
| | , 100 | C | ourse Assessment | nethods | | | | | |
| | | Direc | t | | | | Indire | ct | |
| CIE test | I (30) | | Total CIE: 100 mai | ·ks | | | , | | |
| CIE test | II (30) | | Semester End Exa | mination: NIL | | Cour | se end | survey | ξ, |
| CIE test | III (40) | 3.545 | | - | | | | | |
| nit 01: | | | | | | | 3 | Hours | 3 |
| Hr 6: De | | countries, colors, numbers 0-20, wri | days & months te about one's ident | ification | | | Γ - | | ************ |
| nit 02: | | , st | | | | ٨ | 3 | Hours | 3 |
| Hr 10: Pr | reposition of p | place, identity card, | verbs, indefinite arti negative sentence ephatitic pronouns, s | | nlina | 81 | | | |
| nit 03: | illigs around | us, subjective and c | phatitic pronouns, s | cii-iiii oduction c | 7111110 | | 3 | Hours | 3 |
| Hr 16: A | djective's gen | der, noun's gender | gation: aller and ver t, things in a room, saccommodation, wr | imple preposition | IS | es | | | |
| nit 04: | nysicai acsem | otton, speak about t | accommodation, with | amg a sen poular | | | 3 | Hours | 3 |
| Hr 20: H | terrogative ad | ljectives, daily activ | vities, time and seas rences, write a mail | | verbs | | | | - |
| Hr 24 · N | our ruture tour | se, talk about profe | renees, write a mair | | * | | 3 | Hours | 3 |
| | | | | | | | | | |
| nit 05: | | s, conjugation: fair | e and sortir, demon | strative adjectives | } | | | | |
| nit 05: Hr 26: O Hr 28: A | uting activitie | | re and sortir, demon nbers, past tenses (p write a postal card | | | arfait) | | | |
| Init 05: Hr 26: O Hr 28: A Hr 30: Fi | uting activitie | quency, family men | nbers, past tenses (p | | | | l Hours | : 15 Hı | rs |
| Init 05: Hr 26: O Hr 28: A Hr 30: Fi | uting activitie dverbs of frec rench arts, tall ory: 15 Hrs | quency, family men k about a film, and | mbers, past tenses (p write a postal card | assé composé and | | | l Hours | : 15 Hı | rs |
| Finit 05: Hr 26: O Hr 28: A Hr 30: Fi Theo | uting activitie dverbs of free rench arts, tall bry: 15 Hrs | quency, family ments about a film, and Tutorial: | mbers, past tenses (p write a postal card | assé composé and Project: | l impa | | l Hours | : 15 Hı | rs |
| Init 05: Hr 26: O Hr 28: A Hr 30: Fr Thee TEXT BC | uting activitied dverbs of frequench arts, tall bry: 15 Hrs OOKS he course fact | ruency, family ment about a film, and Tutorial: ulty will provide re | nbers, past tenses (p write a postal card Practical: | Project: s, handouts and n | l impa | | l Hours | : 15 Hı | rs |

| 1122 | OL1102 | Germa | n | | L | T | P | J | С |
|--------------------------|----------------|----------------------|---|----------------|----------|---------|---------------------------------------|--------|----|
| 0230 | OL1102 | | : | | 1 | 0 | 0 | 0 | 1 |
| Course C | Outcomes | | | | | | | | |
| At the en | d of the cou | rse, the student wil | l be able to | | | | | | |
| CO1: | Use commo | on, everyday expres | sions to greet others | s and introduc | ce them: | selves. | | | |
| CO2: | Construct s | imple sentences /qu | estions. | | | | · · · · · · · · · · · · · · · · · · · | | |
| CO3: | Initiate and | sustain basic conve | ersation based on fa | mily, professi | ions, | | | | * |
| CO4: | Hobbies an | d food. | | | | | | | |
| CO5: | Identify dif | ferences in using no | ouns based on gende | er. | | | | | |
| | 1 | C | ourse Assessment r | nethods | | | | | |
| | | Direc | | | | | Indire | et | |
| 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 | |
| • G | reeting and ta | aking leave, introdu | cing oneself, introd | ucing others | | | | | |
| Unit 02: | | | 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: | | A | | - | | | 3 | Hours | 3 |
| - | lobbies, Profe | | | | | | | | |
| Theo | ory: 15 Hrs | Tutorial: | Practical: | Project:- | - | Tota | 1 Hours | : 15 H | ts |
| TEXT BO | | | | | | | | | |
| 1. N | etzwerk A1 | | 6 | | | | | | |

HOD

Dr. M.RENUGA, Professor & Head,

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

| | | | | I | , T | P | I | С |
|------------|----------------|--|------------------------|--|-------------|-----------|---|-------|
| U230 | OL1103 | Japane | se | | 0 | 0 | 0 | 1 |
| Course C | Outcomes | | · | | | | | |
| | | se, the student wi | ll be able to | | | | | |
| CO1: | | | eting in Japanese, wr | ite the letters of the | ne alphabe | t, identi | fy nam | es of |
| | | | tion using short and s | | | | | |
| CO2: | | | elated words and ver | b conjunctions ar | id make lig | tht conv | ersatio | n |
| 600 | | lirections and answ | <u> </u> | and wood for airi | na thinaa | and dan | | to |
| CO3: | the use of a | | rough the day and the | iose used for givi | ng unngs, a | and den | nonstra | ile. |
| CO4: | | | anese language, de | scribe the locati | ons of di | ifferent | things | and |
| CO 1. | | e counting in Japan | ~ ~ ~ | | | | | |
| CO5: | | | nings, express a willi | ngness to go to Ja | pan and us | se 'Te-f | orm' v | erbs |
| | | C | Course Assessment n | nethods | | | | |
| | | Direc | t | | | Indire | ct | |
| CIE test I | (30) | | Total CIE: 100 mar | ks | | | | |
| CIE test I | | | Semester End Exam | nination: NIL | Cou | rse end | survey | 7 |
| CIE test I | II (40) | | | | | | *************************************** | |
| Init 01: | | | | | | 3 | Hour | s |
| | | | Japanese alphabet: 10 | 04 Hiragana and 1 | 04 Kataka | na lette | ers | |
| | | rds from pictures of | or objects shown | | | | | |
| | elf-introducti | on | | | | Τ. | | |
| Jnit 02: | 1: 0 1: | | | | | 3 | Hour | 5 |
| | | ections when shopped and Verb Conjugat | | | | | | |
| | | t conversation | IOHS | | | | | |
| Jnit 03: | . Iviaking ngn | t conversation | | , | | 3 | Hour | s |
| | : Expressions | to use verbs from | morning to night | | | | | |
| | | for giving things | | | | | | |
| Hr 17-18 | : Adjectives | | | 14 | | | | |
| Jnit 04: | | | | 4 | | 3 | Hours | 5 |
| | | w liking for the Ja | | | | | | |
| | | | gs (or where things a | re) | | | | |
| | : Japanese nu | mbers and countin | g | attrama de dem militar de la companya de la company | | Τ, | | |
| Jnit 05: | .) (-1-i | | | | | 3 | 3 Hour | 5 |
| | : Making con | | thing, like 'I want to | oo to Ianan I' | | | | |
| | : Using 'Te-fo | | imig, fike I want to | go to supun | | | | |
| | ory: 15 Hrs | Tutorial: | Practical: | Project: | Tota | l Hours | : 15 H | rs |
| TEXT BO | OOKS | | | | - | | | |
| | | ılty will provide ha | andouts / notes / cour | se material. | | | | |
| | ooks on Basic | Japanese languag | e available in the col | lege library. | | | | |
| 2. | | | | J J- | 131 | | . 0 | 1 |

Dr. M.RENUGA,
Professor & Head, Department of Humanities & Lan

| U230 | DL1104 | Korea | an | | L | Т | P | J | C |
|-------------|----------------|---------------------|-----------------------|----------|---|-------|--------|--------|-------|
| | 1 | | | | 1 | 0 | 0 | 0 | 1 |
| Course O | | | | | | | | | |
| | | se, the student wi | | | | | | | |
| CO1: | | | ants syllable structu | ire. | | | | 9 | |
| CO2: | | s and introduce the | emselves. | | | | | | |
| CO3: | | e, date and week | a - 2 | | | | | | |
| CO4: | | ation and places | | | | | | | |
| CO5: | Construct si | imple sentences / c | questions. | | | | | | |
| | | C | Course Assessment | methods | | | | | 9 |
| | | Direc | 1 | | - | | Indire | ct | |
| CIE test I | (30) | | Total CIE: 100 mar | rks | | | | | |
| CIE test II | 0.0 | | Semester End Exa | | | Cour | se end | survev | |
| CIE test II | • • | | Different Life Like | | | | | - 7 | |
| nit 01: H | | | <u> </u> | | | | 3 | Hours | 3 |
| | • | onants Syllable St | ructure | | | 0 | | | |
| Tense Con | | onants syndone st | raotaro | | | | | | |
| | d Consonants | | | | | | | | |
| Double V | | | | | | | | | |
| Final Cor | | | | | | | | | |
| | inal Consonar | nts | | | | | | | |
| Liaison | | | | | | | | | |
| nit 02: Iı | ntroduction | | | | | | 3 | Hours | 3 |
| Greetings | - | × 1 | | | | | | | - |
| _ | bout names | | | | | | | | |
| Self-intro | | | | | | | | | |
| ntroducir | ng my family | members | * | | | | | | |
| Unit 03: | Time and Da | ate | | | | | 3 | Hours | 3 |
| Talkir | ng about locat | ion |) | | | | 1 | | |
| Talkir | ng about dates | s and days of the w | veek | | | | | | |
| Talkir | ng about doing | g something in the | past | | | | | | |
| nit 04: I | Location and | Places | | | | | 3 | Hours | 3 |
| Talking al | bout location | | | | | | | | |
| Talking al | bout doing so | mething at a locati | ion | * | | | | | |
| Falking al | bout direction | IS | | | | | | 5 | |
| nit 05: Fu | uture | | | | | | 3 | Hours | 3 |
| | • | g something in the | future | | | | | | |
| | | s for the future | | | | | | | |
| Talkin | ng about hope | for the future | - | | | | | | |
| Theo | ry: 15 Hrs | Tutorial: | Practical: | Project: | * | Total | Hours | : 15 H | rs |
| SPER | | | | | | | | | |
| REFERE | NCES | | | | | | | | |

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: B.E Computer Science and Engineering

| S.No | Course Code | Course Title | L | T | P | J | C | Category | Total Contact Hours | Course Type* |
|------|-------------|--|--------|-------|-------|------|------|----------|---------------------------|-----------------|
| | | Theory | cour | ses | | | - | | | |
| 1. | U23ENG201A | Technical English | 2 | 0 | 0 | 0 | 2 | HL | 30 | Т |
| 2. | U23MAT202D | Discrete Mathematics | 3 | 1 | 0 | 0 | 4 | BS | 60 | TT |
| 3, | U23CHE204B | Chemistry for Computer Science | 3 | 0 | 0 | 0 | 3 | BS | 45 | Т |
| 4. | U23CPR205 | Programming in C | 3 | 0 | 0 | 0 | 3 | ES | 45 | Т |
| 5. | U23EGR207 | Engineering Graphics | 3 | 0 | 0 | 0 | 3 | ES | 45 | Т |
| 6. | U23EC203 | Digital Principles and System Design | 3 | 0 | 0 | 0 | 3 | PC | 45 | T |
| 7. | U23TAM201 | தமிழரும் தொழில்நுட்பமும்/ Tamils and Technology | 1 | 0 | 0 | 0 | 1 | HS | 15 | Т |
| 8. | U23GE201 | Basic Aptitude- II | 2 | 0 | 0 | 0 | 0 | AC | 30 | T |
| | | Practica | ıl cou | irses | | | | | | |
| | U23CPL212 | C Programming Laboratory | 0 | 0 | 2 | 0 | 1 | ES | 30 | L |
| 9. | U23CHL211 | Chemistry Laboratory | 0 | 0 | 2 | 0 | 1 | BS | 30 | L |
| | | 7 | otal | Cre | dits | | 21 | | | |
| | | Options | al La | ngu | age (| ours | es** | | | |
| | U23OL1201 | French - II | | | | | | | 15 | T |
| *** | U23OL1202 | German - II | | | | | | _ | 15 | Т |
| 11 | U23OL1203 | Japanese - II | 1 | 0 | 0 | 0 | 1 | OL | 15 | T |
| | U23OL1204 | Korean - II | | | | | | | 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

Approved By

| mint. | Donni | Mirakum | J. Alban | 7 |
|--|----------------------|---------------------------------------|--------------------|---|
| Chairperson, Science and Humanities BoS | Chairperson, CSE BoS | Member Secretary, Academic Council | Dean-Academics | Chairperson, Academic Council & Principal |
| Dr.M.Renuga | Dr B.Sathiyabhama | Dr.R.Shivakumar | Dr.J.Akilandeswari | Dr.S.R.R.Senthil Kumar |

Copy to:- HOD/Computer Science and Engineering, Second Semester B.E. CSE Students and Engineering A.R. SENTHILKUMAR,

M.E.(Struct), Ph.D., MISTE, FIE, C. ENG(I), MICI.,

B.E/B.Tech Regulation of TECHNOLOGY, JUNCTION MAIN ROAD, SALEM-636 005,

^{**}Students may opt for foreign languages viz., German/French/Japanese/Korean with additional one credit (Not accounted for CGPA calculation)

| TI | 23ENC | 201 A | (Com | i | | hnical I | _ | D CCE | OH III | L | Т | P | J | C |
|--------|-----------------------------------|-------------------------|--|-------------------------------------|---------|---------------------------------|---------|-----------------|---|------------|---------------------------|----------|---|-----|
| V | ZJENC | 1201A | (Con | | | MCT, F | | D, CSE, anches) | , CIVIL, | 2 | 0 | 0 | 0 | 2 |
| Cour | se Out | comes | | | | | | | *************************************** | | | L | | |
| At th | e end | of the cou | rse, the | stude | nt will | be able | to | | | | | 15 | *************************************** | |
| CO | | rame sent luency | tences (| correctl | y, both | in writt | en and | spoken | forms o | of langua | age with | 1 accura | acy and | - |
| CO | b | Develop et uilding v | ocabula | ary | | | | | e skills | require | d for us | ing gra | mmar a | and |
| CO | | Organise id | | | | | | | | | | | | |
| CO | 4: I | Develop sk | cills for | writing | g conve | rsations | , propo | sals, rep | orts an | d transc | oding | 9 | | |
| CO | 5: F | Read for u | ndersta | nding a | nd inte | rpreting | inform | ation ar | nd to ut | ilise info | ormatio | n accor | dingly | |
| Pre-re | equisit | e: | 8 | | | | · | | | | 7 | | | |
| | • K | nowledge | e and U | Inderst | anding | of Gran | nmar | | | | | | | |
| | | undamen | | | • | | | | | | | | | |
| | | | | | (| CO/PO, | PSO M | lapping | 7 | | | | | |
| | | (3/2 | /1 indic | ates the | | | | | | Mediun | n, 1-We | ak | | |
| COs | | | Process Committee of the Committee of th | Actor in the Control of the Control | | | | | Maria Committee Committee | ific Out | | | 1.212.1 | |
| COS | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | P09 | PO10 | West of the second second | PO12 | PSO1 | PSO |
| CO1 | 2 | 1 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| CO2 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| CO3 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| CO4 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 205 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | | | | Cou | rse Ass | essmen | t metho | ods | | | | | |
| | | * 10 see | | E | Direct | | | | | | | Indire | ect | |
| IE te | st I (8) st II (8 st III (8 | | | | A | bjective ttendar otal CIE | ce (5) | , | | | Cou | rse end | survey | 7 |
| Assign | nment/ | seminar/(| Quiz (5) |) | Se | emester | End Ex | aminat | ion (60 |) | | | | |
| nit 01 | : | | | | | | • | | • | <u>-</u> | | 1 | 6 Hours | S |
| | | | | | | | | | | | | | | |

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 Unit 03: 6 Hours Collocations, direct and indirect speech 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 Unit 05: 6 Hours **Pronouns** Transcoding – bar chart, pie chart, tabular column Theory: 30 Hrs Tutorial: --Practical: -Project:--**Total Hours: 30 Hrs TEXT BOOKS** Technical English I & II, Dr. M. Renuga et al. Sonaversity, 2016 **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. 3. Grandma's Bag of Stories - Sudha Murthy - Penguin Random House, India. REFERENCES Norman Whitby, Business Benchmark - Pre-Intermediate to Intermediate, Students Book, Cambridge University Press, 2006. A Course in Communication Skills, P. Kiranmai Dutt, Geetha Rajeevan, C. L. N. Prakash, published by Cambridge University Press India Pvt. Ltd.

HOD 13/2/24.

Dr. M.RENUGA,
Professor & Head,
Professor & Languages,
College of Technology,
W - 62

| Course Outcomes At the end of the course, the student will be able to Col: check the validity of the arguments in the field of data base and artificial intelligence using the rules of logic. CO2: apply the concept of logical theory to validate the correctness of software specifications. CO3: analyze and simplify the digital (logic) circuits using the concept of relations. CO4: apply the concept of various types of functions in the field of sorting algorithm, parallel computing and image processing, CO5: apply the concept of various types of functions in the field of sorting algorithm, parallel computing and image processing. CO6: apply the concept of various types of functions in the field of sorting algorithm, parallel computing and image processing. CO7: apply the concept of various types of functions in the field of sorting algorithm, parallel computing and image processing. CO8: apply the concept of group theory in the field of coding theory and cryptography. CO9: apply the concept of calculus CO/PO, PSO Mapping (3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak CO9: apply the concept of calculus CO/PO, PSO Mapping (3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak CO9: apply processing apply the concept of various types of functions and processing apply the concept of various types of functions and bi conditional propositions, converse, contra positive and inverse) — Truth tables of the processing apply the concept of various types of functions and disjunction on disjunctive and disjunctive normal forms — Rules of the processing apply the concept of various types of functions and dispurctive normal forms — Rules of the processing apply the concept of various types of functions and dispurctive normal forms — Rules of the processing apply the concept of processing apply the concept | Common to COMPUTER SCIENCE AND BAGINEERING, SE(ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING) & COMPUTER SCIENCE AND DESIGN Course Outcomes At the end of the course, the student will be able to CO1: check the validity of the arguments in the field of data base and artificial intelligence using the rules of logic. CO2: apply the concept of logical theory to validate the correctness of software specifications analyze and simplify the digital (logic) circuits using the concept of relations. CO3: apply the concept of various types of functions in the field of sorting algorithm, paralle computing and image processing. CO4: apply the concept of various types of functions in the field of sorting algorithm, paralle computing and image processing. CO5: apply the concepts of group theory in the field of coding theory and cryptography. Pre-requisites: Fundamentals of elementary algebra Fundamentals of calculus CO6/PO, PSO Mapping (3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak Programme Outcomes (PO5) and Programme Specific Outcomes (PSOs) Programme Outcomes (PO5) and Programme Specific Outcomes (PSOs) CO1 3 3 3 3 2 | | | | - | | | | | | | | | * | | | | |
|--|--|-----------|--------|-----------------------|----------|-------------------|------------------|----------------------|-----------|---------|---------|----------|---------|----------|---------------|---------|-------|-------------|
| Course Outcomes At the end of the course, the student will be able to check the validity of the arguments in the field of data base and artificial intelligence using the rules of logic. CO2: apply the concept of logical theory to validate the correctness of software specifications. CO3: apply the concept of logical theory to validate the correctness of software specifications. CO4: apply the concept of logical theory to validate the correctness of software specifications. CO5: apply the concept of various types of functions in the field of sorting algorithm, paralle computing and image processing, CO5: apply the concepts of group theory in the field of coding theory and cryptography. Pre-requisites: • Fundamentals of elementary algebra • Fundamentals of calculus CO/PO, PSO Mapping (3/2/1 indicates the strength of correlation) 3. Strong, 2-Medium, 1-Weak Programme Outcomes (PO5) and Programme Specific Outcomes (PSO5) CO5 Po2 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO3 CO6 Po2 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO3 CO7 CO8 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO3 CO8 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO3 CO9 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO3 CO9 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO3 CO9 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO3 CO9 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO3 CO9 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO3 CO9 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO3 CO9 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO3 CO9 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO3 CO9 PSO3 P | COURSE Outcomes At the end of the course, the student will be able to CO1: check the validity of the arguments in the field of data base and artificial intelligence using the rules of logic. CO2: apply the concept of logical theory to validate the correctness of software specifications analyze and simplify the digital (logic) circuits using the concept of relations. CO3: apply the concept of various types of functions in the field of sorting algorithm, paralle computing and image processing, CO5: apply the concepts of group theory in the field of coding theory and cryptography. Pre-requisites: • Fundamentals of elementary algebra • Fundamentals of calculus CO6PO, PSO Mapping (3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) CO6 Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) CO7 CO8 Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) CO8 CO9 CO9 CO9 CO9 CO9 CO9 CO9 | SEME | ESTE | R - II | | mman 4 | | | | | | | | | LT | P | J | (|
| At the end of the course, the student will be able to CO1: check the validity of the arguments in the field of data base and artificial intelligence using the rules of logic. CO2: apply the concept of logical theory to validate the correctness of software specifications. CO3: analyze and simplify the digital (logic) circuits using the concept of relations. CO4: apply the concept of various types of functions in the field of sorting algorithm, paralle computing and image processing, CO5: apply the concepts of group theory in the field of coding theory and cryptography. CO6: apply the concepts of group theory in the field of coding theory and cryptography. CO7: apply the concepts of group theory in the field of coding theory and cryptography. CO6: apply the concepts of group theory in the field of coding theory and cryptography. CO7: apply the concepts of group theory in the field of coding theory and cryptography. CO6: apply the concepts of group theory in the field of coding theory and cryptography. CO7: apply the concept of various types of functions in the field of sorting algorithm, paralle computing and image processing. CO7: apply the concept of various types of functions in the field of sorting algorithm, paralle computing and image processing. CO8: apply the concept of various types of functions in the field of coding theory and cryptography. CO9: apply the concept of various types of functions in the field of coding theory and cryptography. CO9: apply the concept of various types of functions. CO9: Apply the concept of various types of functions. CO9: Apply the concept of various types of functions. CO9: Apply the concept of various types of functions. CO9: Apply the concept of various types of functions. CO9: Apply the concept of various types of functions. CO9: Apply the concept of various types of functions. CO9: Apply the concept of various types of functions. CO9: Apply the concept of various types of functions. CO9: Apply the concept of various types of functions. CO9: App | At the end of the course, the student will be able to CO1: check the validity of the arguments in the field of data base and artificial intelligence using the rules of logic. CO2: apply the concept of logical theory to validate the correctness of software specifications analyze and simplify the digital (logic) circuits using the concept of relations. CO4: apply the concept of various types of functions in the field of sorting algorithm, paralle computing and image processing. CO5: apply the concepts of group theory in the field of coding theory and cryptography. Pre-requisites: Fundamentals of elementary algebra Fundamentals of calculus CO/PO, PSO Mapping (3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) CO5: PO PO3 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO2 CO6 PO PO3 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO2 CO7 SO3 3 3 3 3 2 2 | U23M | IAT2 | 202D | | CSE(AR | TIFIC | IAL IN | TELL | IGEN | CE AN | D MAC | CHINE | | 3 1 | 0 | 0 | , |
| col: check the validity of the arguments in the field of data base and artificial intelligence using the rules of logic. col: apply the concept of logical theory to validate the correctness of software specifications. analyze and simplify the digital (logic) circuits using the concept of relations. apply the concept of various types of functions in the field of sorting algorithm, paralle computing and image processing, apply the concepts of group theory in the field of coding theory and cryptography. Pre-requisites: Fundamentals of elementary algebra Fundamentals of calculus CO/PO, PSO Mapping (3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) COS PO PO2 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO3 CO1 3 3 3 3 2 | cO1: check the validity of the arguments in the field of data base and artificial intelligence using the rules of logic. cO2: apply the concept of logical theory to validate the correctness of software specifications. cO3: analyze and simplify the digital (logic) circuits using the concept of relations. cO4: apply the concept of various types of functions in the field of sorting algorithm, parallel computing and image processing, computing and image processing, computing and image processing, co5: apply the concepts of group theory in the field of coding theory and cryptography. Pre-requisites: • Fundamentals of elementary algebra • Fundamentals of calculus CO6: Pro6 PSO Mapping (3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) CO5: Pro7 PO2 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO2 CO6: PO7 PO8 PO9 PO1 PO5 PO6 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO2 CO1 3 3 3 3 3 2 2 2 2 2 3 3 CO2 3 3 3 3 3 2 2 2 2 2 3 3 CO3 3 3 3 3 2 2 2 2 2 3 3 CO3 3 3 3 3 2 2 2 2 2 3 3 CO4 3 3 3 3 2 2 2 2 2 3 3 CO5: CO6: Co6: Co6: Co6: Co6: Co6: Co6: Co6: Co | Cours | se Ot | ıtcom | es | | | | | | | | | | | | - 1- | _ |
| using the rules of logic. 202: apply the concept of logical theory to validate the correctness of software specifications. 203: analyze and simplify the digital (logic) circuits using the concept of relations. 204: apply the concept of various types of functions in the field of sorting algorithm, paralle computing and image processing, 205: apply the concepts of group theory in the field of coding theory and cryptography. 206: apply the concepts of group theory in the field of coding theory and cryptography. 207: Pre-requisites: 208: Fundamentals of elementary algebra 309: Fundamentals of calculus 209: Fundamentals of calculus 209: Fundamentals of calculus 200: Fundamentals of calculus 200: Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) 201: Algebra of the field of coding theory and cryptography. 201: Fundamentals of geometry 202: Fundamentals of geometry 203: Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) 203: Algebra of the field of coding theory and cryptography. 204: Fundamentals of geometry 205: Fundamentals of geometry 206: Fundamentals of geometry 207: Fundamentals of geometry 208: Fundamentals of geometry 208: Fundamentals of geometry 209: Fundamentals of | using the rules of logic. CO2: apply the concept of logical theory to validate the correctness of software specifications analyze and simplify the digital (logic) circuits using the concept of relations. CO4: apply the concept of various types of functions in the field of sorting algorithm, paralled computing and image processing, CO5: apply the concepts of group theory in the field of coding theory and cryptography. Pre-requisites: Fundamentals of elementary algebra Fundamentals of calculus CO/PO, PSO Mapping (3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) CO5 PO PO2 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO2 CO1 3 3 3 3 3 2 | At the | end | of the | cours | e, the s | tudent | will ł | ne able | to | | | | | | | - | |
| apply the concept of logical theory to validate the correctness of software specifications. | CO2: apply the concept of logical theory to validate the correctness of software specifications analyze and simplify the digital (logic) circuits using the concept of relations. CO4: apply the concept of various types of functions in the field of sorting algorithm, paralled computing and image processing, CO5: apply the concepts of group theory in the field of coding theory and cryptography. Pre-requisites: • Fundamentals of elementary algebra • Fundamentals of calculus CO/PO, PSO Mapping (3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) CO5 PO PO2 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO2 CO1 3 3 3 3 2 2 2 2 3 3 3 3 3 2 2 2 3 3 3 3 3 3 2 3 | CO1: | | | | | | rgume | nts in | the f | ield o | f data | base | and a | tificia | 1 intel | lige | nc |
| analyze and simplify the digital (logic) circuits using the concept of relations. CO4: apply the concept of various types of functions in the field of sorting algorithm, paralle computing and image processing, CO5: apply the concepts of group theory in the field of coding theory and cryptography. CO6: apply the concepts of group theory in the field of coding theory and cryptography. CO7: apply the concepts of group theory in the field of coding theory and cryptography. CO8: apply the concepts of group theory in the field of coding theory and cryptography. CO9: apply the concepts of group theory in the field of coding theory and cryptography. CO9: apply the concept of various types of functions in the field of sorting algorithm, paralle computing and image processing, CO9: apply the concept of various types of functions in the field of sorting algorithm, paralle computing and image processing, CO9: apply the concept of various types of functions in the field of sorting algorithm, paralle computing and cryptography. CO9: apply the concept of various types of functions in the field of sorting algorithm, paralle computing and cryptography. CO9: apply the concept of various types of functions in the field of sorting algorithm, paralle computing and cryptography. CO9: apply the concepts of group theory in the field of sorting algorithm, paralle computing and cryptography. CO9: apply the concepts of group theory in the field of sorting algorithm, paralle computing and computing algorithm, paralle computing and functional paralle computing and conditional propositions, converse, contra positive and inverse) — Truth tables apply and contradiction — Logical equivalences and implications (consequences) — Deforgan's laws — Normal forms — Principal conjunctive and disjunctive normal forms — Rules of Grogan's laws — Normal forms — Principal conjunctive and disjunctive normal forms — Rules of Grogan's laws — Normal forms — Principal conjunctive and disjunctive normal forms — Rules of Grogan's laws — Normal forms | CO3: analyze and simplify the digital (logic) circuits using the concept of relations. CO4: apply the concept of various types of functions in the field of sorting algorithm, paralle computing and image processing. CO5: apply the concepts of group theory in the field of coding theory and cryptography. Pre-requisites: Fundamentals of elementary algebra Fundamentals of calculus CO/PO, PSO Mapping (3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) PO PO PO3 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO2 CO1 3 3 3 3 3 2 | ~~~ | + | | | | | | | | | - | | | | | | |
| consistence of various types of functions in the field of sorting algorithm, parallel computing and image processing, apply the concepts of group theory in the field of coding theory and cryptography. Pre-requisites: Fundamentals of elementary algebra Fundamentals of calculus CO/PO, PSO Mapping (3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) PO PO PO3 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO3 CO1 3 3 3 3 2 | CO4: apply the concept of various types of functions in the field of sorting algorithm, paralle computing and image processing, apply the concepts of group theory in the field of coding theory and cryptography. | | | | | | | | | | | | | | | | ition | 15. |
| COS: apply the concepts of group theory in the field of coding theory and cryptography. | CODE apply the concepts of group theory in the field of coding theory and cryptography. | | ana | alv. th | and SII | nplity | the dig | gital (1 | ogic) | circuit | s usin | g the c | oncep | ot of re | lation | S. | | |
| Pre-requisites: Fundamentals of elementary algebra Fundamentals of calculus CO/PO, PSO Mapping (3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak Programme Outcomes (PSOs) and Programme Specific Outcomes (PSOs) PO P | Pre-requisites: Fundamentals of elementary algebra Fundamentals of calculus CO/PO, PSO Mapping (3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) PO PO PO POS POS POS POS POS POS POS POS | CU4: | con | nputii | e conc | image | variou proce | s type ssino | s of It | ınctioi | is in t | the fiel | d of s | orting | algor | ithm, 1 | oara | lle |
| Pre-requisites: • Fundamentals of elementary algebra • Fundamentals of geometry | Pre-requisites: Fundamentals of elementary algebra Fundamentals of calculus CO/PO, PSO Mapping (3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) Program 3 3 2 2 2 2 2 3 3 2 2 2 2 3 3 3 3 2 2 2 2 2 3 3 3 3 3 2 2 2 2 2 3 3 3 3 3 2 2 2 2 2 3 3 3 3 3 2 2 2 2 2 3 3 3 3 3 2 2 2 2 2 3 3 3 3 3 2 2 2 2 2 3 3 3 3 3 3 2 2 2 2 2 3 3 3 3 3 3 2 2 2 2 2 3 3 3 3 3 3 2 2 2 2 2 3 3 3 3 3 3 2 2 2 2 2 3 3 3 3 3 3 2 2 2 2 2 3 3 3 3 3 3 3 2 2 3 3 3 3 3 3 3 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 2 3 | CO5: | _ | and the second second | - | | • | 0, | y in th | e field | of co | ding t | neorv | and cr | vntog | raphy | | |
| CO/PO, PSO Mapping | CO/PO, PSO Mapping (3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) PO PO2 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO2 CO1 3 3 3 3 2 | Pre-re | | | | | | | | | | | | | JP**B | | | |
| CO/PO, PSO Mapping (3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) PO PO2 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO3 CO1 3 3 3 2 2 2 2 3 CO2 3 3 3 3 2 2 2 2 3 CO3 3 3 3 3 2 2 2 2 3 CO4 4 3 3 3 3 2 2 2 2 3 CO5 3 3 3 3 2 2 2 3 3 CO5 3 3 3 3 2 2 3 3 3 CO5 3 3 3 3 3 2 3 3 3 2 3 3 3 CO4 5 3 5 3 5 3 5 3 5 3 CO 1 5 3 5 5 5 5 5 5 5 5 5 CO 1 5 5 5 5 5 5 5 5 5 5 5 5 CO 1 5 5 5 5 5 5 5 5 5 5 5 5 5 5 CO 1 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 CO 2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 | CO/PO, PSO Mapping (3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) PO PO2 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO2 CO1 3 3 3 3 3 2 | • | | | | | | algebi | ra | | • | Funda | ament | als of | geome | etry | | |
| COS Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) | COs Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) | | | | | | | COM | O DC | OM | • | | | | | | | |
| Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) | Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) | | | (3/2/ | 1 indic | cates th | e strer | | | | | | -Med | ium 1 | _Weal | _ | | |
| POS | Col 3 3 3 3 2 2 2 2 3 CO2 3 3 3 3 2 2 2 2 3 CO3 3 3 3 3 2 2 2 2 3 CO3 3 3 3 3 2 2 2 2 3 CO4 3 3 3 3 2 2 2 2 3 CO5 3 3 3 3 2 2 2 2 3 CO5 3 3 3 3 2 2 2 3 3 CO5 3 3 3 3 3 2 3 2 3 3 3 CO5 3 3 3 3 3 2 3 3 3 3 3 3 3 3 3 3 3 3 3 | | | | | | | | | | | | | | | | | |
| Course assessment methods [Theory with tutorial course] Course assessment methods [Theory with tutorial course] Course assessme | Course assessment methods [Theory with tutorial course] Course assessment methods [Theory with tutorial course] Course assessme | COs | | | | | | | Section 1 | | | | | | GENERAL CANON | | PS | 03 |
| Course assessment methods [Theory with tutorial course] Direct Indirect | Course assessment methods [Theory with tutorial course] Direct | CO1 | 3 | 3 | | 3 | 2 | | | | | | | 2 | | 2 | 3 | |
| Course assessment methods [Theory with tutorial course] Direct Indirect | Course assessment methods [Theory with tutorial course] Direct Indirect | CO2 | 3 | 3 | | 3 | 2 | | | | | | | 2 | | 2 | 3 | , |
| Course assessment methods [Theory with tutorial course] Direct Et test I (8) (Theory) IE test II (8) (Theory) Big test III (8) (Theory) Course end survey Total CIE: 40 marks Semester End Examination: 60marks Total CIE: 40 marks Semester End Examination: 60marks Toposition (statement) – Simple (atomic / primitive) and Compound propositions – Logical connectives / operators (negation, conjunction, disjunction, negation of compound propositions, anditional and bi conditional propositions, converse, contra positive and inverse) – Truth tables Tautology and contradiction – Logical equivalences and implications (consequences) – Deforgan's laws – Normal forms – Principal conjunctive and disjunctive normal forms – Rules of | Course assessment methods [Theory with tutorial course] Direct Et test I (8) (Theory) Et test II (8) (Theory) Discit test III (8) (Theory) Discit test | CO3 | 3 | 3 | | 3 | 2 | | | | | | | 2 | | 2 | 3 | |
| Course assessment methods [Theory with tutorial course] Direct | Course assessment methods [Theory with tutorial course] Direct Attendance (5) Assignment/Quiz/Seminar (5) CIE test II (8) (Theory) CIE test III (8) (Theory) Course end survey | CO4 | 3 | 3 | | 3 | 2 | | | | | | | 2 | | 2 | 3 | |
| Course assessment methods [Theory with tutorial course] Direct Indirect IE test I (8) (Theory) IE test II (8) (Theory) IE test III (8) (Theory) ID Total CIE: 40 marks Semester End Examination: 60marks Total CIE: 40 marks Semester End Examination: 60marks Toposition (statement) – Simple (atomic / primitive) and Compound propositions – Logical connectives / operators (negation, conjunction, disjunction, negation of compound propositions, anditional and bi conditional propositions, converse, contra positive and inverse) – Truth tables Tautology and contradiction – Logical equivalences and implications (consequences) – Deforgan's laws – Normal forms – Principal conjunctive and disjunctive normal forms – Rules of | Course assessment methods [Theory with tutorial course] Direct Attendance (5) Assignment/Quiz/Seminar (5) Total CIE: 40 marks Semester End Examination: 60marks Proposition (statement) – Simple (atomic / primitive) and Compound propositions – Logical connectives / operators (negation, conjunction, disjunction, negation of compound propositions, onditional and bi conditional propositions, converse, contra positive and inverse) – Truth tables a Tautology and contradiction – Logical equivalences and implications (consequences) – Deforgan's laws – Normal forms – Principal conjunctive and disjunctive normal forms – Rules of afference – Arguments – Validity of arguments by truth table technique and rules of inference – | CO5 | 3 | 3 | | 3 | 2 | | | | | | | 2 | | 2 | 3 | |
| Direct Indirect Indirect | Direct CIE test I (8) (Theory) CIE test II (8) (Theory) CIE test III (8) (Theory) Course end survey Cou | | | | | | 1 | | | | | | | | | | | |
| Direct Indirect Indirect | Direct CIE test I (8) (Theory) CIE test II (8) (Theory) CIE test III (8) (Theory) Course end survey Cou | | 100 H | | Cou | rse ass | essme | nt me | thods | The | rv wi | th tuto | rial co | ursel | | | | |
| IE test I (8) (Theory) IE test II (8) (Theory) Assignment/Quiz/Seminar (5) Total CIE: 40 marks Semester End Examination: 60marks it 01 PROPOSITIONAL CALCULUS Toposition (statement) – Simple (atomic / primitive) and Compound propositions – Logical connectives / operators (negation, conjunction, disjunction, negation of compound propositions, anditional and bi conditional propositions, converse, contra positive and inverse) – Truth tables Tautology and contradiction – Logical equivalences and implications (consequences) – Deforgan's laws – Normal forms – Principal conjunctive and disjunctive normal forms – Rules of | Attendance (5) Assignment/Quiz/Seminar (5) Total CIE: 40 marks Dejectives Test (6) Assignment/Quiz/Seminar (5) Total CIE: 40 marks Semester End Examination: 60marks Toposition (statement) — Simple (atomic / primitive) and Compound propositions — Logical connectives / operators (negation, conjunction, disjunction, negation of compound propositions on ditional and bi conditional propositions, converse, contra positive and inverse) — Truth tables Tautology and contradiction — Logical equivalences and implications (consequences) — Defengan's laws — Normal forms — Principal conjunctive and disjunctive normal forms — Rules of afference — Arguments — Validity of arguments by truth table technique and rules of inference — | | | | | | rinakalimperajes | SECULATION STANSACTO | | L | | | | , a | Ind | irect | | |
| Total CIE: 40 marks Course end survey | Course end survey Dejectives Test (6) Total CIE: 40 marks Semester End Examination: 60marks PROPOSITIONAL CALCULUS Troposition (statement) — Simple (atomic / primitive) and Compound propositions — Logical connectives / operators (negation, conjunction, disjunction, negation of compound propositions on ditional and bi conditional propositions, converse, contra positive and inverse) — Truth tables are Tautology and contradiction — Logical equivalences and implications (consequences) — Defengan's laws — Normal forms — Principal conjunctive and disjunctive normal forms — Rules of afference — Arguments — Validity of arguments by truth table technique and rules of inference — | | | | | | Atter | idance | (5) | | | | | | | | | |
| bjectives Test (6) Semester End Examination: 60marks it 01 PROPOSITIONAL CALCULUS roposition (statement) – Simple (atomic / primitive) and Compound propositions – Logical connectives / operators (negation, conjunction, disjunction, negation of compound propositions, anditional and bi conditional propositions, converse, contra positive and inverse) – Truth tables Tautology and contradiction – Logical equivalences and implications (consequences) – Deforgan's laws – Normal forms – Principal conjunctive and disjunctive normal forms – Rules of | Objectives Test (6) Semester End Examination: 60marks PROPOSITIONAL CALCULUS Troposition (statement) – Simple (atomic / primitive) and Compound propositions – Logical connectives / operators (negation, conjunction, disjunction, negation of compound propositions on and bi conditional propositions, converse, contra positive and inverse) – Truth tables Tautology and contradiction – Logical equivalences and implications (consequences) – Deforgan's laws – Normal forms – Principal conjunctive and disjunctive normal forms – Rules of a ference – Arguments – Validity of arguments by truth table technique and rules of inference – | | | | | | 1 | | | | nar (5 | 5) | 1 | Co | urco o | nd our | | |
| it 01 PROPOSITIONAL CALCULUS roposition (statement) – Simple (atomic / primitive) and Compound propositions – Logical onnectives / operators (negation, conjunction, disjunction, negation of compound propositions, anditional and bi conditional propositions, converse, contra positive and inverse) – Truth tables Tautology and contradiction – Logical equivalences and implications (consequences) – Deforgan's laws – Normal forms – Principal conjunctive and disjunctive normal forms – Rules of | nit 01 PROPOSITIONAL CALCULUS Proposition (statement) – Simple (atomic / primitive) and Compound propositions – Logical connectives / operators (negation, conjunction, disjunction, negation of compound propositions, onditional and bi conditional propositions, converse, contra positive and inverse) – Truth tables Tautology and contradiction – Logical equivalences and implications (consequences) – Deforgan's laws – Normal forms – Principal conjunctive and disjunctive normal forms – Rules of afference – Arguments – Validity of arguments by truth table technique and rules of inference – | | | | | , | | | | | | | . | Co | urse e | na sur | vey | |
| roposition (statement) – Simple (atomic / primitive) and Compound propositions – Logical onnectives / operators (negation, conjunction, disjunction, negation of compound propositions, onditional and bi conditional propositions, converse, contra positive and inverse) – Truth tables Tautology and contradiction – Logical equivalences and implications (consequences) – Deforgan's laws – Normal forms – Principal conjunctive and disjunctive normal forms – Rules of | roposition (statement) – Simple (atomic / primitive) and Compound propositions – Logical onnectives / operators (negation, conjunction, disjunction, negation of compound propositions on on ditional and bi conditional propositions, converse, contra positive and inverse) – Truth tables Tautology and contradiction – Logical equivalences and implications (consequences) – Deforgan's laws – Normal forms – Principal conjunctive and disjunctive normal forms – Rules of a ference – Arguments – Validity of arguments by truth table technique and rules of inference – | | | | | DNIAT | | | | amına | tion: | 60mar | KS | | | 10.5 | | |
| onnectives / operators (negation, conjunction, disjunction, negation of compound propositions, onditional and bi conditional propositions, converse, contra positive and inverse) – Truth tables Tautology and contradiction – Logical equivalences and implications (consequences) – Deforgan's laws – Normal forms – Principal conjunctive and disjunctive normal forms – Rules of | onnectives / operators (negation, conjunction, disjunction, negation of compound propositions on ditional and bi conditional propositions, converse, contra positive and inverse) – Truth tables Tautology and contradiction – Logical equivalences and implications (consequences) – Deforgan's laws – Normal forms – Principal conjunctive and disjunctive normal forms – Rules of afference – Arguments – Validity of arguments by truth table technique and rules of inference – | | | | | | | | | mitive |) and | Comr | ound | propo | cition | | | |
| onditional and bi conditional propositions, converse, contra positive and inverse) – Truth tables Tautology and contradiction – Logical equivalences and implications (consequences) – Deforgan's laws – Normal forms – Principal conjunctive and disjunctive normal forms – Rules of | onditional and bi conditional propositions, converse, contra positive and inverse) – Truth tables. Tautology and contradiction – Logical equivalences and implications (consequences) – Deforgan's laws – Normal forms – Principal conjunctive and disjunctive normal forms – Rules of inference – Arguments – Validity of arguments by truth table technique and rules of inference – | connect | tives | / ope | rators | (negati | ion, co | njunc | tion, c | lisjunc | tion, | negati | on of | compo | ound r | oronos | ogic | aı 15 |
| Tautology and contradiction – Logical equivalences and implications (consequences) – Deforgan's laws – Normal forms – Principal conjunctive and disjunctive normal forms – Rules of | Tautology and contradiction – Logical equivalences and implications (consequences) – Deforgan's laws – Normal forms – Principal conjunctive and disjunctive normal forms – Rules of inference – Arguments – Validity of arguments by truth table technique and rules of inference – | condition | onal a | and bi | cond | itional | propos | sitions | , conv | erse, | contra | positi | ve and | d inve | rse) – | Truth | tabl | es |
| forgan's laws – Normal forms – Principal conjunctive and disjunctive normal forms – Rules of ference – Arguments – Validity of arguments by truth table technique and rules of inference – | nference - Arguments - Validity of arguments by truth table technique and rules of inference - | - Tauto | ology | and | contra | diction | - Lo | gical | equiva | alence | s and | impli | cation | s (con | seque | nces) | - I | De |
| reference - Auguments - validity of arguments by truth table technique and rules of inference - | Methods of proof (direct and indirect). | Morgan | ı's la | Ws - | Norma | al form | s – Pri | ncipa | l conji | inctiv | e and | disjun | ctive 1 | norma | form | s – Ru | iles | of |
| ethods of proof (direct and indirect) | | Method | s of | rroof | (direct | – vallo tandin | uty of | argun 1 | nents l | by trut | n tabl | e tech | nique | and ru | iles of | infere | nce | _ |
| or proof (anot and manot). | | | 01 | Proor | (another | unu II | إعادات | ,. | | | | | | | | | | |

Unit 02 PREDICATE CALCULUS 12 Hours Predicates - Propositional (Statement) function - Quantifiers (Universal and Existential quantifiers) - Variables - Free and bound variables - Scope of the formula - Negation -Logical equivalences and implications for quantified statements - Theory of inference - Rules of universal specification and generalization - Rules of existential specification and generalization Validity of arguments. Unit 03 | RELATIONS 12 Hours Relations - domain and range of a relation - Types of relations (reflexive, symmetric, transitive, antisymmetric irreflexive relation) and their properties - Relation matrix - Graph of a relation -Partition of a set - Equivalence relations - Equivalence Classes - Quotient set - Partial order relation - Poset - Hasse diagram. Unit 04 **FUNCTIONS** 12 Hours Functions - Classification of functions (algebraic and transcendental) - Types of functions (injective, surjective and bijective) - Composition of functions and its properties (statement only) - Inverse functions - Characteristic function of a set and its properties (with proof) - Permutation functions. Unit 05 **GROUPS AND GROUP CODES** 12 Hours Algebraic structures - Groups - Cyclic groups - Subgroups - Group homomorphism - Normal subgroups and Cosets - Lagrange's theorem - Codes and group codes - Basic notions of error detection and error correction. Theory: 45 Hrs Tutorial: - 15 Practical: -Project:--Total Hours: 60 Hrs **TEXT BOOK:** T. Veerarajan, "Discrete Mathematics", McGraw Hill Publishers, 1st Edition, 21st Reprint, 2015. REFERENCE BOOKS: J. P. Trembly and R. Manohar, "Discrete Mathematical Structures with Applications to Computer Science", McGraw Hill Publishers, 1st Edition, 2017. 2. K. H. Rosen, "Discrete Mathematics and Its Applications", McGraw Hill Publishers, 8th Edition, 2019. B. Kolman, R. C. Busby and S. C. Ross, "Discrete Mathematical Structures", Pearson Publishers, 6th Edition, 2006 ASSOCIATE PROFESSOR & HEAD DEPARTMENT OF MATHEMATICS. SONA COLLEGE OF TECHT OF OGY, SALEM-636 005. Temilinadu. Fit: 0427-4099999.

BoS Date: 08, 07, 2023

HoD / Mathematics

| | | 5004B | CT. | T. 1107 | | OR COL | ani me | D CCIE | NCE | L | T | P | J | C |
|-----------------|----------------|-----------------|----------|----------|-------------------------|------------------------------------|-------------------------------|--|----------------------------------|--|---|--------------------------|----------|------------|
| 02 | ЗСН | E204B | CH | IEMIS I | KYFC | OR COM | APU I E. | K SCIE | NCE | 3 | 0 | 0 | 0 | 3 |
| Cours | se Ou | tcomes | u a | | | | | | | | | | | |
| At the | e end | of the cou | rse, the | studen | t will | be able | to | | | | | | | |
| CO1 | l: | Understan | d the pi | rinciple | , appli | cations o | of electr | ochemi | stry and | d types | of corre | osion. | | |
| CO2 | | Summariz | | 1000 | V04 (353) | | | | | | | | | |
| CO | 3: | Analyze th | ie types | of poly | mers, | polyme | rization | reactio | ns, poly | ymeriza | tion tec | hniques | s and | |
| | | fabrication | metho | ds of po | olymer | s for eng | gineerir | g appli | cations | • | | | a n | |
| CO ₄ | 4: | Discuss the | e princi | iple, ad | vantag | ges and | applica | tions of | organ | ic electr | onic m | aterials | in elec | tronic |
| CO | 5: | Analyze th | ne need | of e-wa | ste ma | nageme | nt and | disposa | l metho | ds acro | ss the g | globe. | - | |
| Pre-re | equis | ite: | | | | | | | | a N | | | | |
| Ba | sic k | nowledge (| on the c | oncepts | of org | ganic, inc | organic | and ph | ysical c | hemistr | y. | | | - |
| | | 1 | | | e stren | CO/PO, gth of co | orrelatio | n) 3-Str | ong, 2- | | 1,41-6,12 | Mark States and Addition | | |
| COs | D.C | | 1 | | 150.000 NAMES OF STREET | es (POs) | Property and the second | Mark Committee C | VIOLET AND ADDRESS OF THE OWNER. | Manager Committee of the Committee of th | CONTRACTOR | PSOs) PO12 | DCO1 | PSO |
| | PC | | PO3 | PO4 | PO5 | PO6 | PO7 | · PO8 | P09 | POIO | POH | PO12 | | |
| CO1 | 3 | 2 | | | | | 2 | | | | | | 3 | 3 |
| CO2 | 2 | 2 | | | | | 2 | | | | | | 2 | 3 |
| 2.2 ****** | - 3 | 2 | | | | 1884 | 2 | | | | | | 3 | 3 |
| CO3 | | 2 | 200 | | | | | | | | | | | SECTION OF |
| CO3 | 3 | 3 | | | | | 2 | | | | | | 3 | 3 |
| | . 3 | 3 | | | | | 2 | | | | | | 3 | 3 |
| CO4 | | 3 | | | Cor | urse Ass | 3 | nt meth | ods | | | | | |
| CO4 | | 3 | | Γ | Con | urse Ass | 3 | nt meth | ods | | | Indir | 3 | |
| CO4 CO5 CIE te | est I (est II) | 3 • 3 • . | 'Quiz (5 | | Direct | Dbjective Attendar Fotal CII | es Test nce (5) E: 40 m | (6) arks | |) | Con | Indir urse end | 3 ect | 3 |

Introduction – basic terminologies - electrode potential – Nernst Equation – derivation and problems based on single electrode potential calculation – reference electrodes – standard hydrogen electrode – saturated calomel electrode – Ion selective electrode – glass electrode – measurement of pH – electrochemical series – significance – electrolytic and electrochemical cells – EMF – measurement of emf – potentiometric titrations (redox – Fe^{2+} vs dichromate) – conductometric titrations (acid-base – HCl vs NaOH) – Corrosion – types – dry and wet corrosion – corrosion control methods of iron sheets by galvanizing and tinning.

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: POLYMER CHEMISTRY

9 Hours

Introduction to Polymers – classification of polymers - functionality – tacticity, degree of polymersation, glass transition temperature in polymers - types of polymerization-addition-condensation and copolymerization – free radical mechanism of addition polymerization – techniques of polymerization-bulk and solution only – Plastics – moulding constituents of plastic – moulding of plastics into articles-Injection, Compression and Blow moulding – Thermoplastic and Thermosetting Resins – Conducting polymers – classification – mechanism of conducting polymers – Applications of conducting polymers.

Unit 04: CHEMISTRY OF ORGANIC ELECTRONIC MATERIALS

9 Hours

Organic semiconducting materials – working principle and advantages over inorganic semiconducting materials - p-type and n-type organic semiconducting materials - Pentacene Fullerenes-C-60 – Organic dielectric material-definition-working principle and examples - Polystyrene – PMMA – Organic light emitting polymer – structure-properties and applications of Polythiopene – Organic Light Emitting Diodes (OLEDs) - construction-working principle and applications – Organic transistors- construction-working principle and applications.

Unit 05: E-WASTE MANAGEMENT

9 Hours

Introduction-E-Waste – definition – sources of e-waste – hazardous substances in e-waste – effects of E-waste on environment and human health- need for E-waste management – E-waste handling rules – salient features of Indian E-waste management rule, 'Rule 2022' - waste minimization techniques for managing E-waste – extraction of gold and copper from printed circuit boards (PCBs) – extraction of and tin metal in tin/lead solder dross - recycling of E-waste – disposal treatment methods of E - waste – global Scenario of E-waste – E-waste in India.

Theory: 45 Hrs

Tutorial: 0

Practical: 0

Project:0

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. Gowariker V.R., Viswanathan N.V. and Jayadev Sreedhar, "Polymer Science", New Age International P (Ltd.,), Chennai, 2006.
- 2. Stergios Logothetidis "Handbook of Flexible Organic Electronics Materials Manufacturing and

| | Applications", WoodHead publishing., 1st edition, London, 2015. |
|----|---|
| 3 | Sam-Shajing Sun, Larry R. Dalton "Introduction to Organic Electronic and Optoelectronic Materials |
| 0. | and Devices", CRC press., 2nd edition, London, 2017. |
| 4 | Majeti Narasimha Var Prasad, Meththika Vithanage, Anwesha Borthakur, "Handbook of Electronic |
| | 'Waste Management", 1st edition - November 21, 2019. |

子子ではいか

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,
SALEM - 636 005.

Jr. C. SHANTHI, MSc MF Phr

Professor of Physics
Head, Department of Sciences
Sona College of Technology (Autonomous)
SALEM-636 005.

| 1 | U23C | PR205 | ICO | mmon | | GRAMN | | | | L | | T | P | J | C |
|--------|---------------|-----------------|----------|------------|-----------|-------------------------------------|--------------------|----------------------|-----------|-----------|----------|--------|--------|-------|------|
| | | | (00 | | O CSE, | CSE(AIM Branch | | ADS, IT | and ECE | 3 | | 0 | 0 | 0 | 3 |
| Cou | rse Oı | utcomes | | | | | | | - | | | | | | |
| At th | ie end | of the co | urse, th | e stude | ent wi | ll be able | e to | | | | | | | | |
| CO | 1: | Write sim | ple C p | rogram | s using | g console | input a | and outr | out func | tions | | | | | |
| CC | | Write C p | | | | | | | | | nts | | | | - |
| CO | | Design an | | | | | | | | | | | | | |
| CO | | Design an | | | | | | | | | 2 | | | | |
| CO | | Design and | | | | | | | | | , | | | | |
| Pre-r | equis | | | | | | | | | | | | | 7 | |
| | | | (3 | 3/2/1 indi | icates th | ne strength | of correl | O Mapp lation) 3- | Strong, 2 | -Medium | , 1-Weal | k | | | |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 | tcomes (P | Os) and | Program | nme Spe | ecific Ou | tcomes | (PSOs) | | 14,00 | |
| COI | 1 | 2 | 3 | 2 | 2 | 2 | PO7 | PO8 | P09 | PO10 2 | PO11 2 | PO12 | PSO1 | PSO2 | PSO3 |
| CO2 | 2 | 2 | 3 | 2 | 2 | 1 | | 2 | | 2 | 2 | 3 | 3 | 2 | 2 |
| CO3 | 2 | 3 | 3 | 2 | 2 | 1 | | 2 | | 2 | 2 | 3 | 3 | 2 | 2 |
| CO4 | 2 | 3 | 3 | 2 | 2 | 1 | - 1 | 2 | - | 2 | 1 | 3 | 3 | 2 | 2 |
| CO5 | 2 | 3 | 3 | 2 | 2 | 2 | - | 2 | - | 2 | 2 | 3 | 3 | 2 | 2 |
| | | | | | | Course | Assessr | nent m | ethods | | | | | | _ |
| | | | | D | irect | | Alen | | | | | In | direct | | |
| | | 3) | | | T | Objective Attendand Total CIE | ce (5) 2: 40 ma | arks | | | | Course | | vey | |
| Assign | st III (ment/ | seminar/QPROGRA | | | | emester | End Ex | aminati | on (60) | | | | | | |

Statements and Symbolic constants, Operators - Arithmetic Operators - Unary operators - Relational and Logical Operators - Assignment operators - Conditional operators. Unformatted and formatted Input/Output functions, preprocessor directives and storage classes.

Unit 02: CONTROL STATEMENTS, ARRAYS AND STRING

9 Hours

Conditional statements, Unconditional statements, branching and looping statements - Arrays - Initialization -Declaration - One dimensional and Two dimensional arrays. String- String operations - String Arrays. Simple programs- sorting- searching - matrix operations.

Unit 03: FUNCTIONS AND POINTERS

9 Hours

Function - Library functions and user-defined functions - Function prototypes and function definitions - Call by value - Call by reference - Recursion - Pointers - Definition - Initialization - Pointers arithmetic - Pointers and

12.1.2024 Version 1.0

Semester II

B.E / B.. Tech Regulations 2023

Or. B. SATHIYABHAMA, B.E., M. Toch, Ph.O. PROFESSOR & HEAD. Dept. of Computer Science and Engineering SONA COLLEGE OF TECHNOLOGY SALEM-636 005

arrays - Pointers and Functions - Dynamic memory Allocation - Example Programs. **Unit 04: STRUCTURES AND UNIONS** 9 Hours Need for structure data type - structure definition - Structure declaration - Structure within a structure - Passing structures to functions - Array of structures - Pointers to structures - Union - Programs using structures and Unions **Unit 05: FILE MANIPULATIONS** 9 Hours Files-File operations- Binary files and text files - Types of File processing-Sequential access -Random Access File -Command line arguments. Theory: 45 Hrs Tutorial: 0 Practical: 0 **Total Hours: 45 Hrs** Project:0 TEXT BOOKS 1. Deitel and Deitel, "C How to Program", Pearson Education, New Delhi, 2011. 2. Yashavant P. Kanetkar. "Let Us C", BPB Publications, 14th edition, 2016. REFERENCES 1. Kernighan, B.W and Ritchie, D.M, "The C Programming language", Second Edition, Pearson Education, 2006. 2. Byron S Gottfried, "Programming with C", Schaum's Outlines, Second Edition, Tata McGraw-Hill, 2006. 3. Anita Goel and Ajay Mittal, "Computer Fundamentals and Programming in C", Dorling Kindersley (India) Pvt. Ltd., Pearson Education in South Asia, 2011.

4. E. Balagurusamy, "Programming in ANSI C", seventh edition, Tata McGraw Hill, 2016.

12.1.2024 Version 1.0

Semester II

B.E / B.. Tech Regulations 2023

PROFESSOR & HEAD,

Dept. of Computer Science and Engineering
SONA COLLEGE OF TECHNOLOGY
SALEM-636 005

| ** | 2254 | CDA | 07 | - | | | EERING | | | | L | Т | P | J | C |
|-----------|----------|--------|--------------|----------|-------------------|--------|------------------------------------|-------------------|--|-----------|--------------|----------|-----------|-------------|---------|
| U | 23E0 | GKZ | :07 | (Co | mmon | to AD | S, IT, BN branch | The second second | , ECE, a | and FT | 3 | 0 | 0 | 0 | 3 |
| Cours | se Ot | atco | mes | STATE OF | 70.0 | | TANK SET | F (CIII-II | elegitus Santi | SUIT DE | all the same | 1 | 1 | The same | |
| At the | e end | oft | he cou | rse, the | studer | ıt wil | be able | to | | eriting. | pojis a | nifely: | ve selsi | n levyla | ureş- |
| CO1 | ı: | Cor | struct - | -Ellipse | e, Parab | ola, F | lyperbola | a, Cyclo | oids and | Involu | ites. | | | | |
| CO | | | | - | | | ine and l | | The state of the s | | | | | | April I |
| COS | 3: | | | | 7021 | 11.16 | solids by | Marie Town | | | d. | | at bird | alt m | mier : |
| CO | 4: | _ | | | - | - | olids and | | | | March 1999 | solids. | 201.100 | of the same | de l |
| COS | 5: | Dra | w the i | sometr | ic view | to ort | hographi | ic proje | ction. | A. San La | | - | | | |
| Pre-re | quis | ite: | Nil | | | | | | | | | 13.68 | A) Z | HOVE THE | |
| Let's let | 197.0 | | 50 | 16 17 | on the sale | artis. | DE ACCUSE | n silin | p l'w is | la og l | | The same | il ahilis | L rat | 523 |
| | | | | | 9115 | | CO/PO, | PSO M | [apping | 3 | | | | | |
| | (F.40/6) | 255 | (3/2) | /1 indic | ates the | strer | igth of co | orrelatio | on) 3-St | rong, 2- | Mediun | n, 1-We | ak | | |
| COs | PO | | | | The second second | | es (POs) | | - | | | | | | |
| | PO | | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | P09 | PO10 | PO11 | PO12 | PSO1 | PSO |
| CO1 | 1 | | | | W. Ta | 8- | | in the | -3 | | 2 | | | 1 | |
| 302 | | | A second | | | 3 | | | 2 | | 2 | | 2 | | 2 |
| CO3 | | | | | | 3 | | | 2 | | 2 | | 2 | 1 | 2 |
| CO4 | | | | | | 3 | | | 2 | | 2 | | 2 | 1 | 2 |
| CO5 | | | | 2 | | | | | 2 | | 2 | | 2 | 1 | |
| | | THE | | | | 100000 | urse Ass | essmer | nt meth | ods | | | | TOCHU I | |
| | | | lov, system | | D | irect | | | | | | | Indire | ect | |
| CIE te | st II (| (8) | | | | | Objective Attendar Total CII | nce (5) | 20248 | | | Cou | ırse end | l survey | y |
| | | | minar/0 | Quiz (5) |) | | Semester | End E | xaminal | tion (60 |) | | Marija | | |
| | | | | | | 1020 | ot for Exa | | O'COMMENT. | | No. | AM A | | | |
| | | 0.5 | | | | | plication layout | | | - | | | | | |
| | | | limensi | | nis — | size, | layour | and 10 | iding (| я стач | ving sn | eets — | | | |
| Jnit 0 | t: PL | AN | E-CUR | VES- | Manua | draf | ting). | | | | | | | | |
| | | | | | | | used in | n engi | neering | practi | ces: Co | nics – | | 9 Hour | S |
| | | | 4.3 (1.25) | | | | rbola by | | - | | | | | | |
| of cycl | | | | ction of | Involu | te of | circle – | Drawin | ng of ta | ingents | and no | rmal to | | | |
| THE GENT | OVE C | CAL VE | | | | | | | | | | | | | |

| Unit 02: PROJECTION | OF POINTS, LIN | ES AND PLANE | SURFACES. (CAD | | |
|--|--------------------|--|--|--|--|
| Software) | | CONTRACTO DIAL | | | |
| Orthographic projection points. Projection of str | | 7 | ~ | | 9 Hours |
| principal planes -Deter | | | and the state of t | The second secon | . 9 Hours |
| method. Projection of p | | | | | Course Outro |
| principal plane by rotati | | | ad Illian restandard | | he borned of |
| Unit 03: PROJECTION | OF SOLIDS (CAI |) Software) | | | -21 /1005 |
| Projection of simple so | | | cone and truncate | ed solids | 10 SEED 10 SEE |
| when the axis is incline | | The state of the s | | and the same of th | 9 Hours |
| rotating object method. | | least Consul books | da al muria I | | W. Wa |
| Unit 04: PROJECTIO | | NED SOLIDS AN | ND DEVELOPM | ENT OF | |
| SURFACES. (CAD Soft | | | | | |
| Section of solids in simp | | | | 1 | 9 Hours |
| the principal planes and s not required). Develor | | The second secon | | section | |
| oyramids cylinders and | | irtaces of truncated | i solids — Prisms, | SETTING T | |
| 77 70 90 10 | | angas hacast | | | - 00 |
| Unit 05: ISOMETRIC | | AND RESIDENCE OF STREET | | | |
| Representation of three | | | A | | |
| of multiple views – First view to orthographic view | | - layout of views | s – Conversion of | isometric | |
| view to orthographic vie | ews. | | | | 9 Hours |
| Practicing three dimens | ional modelling of | simple objects us | ing CAD Software | (Not for | |
| examination) | | | | | |
| | | | | | |
| Theory: 45 Hrs | Tutorial: | Practical: | Project: | Total H | ours: 45 Hrs |
| FEXT BOOKS | | | E-94(3) | | |
| DI HALD 11 | Donahal V M "E | nainaarina Drawis | oo" Charatan Buk | lichina How | so 53md Ewlitio |
| 1. Bhatt N.D. and 1 2019. | ranchal V.M., E | ngmeering Drawn | ng", Charotar Pub | iisning Hous | se, 33rd Editio |
| 2. Natrajan K.V., "A | Text Book of En | gineering Graphics | s", Dhanalakshmi I | Publishers, C | hennai, 2018. |
| 3. Parthasarathy, N. | S. and Vela Mura | li, "Engineering D | rawing", Oxford U | niversity Pre | ss, 2015 |
| DC 1 45 | neering Graphics | 1 D : " | 2 | G 11 | |

Dr.D. SENTHIL KUMAR, ME,PhD PROFESSOR & HEAD DEPT. OF MECHANICAL ENGG.

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

Salem, Revised edition, 2012.

| U23 | EC20 | 13 E | DIGITA | | | | | | IGN | L | T | P | J | С |
|---|--------------------|-----------------------------------|--|-------------|--------------------------|--|---------------------|---|---|-----------------|--|---|------------------------------|------------|
| | | | (CC | ОММО | NTO | B.E CSI | E,AIMI | ,(CSD) | | 3 | 0 | 0 | 0 | 3 |
| Cours | e Out | tcomes | | | | | | | | | | | | |
| At the | end | of the cou | rse, the | studen | t will b | e able | to | | | | | | | |
| CO1 | : 1 | Explain nı | ımber sy | stems, | logic g | ates an | d simpl | ify Bool | ean ex | pression | S | | 12.25 40) | |
| CO2 | : 1 | Design of | combina | itional l | ogic cii | rcuits | | | | | | | | |
| CO3 | : 1 | Design of | sequent | al logic | circuit | s | | *************************************** | | 1 n | | *************************************** | | a ego |
| CO ₄ | : I | Design an | d implei | nent sh | ift regi | sters an | d coun | ters. | | | | ## ## A. MAR. (1997) | | 1 |
| CO5 | : 1 | Implemen | tation of | combi | nationa | ıl circu | its usin | g Progra | ammab | le Logic | Device | es | | |
| Pre-re | | | | | | - | | | | | | | | |
| | - | | | | | | | | | ************** | *************************************** | | Circles New Yorks | <u>.</u> |
| | | | | | ε | O/PO, | PSO M | apping | • | | | | | |
| | | | THE PARTY OF THE P | | The second second second | - | | | | Medium | William Control of the Control | Company of the Walling of the s | | |
| COs | | | | | | | | | | | | | | |
| CO1 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 1 | 1 | 1010 | 2 | 3 | PSO1 | PSC 3 |
| CO2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 1 | 4 | | 0 | | | endika naj |
| | Karana da | | | | | | | | 1 | Angelous states | 2 | 3 | 3 | 3 |
| CO3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 1 | 1 | | 2 | 3 | 3 | 3 |
| CO4 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 1 | 1 | | 2 | 3 | 3 | 3 |
| CO5 | 3 | 3 | 3 | 3 | , 3 | 2 | 2 | 1 | 1 | | 2 | 3 | 3 | 3 |
| | | 1 | | | Cou | rse Ass | essmen | t metho | ds | | 1 | | are the second | |
| | | | | D | irect | | | Sary New York | pak tekanya | | | Indire | ect | |
| CIE tes CIE tes CIE tes Assign | t II (8 t III (| 3) | Quiz (5) | | A To | bjective ttendar otal CIÉ emester | ice (5) 2: 40 ma | | ion (60) |) | Cou | rse end | survey | 7 |
| nit 01: | BOC | LEAN A | LGEBRA | AND | LOGIC | C GATI | ES | | *************************************** | | COMA MONTH CONTRACTOR AND ASSESSMENT | 1 | 9 Hour | S |
| NAND | and | Number sy NOR In our Variab | ıplemen | tation - | -SOP a | and PC | OS - Sin | mplifica | tion of | f Boolea | n func | tions u | ising K | C-Map |
| | | IBINATIO | | | | | | | | | - | | 9 Hours | |

12.1.2024 Version 1.0 Programme: B.E / B.. Tech

Regulations 2023

Dr. R.S. SABEENIAN, M.E., Ph.D., MBA., FIETE., FIE(I)., MIEEE., MISTE., MIUPRAI., Professor & Head of the Department, Department of Electronics and Communication Engineering, Sona College of Technology, Salem-636 005. Tamil Nadu.

Semester II



Design of Half and Full Adders, Half and Full Subtractors – Parallel Adders and Subtractors – BCD Adder – Code converters: BCD to XS-3, XS-3 to BCD - Magnitude Comparator – Decoders – Encoders – Multiplexers Demultiplexers - Design of ALU using adders - Introduction to Verilog HDL - Verilog HDL for 2 - bit adder - 2:1 multiplexer.

Jnit 03: SEQUENTIAL LOGIC CIRCUITS

9 Hours

Flip-Flops - SR - D- JK-T- Master Slave JK Flip-Flop - Conversion of Flip Flops - Design of Clocked Sequential Circuits - State Diagram - State Table - State Reduction and Assignment.

Unit 04: REGISTERS AND COUNTERS

9 Hours

Registers - Shift Registers - SISO - SIPO - PIPO - Synchronous Counters - Up-down Binary Counter -Ring Counter – Johnson Counters – Asynchronous Counters – Asynchronous Design Procedure – Race Free State Assignment - Hazards

Jnit 05: MEMORY AND PROGRAMMABLE LOGIC

9 Hours

Classification of memories: RAM - Static and Dynamic RAM, ROM - PROM, EPROM, EEPROM - Design of Memory using flip-flops -Implementation of combinational logic using PROM - Programmable Logic Array Programmable Array Logic.

| Th | neory: 45 Hrs | Tutorial: | Practical: | Project: | Total Hours: 45 Hrs |
|------|--|---------------------|-----------------------|---------------------|-------------------------------|
| TEXT | BOOKS | | | | |
| 1 | M. Morris Mano a Edition, Pearson E | | etti – 'Digital Desiş | gn with an Introduc | tion to the Verilog HDL', 6th |
| | S. Salivahanan and edition, 2018. | l S. Arivazhagan, ' | "Digital Cîrcuits A | nd Design", Oxfor | d University Press, Fifth |

REFERENCES

- 1. A. Anandkumar, 'Fundamentals of digital circuits, 4th Edition, Prentice Hall India, Paper back'2016.
- John F Wakerly 'Digital Design Principles and Practices', 4th Edition, Prentice Hall India, 2008.

9.00,-Dr. R.S. SABEENIAN, M.E., Ph.D., MBA., FIETE., FIE(I)., MIEEE., MISTE., MIUPRAI., Professor & Head of the Department, Department of Electronics and Communication Engineering, Sona College of Technology, Salem-636 005. Tamil Nadu.

Semester II

| 11237 | TAM201 | es filore | ம் தொழில்நுட்பமும் | L | T | P | J | (|
|---|---|---|---|---------------------------------------|--------------------------------|--|------------------------------|---|
| 0231 | ANIZUI | <u> </u> | a elongisomic cities | 1 | 0 | 0 | 0 | 1 |
| Course C | Outcomes | 7 | | | | L | 1 | |
| At the en | d of the cour | se, the student wi | ll be able to | | | | | |
| CO1: | Describe the | e weaving and cer | amic technology | | | 8 | | 1 |
| CO2: | Explain the d | lesign and construct | ion technology | | | | | |
| CO3: | Analyse the n | manufacturing techn | ology | - | | | | |
| CO4: | Describe the | agriculture and irrig | gation technology | - | | · · · · · · · · · · · · · · · · · · · | - | |
| CO5: | Explain the S | Scientific Tamil and | Tamil Computing | · · · · · · · · · · · · · · · · · · · | | | | |
| | | C | ourse Assessment methods | | | | | |
| | | Direc | t | | | Indire | et | |
| CIE test I | (30) | | Total CIE: 100 marks | | | economical de la contra de la co | | |
| CIE test I CIE test I | ` ' | | Semester End Examination: N | IIL | Cours | se end | survey | |
| | | O CERAMIC TECH | NOI OGV | | Т | 2 | Hours | |
| அலகு 1 | | ற்றும் பானைக் தெ | | | 1 | <u> </u> | nours | • |
| படிவமைப் ந்றிய வி ந்றும் பிற துரை மீ | பு— சங்க காவ வரங்கள் — ப ந வழிபாட்டுத் னாட்சி அம்மன் | மாமல்லபுரச் சிற்பங் தலங்கள் – நாயக்க ர ஆலயம் மற்றும் | | லப்பதிகாரத் ர் காலத்த ரி கட்டமை | தில் மே நப் பெரு மப்பகள் | நங்கோய பள்ளி • | மும்ப்பு பில்கள் மிகல் | |
| | | ING TECHNOLOG | | · · · · · · · · · · · · · · · · · · · | | 3 | Hours | |
| பரலாற்றுச உருவாக்கு | டும் கலை – சான்றுகளாக ம் தொழிற்சான | க செம்பு மற்றும் லைகள் – கல்மணிச | இரும்புத் தொழிற்சாலை – இ தங்க நாணயங்கள் – நாண கள், கண்ணாடி மணிகள் – கடும கள் – சிலப்பதிகாரத்தில் மணிகல | ഡ്രങ്ങൾ തൽ ഥത്തി | அச்சடித்த கள் – சு | 5ல், எக் கல் | 3 %கு – மணி | |
| nit 04 : A(| GRICULTURE | AND IRRIGATIO | N TECHNOLOGY | | | 3 | Hours | |
| ளல்நடைச செயல்பாடு | ரி, குளங்கள், எஞ்காக வடி | மத்கு – சோழர்கா தவமைக்கப்பட்ட ார் அறிவு – மீன்வ | <mark>சனத் தொழில் நுட்பம்</mark> : rலக் குமுழித் தூம்பின் முக்கியத் கிணறுகள் – வேளாண்மை ப மாம் – முத்து மற்றும் முத்துக்கு | ommin G | வளாண்க | பராமர | 3 Núy – | |
| | | MIL & TAMIL CO | MPUTING | | T | 3 | Hours | |
| ிமன்பொரு | தமிழின் வள நட்கள் உருவா | ் தமிழ் மற்றும் கண ர்ச்சி –கணித்தமிழ் க்கம் – தமிழ் இன ற்குவைத் திட்டம். | ரித்தமிழ்: வளர்ச்சி — தமிழ் நூல்களை ஹையக் கல்விக்கழகம் – தமிழ் | ா மின்பதி மின் நூல | ப்பு செய் சும் – இ | பகல் – | 3 <i>கூ</i> ழிம் | |

| 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

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,
SALEM - 636 005.

| 023 | ГАМ201 | | TAMILS | AND TECHNOLO | GY | L | T | P | J | C |
|---|--|--|--|---|---|--|--|--|---|----------|
| | | <u></u> | ***** | | | 1 | 0 | 0 | 0 | 1 |
| Course C | Outcomes | | | | | | | | - | |
| At the er | nd of the cou | rse, the st | udent wil | l be able to | | | | | | |
| CO1: | Describe th | ne weavin | g and cera | amic technology | | | | | | |
| CO2: | Explain the | design and | constructi | on technology | | | | | | |
| CO3: | Analyse the | manufactu | ring techno | ology | ************************************** | | | | | |
| CO4: | Describe the | e agricultur | e and irrig | ation technology | | | | | S _{cel} | 13 |
| CO5: | Explain the | Scientific 7 | Famil and | Tamil Computing | | | | A. | | |
| | | | C | ourse Assessment n | nethods | | | | | |
| | | | Direct | | | | | Indire | et . | |
| CIE test I | | | | Total CIE: 100 mar | | | | | | |
| CIE test I CIE test I | ` , | | | Semester End Exam | nination: N | IL | Cour | se end | survey | |
| Init 01: W | EAVING AN | D CERAM | IIC TECH | NOLOGY | | | | 3 | Hours | |
| | ndustry during on Potteries | g Sangam A | Age – Cera | mic technology - Bla | ck and Red | Ware Pott | eries (BR | (W) | | |
| | | CONSTRU | CTION T | ECHNOLOGY | | 7 | | 3 | Hours | |
| Desig | ning and Stri | uctural cor | struction | House & Designs in | household | materials | during S | Sangam | Age - | |
| Build Sculp of Na Hous Jnit 03: M | ling materials otures and Ten ayaka Period - es, Indo - Sara ANUFACTUI | and Hero some and Hero some students of Months of the content of t | stones of S amallapura ly (Madura tecture at N HNOLOG | | of Stage Co f Cholas and)- Thirumala Period. | onstruction other wo ni Nayaka | ns in Sila orship pla or Mahal | ppathik ices - Te - Chetti | aram - emples Nadu Hours | |
| Build Sculp of Na Hous Jnit 03: M Art o sourc | ing materials of tures and Ten ayaka Period - es, Indo - Sara ANUFACTUIT Ship Building e of history - N | and Hero simples of Moreover Type studies archic archic RING TEC g - Metallum Minting of | stones of Samallapurally (Maduratecture at Maduratecture at Manuelle HNOLOG) rgical studictions — Bearing | Sangam age – Details am - Great Temples of ai Meenakshi Temple Madras during British Y ies - Iron industry - Iron ads making-industries | of Stage Co f Cholas and)- Thirumala Period. on smelting, s Stone bead | onstruction other wo ni Nayaka steel -Cop s -Glass b | ns in Sila orship pla or Mahal opper and peads - Te | ppathik ices - Te - Chetti 3 gold- Co | emples Nadu Hours oins as | |
| Build Sculp of Na Hous Jnit 03: M Art of source -Shell | ling materials of tures and Ten ayaka Period - es, Indo - Sara ANUFACTUIT Ship Building e of history - No beads/bone bead | and Hero simples of Moreover Type studies architer TEC g - Metallum Minting of the deats - Architer Techniques of the deats - Architer Techniques of the deats - Architer Type of the deats - | stones of Samallapura dy (Madura tecture at Manuel HNOLOG rgical stud Coins – Be neological | Sangam age – Details am - Great Temples of ai Meenakshi Temple Madras during British Y ies - Iron industry - Iro | of Stage Co f Cholas and)- Thirumala Period. on smelting, s Stone bead | onstruction other wo ni Nayaka steel -Cop s -Glass b | ns in Sila orship pla or Mahal opper and peads - Te | appathik aces - Te - Chetti 3 gold- Co erracotta aram. | emples Nadu Hours oins as | |
| Build Sculp of Na Hous Unit 03: M Art of sourc -Shell Unit 04: Ac Dam, Tan for cattle | ling materials of tures and Tempyaka Period - es, Indo - Sara ANUFACTUIT Ship Building e of history - No Beads/bone to GRICULTURE k, ponds, Sluid | and Hero simples of Moreonic archic RING TEC g - Metallum Minting of Deats - Arclic E AND IRIce, Significant and Agents - Agents | stones of Samallapura dy (Madura tecture at Manual HNOLOG rgical studi Coins – Be neological RIGATION cance of K gro Process | Sangam age – Details am - Great Temples of ai Meenakshi Temple Madras during British Y ies - Iron industry - Iron ads making-industries evidences - Gem ston TECHNOLOGY umizhi Thoompu of Sing - Knowledge of | of Stage Co f Cholas and)- Thirumala Period. on smelting, s Stone bead e types descri | onstruction other wo ni Nayaka steel -Cop s -Glass b ribed inSi | ns in Sila orship pla or Mahal opper and eads - Te lappathik | appathik aces - Te - Chetti 3 gold- Co erracotta aram. 3 lry - We | Hours beads Hours beads | gnec |
| Build Sculp of Na Hous Init 03: M Art of sourc -Shell Init 04: Act Dam, Tan for cattle Knowledg | ling materials of tures and Ten ayaka Period - es, Indo - Sara ANUFACTUI f Ship Building e of history - h beads/bone to GRICULTUR k, ponds, Sluiuse - Agricult | and Hero simples of Moreonic archic RING TEC g - Metallum Minting of Deats - Arclic E AND IRIce, Significant and Agrand Manuel Agrand Manuel RING Manu | stones of Samallapura dy (Madura tecture at Manufactions – Be neological RIGATION cance of K gro Process Specific So | Sangam age – Details am - Great Temples of ai Meenakshi Temple Madras during British Y ies - Iron industry - Iron ads making-industries evidences - Gem ston N TECHNOLOGY umizhi Thoompu of Osing - Knowledge of ociety | of Stage Co f Cholas and)- Thirumala Period. on smelting, s Stone bead e types descri | onstruction other wo ni Nayaka steel -Cop s -Glass b ribed inSi | ns in Sila orship pla or Mahal opper and eads - Te lappathik | gold- Corracotta aram. 3 dry - We che divin | Hours beads Hours beads | gnec |
| Build Sculp of Na Hous Init 03: M Art of sourc -Shell Init 04: At Dam, Tan for cattle Knowledg Init 05: SO Developm | ling materials of tures and Tendayaka Periodes, Indo - Sara ANUFACTUIT Ship Building of history - North Beads/bone to GRICULTURE Approach of Ocean - Kent CIENTIFIC TA | and Hero samples of Marchiner archiner and Again archiner and Again and Agai | stones of Samallapura ly (Madura tecture at Manufactions – Bean teological RIGATION cance of Karo Process Specific Sc AMIL COM - Tamil of | Sangam age – Details am - Great Temples of ai Meenakshi Temple Madras during British Y ies - Iron industry - Iron ads making-industries evidences - Gem ston N TECHNOLOGY umizhi Thoompu of Osing - Knowledge of ociety | of Stage Co f Cholas and)- Thirumala Period. on smelting, s Stone bead e types descri Chola Period Sea - Fisher | steel -Cops -Glass bribed inSi | ns in Sila orship pla or Mahal opper and eads - Te lappathik Husband rl - Conc | appathik aces - Te - Chetti 3 gold- Co erracotta aram. 3 dry - We che divin 3 velopme | Hours beads Hours Hours Hours Hours Hours Hours Hours | gnec |
| Build Sculp of Na Hous (nit 03: M Art or sourc -Shell (nit 04: Ac Dam, Tan for cattle (Knowledg (nit 05: SC Developm Software - | ling materials of tures and Tendayaka Periodes, Indo - Sara ANUFACTUIT Ship Building of history - North Beads/bone to GRICULTURE Approach of Ocean - Kent CIENTIFIC TA | and Hero samples of Marchine Type studies archine RING TEC g - Metallum Minting of the beats - Archine E AND IRICCE, Signification and Agriculture and Agriculture and Agriculture Tamilal Academy | stones of Samallapura ly (Madura tecture at Manufactions – Bean teological RIGATION cance of Karo Process Specific Sc AMIL COM - Tamil of | Sangam age — Details am - Great Temples of ai Meenakshi Temple Madras during British Y ies - Iron industry - Iron ads making-industries evidences - Gem ston N TECHNOLOGY umizhi Thoompu of Sing - Knowledge of ociety MPUTING computing — Digitaliz | of Stage Co f Cholas and)- Thirumala Period. on smelting, s Stone bead e types descri Chola Period Sea - Fisher | steel -Cops -Glass be ibed inSilies - Pea | ns in Sila orship pla orship pla or Mahal opper and eads - Te lappathik Husband rl - Conc ors - Sorkuva | appathik aces - Te - Chetti 3 gold- Co erracotta aram. 3 dry - We che divin 3 velopme | Hours ells desing - An Hours nt of T | gneccien |
| Build Sculp of Na Hous Init 03: M Art of sourc -Shell Init 04: At Dam, Tan for cattle Knowledg Init 05: SC Developm Software - | ling materials bures and Temayaka Period - es, Indo - Sara ANUFACTUI f Ship Building e of history - North beads/bone to GRICULTURE with the of Ocean - Kent CIENTIFIC Temater of Sciential Tamil Virtual ry: 15 Hrs | and Hero samples of Marchine Type studies archine RING TEC g - Metallum Minting of the beats - Archine E AND IRICCE, Signification and Agriculture and Agriculture and Agriculture Tamilal Academy | stones of Samallapura dy (Madura tecture at Manufactions – Bean declogical RIGATION cance of Karo Process Specific Sc AMIL COM - Tamil Com - Tamil D | Sangam age — Details am - Great Temples of ai Meenakshi Temple Madras during British Y ies - Iron industry - Iron industry - Iron ads making-industries evidences - Gem stone N TECHNOLOGY umizhi Thoompu of the sing - Knowledge of ociety MPUTING Computing — Digitalizatigital Library — Onlin | of Stage Co f Cholas and)- Thirumala Period. on smelting, s Stone bead e types descri- Chola Period Sea - Fisher | steel -Cops -Glass be ibed inSilies - Pea | ns in Sila orship pla orship pla or Mahal opper and eads - Te lappathik Husband rl - Conc ors - Sorkuva | appathik aces - Te - Chetti 3 gold- Co erracotta aram. 3 dry - We che divir 3 velopme ni Projec | Hours ells desing - An Hours nt of T | gneccien |
| Build Sculp of Na Hous Jnit 03: M Art or sourc -Shell Jnit 04: Ac Dam, Tan for cattle Knowledg Jnit 05: SC Developm Software - Theo TEXT BO | ing materials ourses and Tenayaka Period - es, Indo - Sara ANUFACTUL f Ship Building e of history - M beads/ bone to GRICULTUR k, ponds, Sluid use - Agricult e of Ocean - K CIENTIFIC TA ent of Sciential Tamil Virtual ry: 15 Hrs OKS | and Hero samples of Moreover Type studies of Moreover Type studies of Moreover Type studies and Type and Agenowledge AMIL & Table Tamil Academy Tut | stones of Samallapura dy (Madura dy (Madura decture at Manual HNOLOG rgical studi Coins – Be neological RIGATION cance of K gro Process Specific So AMIL COM - Tamil of - Tamil of orial: | Sangam age – Details am - Great Temples of ai Meenakshi Temple Madras during British Y ies - Iron industry - Iron ads making-industries evidences - Gem ston TECHNOLOGY aumizhi Thoompu of Sing - Knowledge of ociety MPUTING computing – Digitalizatigital Library – Onlin Practical: | of Stage Co f Cholas and)- Thirumala Period. on smelting, s Stone bead e types described. Chola Period Sea - Fisher cation of Tage Tamil Dict | steel -Cops -Glass bribed inSi | ns in Sila priship pla priship | gold- Corracotta aram. 3 lry - Weche divin 3 velopme ni Projec Hours: | Hours ells desing - An Hours nt of T | gneccien |

| 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.

| *** | CHAC | | | BA | SIC AP | TITUDI | E-II | | L | T | P | J | C | |
|--------------|--|----------|---------------------------------|----------------------|------------|----------------------|--|-----------------------|-----------|------------|----------|-----------------|------------|--|
| U23 | GE201 | | | | non to Al | | | | 2 | 0 | 0 | 0 | 0 | |
| Course (| Outcom | es | n sM_p_U minsorra | n notasa 1 avissa | obud2 — ar | segotion se Chanc | <u>s eta.</u> aktosona ^c | enetrors La enetro | eneg a | oloi oite? | le for | erimi muses | nna' | |
| At the er | nd of the | e course | e, the st | udent w | ill be ab | le to | | | | | | | | |
| CO1: | | | | | | | n of Perc | entage to | o Ratio | and Ratio | into I | Percen | tage | |
| 871 | | | | - | questions | | et sa | | · 11 | Post To Lo | | 2.0 | 710 | |
| CO2: | | | | | | | ercentages and phr | | tit and l | oss. | | | | |
| CO3: | | | | | | | | - | umfere | nce, Surfa | ace are | a and | | |
| 003. | Volun | | | 3 | | | I A L | | | | 1 | o a f | | |
| | | | the give | n passag | ges for R | eading C | Comprehe | ension ac | ctivity a | nd answe | r the q | uestio | ns | |
| Ess. | correctly. Deduce the problems involving Trigonometry and exhibit good expertise in detecting errors in | | | | | | | | | | | | | |
| CO4 : | | | | involvi | ng Trigo | onometry | and ext | nibit goo | d exper | tise in de | etecting | g erro | rs ii | |
| | the gr | ven sent | lences. | | | | | | aviolia | | | | | |
| CO5: | Interp | ret the | problem | s on A | ges & lo | garithm | and wo | rk on lo | gical re | asoning | and de | mons | trate | |
| relucrio | good | vocabul | ary skill | by spot | ting erro | rs. | Jime: C | 7 & 69 | 18' 908'T | reed sur | 113 .29 | R 90g | hi | |
| Pre-requ | isite: | | | | | | | blems | ne-Pro | lemisphe | - 510 | -Spb | ente | |
| | Basic | English | languag | ge and G | Grammar | knowled | dge | | | | | | | |
| | Know | ledge in | Basic N | Mathema | atics | | | | iqmos g | | | | | |
| A CON | est is | | | | CO/PC | , PSO N | Aapping | | | | | 3.19 | | |
| | | (3/2/1 i | ndicates | the stre | | | | | ledium, | 1-Weak | | | | |
| | | Pr | ogramm | e Outco | mes (PO | s) and P | rogramn | ne Specif | ic Outc | omes (PS | Os) | | | |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | P09 | PO10 | PO 11 | РО | 12 | |
| 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 | ing Mil | |
| CO4 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 3 | 3 | 3 | 2 | 011 3 | X II | |
| | 1/2 12 | 3 | 3 | 2 | 1001 | 1 | ovi ₁ nin | 3 | 3 | 3 | 2 | 3 | | |
| CO5 | 3 | | | | | | | | | | | | | |
| CO5 | 3 | | 1021. | 00276 | ourse A | ssessme | nt metho | nds | cal Rea | god" ad | ni2.2i | ideiM Nishii | | |
| CO5 | 3 | | 2021, | C | | ssessme | nt metho | ods | ual Rea | | direct | | | |

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

Dr.S.Anita
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.

| | | | | | | IMING | | | | L | 7 | 7 | P | J | C |
|---------|--------|------------|---------|------------|-----------|---------------------|-----------|---------|-----------|----------|----------|-------|----------|---------|-------|
| ı | 123CP | L212 | (Cor | nmon to | ADS, I | Γ, CSE, (Branch | | L), CSD | and ECE | 0 | (| | 2 | 0 | 1 |
| Cour | se Ou | tcomes | | | | | | | | | | | | | |
| At the | e end | of the cou | rse, th | e stude | nt will | be able | to | | , , , | | | | | | |
| (| CO1 [| Design and | devel | op simp | le prog | rams us | sing bra | nching | looping | g staten | nents | | x I | | |
| CO | | Develop pi | | | | | | | | | | | | - | |
| CC | | Write prog | | | | | | | | | | dling | | | |
| Pre-re | | | | | | | | | | | | | | | |
| | Hust | | | | | CO | /PO, PS | O Mann | ing | | | | | 7 | |
| | | | (3 | 3/2/1 indi | cates the | | | | Strong, 2 | -Medium | . 1-Weal | | | | |
| COs | | | | | | | | | nme Spe | | | | | | |
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | P09 | PO10 | PO11 | PO12 | PSO1 | PSO2 | PSO3 |
| CO1 | 1 | 2 | 3 | 2 | 2 | 2 | - 1 | - | - | - | - | | 1 | 2 | 2 |
| CO2 | 2 | 2 | 3 | 2 | 2 | 1 | | - | - | - | - 1 | - | 1 | 2 | 2 |
| CO3 | 2 | 3 | 3 | 2 | 2 | 1 | - | - | - | | - | - | 1 | 2 | 2 |
| | | | | | (| Course | Assessi | ment m | ethods | - | | | | | 22307 |
| | | | | | Direc | t | | | | | | | Indire | ect | |
| CIE te | , | 5) | | | R | TPS (10 | 0) | | | | | Cou | rse end | survey | |
| Quiz 1 | | | | | R | ecord (| 10) | | | | | Cou | ise cita | sui vey | |
| CIE te | , | (5) | | | - 1 | otal CIE | , | arks | | | | | | | |
| Quiz I | 1- (5) | | | | | | | | ion (40 | marks) | | | | | |
| List of | Expe | riments: | | | | | | 20 | 1011 (10 | marko) | | | | | |
| 1 | • | ams using | Input | Output | and ac | sianma | nt ctator | nento | | | | | | | |
| | | ams using | | | | | it stater | nents. | | | * | | | | |
| | | ams using | | | | 3 | | | | | | | | | |

- 4. Programs using Functions
- 5. Programs using Arrays
- 6. Programs using Structures
- 7. Programs using Strings
- 8. Programs using Pointers (both data pointers and function pointers)
- 9. Programs using dynamic memory allocation
- 10. Programs using Recursion
- 11. Programs using Files

Theory: 0 Hrs **Tutorial: 0** Practical 30 Hrs Project:0 Total Hours: 30 Hrs

12.1.2024 Version 1.0

Semester II

B.E / B.. Tech Regulations 2023

Dr. B. SATHIYABHAMA, B.E., MToch., Ph.O.

PROFESSOR & HEAD,

Dept. of Computer Science and Engineering SONA COLLEGE OF TECHNOLOGY

SALEM-636 005

| 111 | 23CH | T 211 | CHEMISTRY LABORATORY (Common to CSE, CSE (AIML), & CSD branches) | | | | | | L | Т | P | J | C | | |
|------------------|----------|------------|--|--------------------|-----------|----------------|----------|-------------------------------|------------|---------------------------------------|---------|---|---------|--------|--|
| U | 23CH | LZII | | | | | | | 0 | 0 | 2 | 0 | 1 | | |
| Cours | e Out | comes | | | | | | 2 | | | | | | | |
| At the | e end o | of the cou | rse, the | studen | t will l | be able | to | | | | | | | | |
| CO1 | L: A | Analyze th | ne amo | unt of | hydro | chloric | acid in | a give | n solu | tion by | pH m | etry an | d amou | ant of | |
| | h | ydrochloi | ric acid | and ace | etic acio | d by cor | nducton | netric ti | tration. | | | | | | |
| CO2 | 2: E | Estimate t | he am | ount of | coppe | er from | discar | ded PC | CBs, de | etermin | e the n | nolecul | ar weiş | ght of | |
| | . a | polymer | and e | stimatio | on of ch | nromiur | n in ele | ctroplat | ting slu | dge by | Permar | iganom | etry. | | |
| CO | 3: I | Determine | e the a | mount | of feri | rous io | n in a g | given s | olutior | by po | tention | neter, d | determi | ne the | |
| | | ron conte | | | _ | _ | | | | | the ar | nount | of hard | iness, | |
| Pro-ro | quisit | lkalinity | presen | it in ho | use ho | old wate | er by v | olumet | ric me | thod. | | | | | |
| 116-16 | | Capable of | handli | ng bure | tte, pir | ette, be | aker, co | onical fla | ask and | l standa | rd mea | suring i | flask. | | |
| | | • | | | 8 | CO/PO, | | Granden et e | 218,62,700 | | | | | | |
| | | | | | | gth of co | | Annual Control of the Control | | | | | | | |
| COs | PO1 | | Program PO3 | nme Ou PO4 | PO5 | s (POs) PO6 | and Pro | ogramm PO8 | P09 | ific Outo | | \$100 CO. | PSO1 | PSO | |
| CO1 | 3 | 2 | 103 | 1 | 103 | 1 | 107 | 100 | 1 | 1010 | 1011 | 1012 | 1301 | 2 | |
| 301 | | | | | | | - | | | | | 36 | | | |
| CO2 | 3 | 2 | | -1 = | | 1 | 1 | | 1 | | | | | 2 | |
| CO3 | 3 | 2 | | 1 | | 1 | 1 | | 1 | | | | | 2 | |
| | | | | | Cot | ırse Ass | sessmer | nt meth | ods | | 1 | | | | |
| | | • | | | Direc | | | | | | | Inc | lirect | | |
| CIE te | est I (1 | o) | | | ŀ | RTPS (10 |)) | | | | | | | | |
| Quiz 1 (5) | | | | | F | Record (10) | | | | | | Course end survey | | | |
| CIE test II (15) | | | 1 | Total CIE:60 marks | | | | | | | | | | | |
| Quiz 2 | 2 (5) | | | | 5 | Semeste | r End E | xamina | tion (40 |) marks) | | | | | |
| | | (PERIME) | NTS | 3.7 | | | | | • | | | | | | |
| 1 | Estima | ation of H | Cl acid | by pH | metry. | | | 200 | | | | and the second | | | |
| | Estima | ation of H | Cl by co | onducto | ometry | . (HCl v | s NaOF | -I) | | e e e e e e e e e e e e e e e e e e e | | | , a | 6° a | |
| 2 | الللاد | adon on 11 | Ci by C | onauch | Jiichy | . (11C1 V | 311401 | -, | | | | | | | |

| 3 | Estimation of mixture of acids by conductometry. (HCl + CH ₃ COOH vs NaOH |) |
|----|--|-----------------|
| 4 | Estimation of ferrous ion by potentiometric titration. | |
| 5 | Estimation of copper content from discarded PCBs by EDTA method. | |
| 6 | Determination of molecular weight of a polymer by viscosity measurements. | |
| 7 | Estimation of hardness of water sample by EDTA method. | |
| 3 | Estimation of alkalinity of water sample by indicator method. | |
| 9 | Estimation of chromium prepared from electroplating sludge by Permanganon | netry. |
| 10 | Determination of iron content in water by spectrophotometric method. | |
| | · | TOTAL: 30 HOURS |

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

of for 1/24.

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages
and College of Technology.
SALEM - 63-

| <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 | e 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 vition, 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 | ca to d | | | . , | . 11 |
| 001 | about weath | ner, draft a mail re | sponse | inc a list of tilli | gs to d | o, expr | ess an o | pinion | , talk |
| CO5: | Express on | e's interest and | wish, describe a p | et animal, expi | ess of | ne's av | ersions | encoi | irage |
| | others, write | e to ask for a help, | narrate a past even | t, write a biograp | phy | | •1010110, | 011000 | пирс |
| | | | Course Assessment | | | | | | |
| | | Direc | t | | | | Indirec | f | |
| CIE test I | (30) | | Total CIE: 100 ma | rks | | | | | |
| CIE test II | ` ' | | Semester End Exa | mination: NIL | Course end survey | | | | |
| CIE test II | I (40) | | | v. | | | | J | |
| Unit 01: | | | 1 | | | | 3 | Hours | |
| Hr 2: City | shopping and | d services, conjuga | ation: payer, mange | r and acheter, ne | gative | sentend | 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 | Comingation | | 1 | <u> </u> | | 3 | Hours | |
| Hr 10: Tra | insport 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 | on | | | | |
| Unit 03: | | | , | | | T | 3 1 | Hours | |
| Hr 14: Thi | ings in a store | , conjugation : fai | re, imparfait 2, pass | é composé | | | - 31 | 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 1 | 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 | savoir denuis ve | nande | nnt | 31 | Iours | |
| Hr 28: Imp | parfait vs pass | é composé, nature | e and environment, | indirect pronoun | s penda s COI | anı | | | |
| Hr 30: Ani | mals, conditi | onal, talk on supp | orting others, write | a biography | | | | | |
| 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 i | notes. | | | | |
| 2. Boo | oks : Saison (1 | Méthode de frança | is, cachier d'activit | és) | | | | | |
| 3. Ref | erence books | : La conjugaison, | Dondon, Echo | - E | | | | | |

Dr. M.RENUGA,
Prefessor & Head,
Department of Humanities & Languages,

Department of Humanities & Languages

Sona College of Technology

B.E / B. Tech Regularione 10236

| U23 | OL1202 | * " | German - II | | L | T | 0 0 | 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 | | | | 1. | | | | |
| CO1: | Use gramm | atical expressions | appropriately in da | y-to-day conver | sation. | 2 | | | | | |
| CO2: | Make them | frame simple sente | ences /questions. | · | | · | | | | | |
| CO3: | Accentuate to start and sustain basic conversation | | | | | | | | | | |
| CO4: | Helps them | Helps them articulate thoughts in German | | | | | | | | | |
| CO5: | Identify the different forms of the verb | | | | | | | | | | |
| | | C | ourse Assessment | methods | | | | | | | |
| | | Direct | | | | | Indirec | f . | | | |
| | IE test I (30) Total CIE: 100 marks | | | | | | | | | | |
| | CIE test II (30) CIE test III (40) Semester End Examina | | | | | L Course end survey | | | | | |
| Unit 01: | 11 (10) | | * | | | | 2 | Цония | | | |
| Nominati | ve/accusative | case, adjectives | | | | | <u> </u> | ilouis | | | |
| Unit 02: | | | | | | | 31 | Hours | | | |
| Modes of | transportation | n, orientation, givin | g/understanding si | mple directions | | | | | | | |
| Unit 03: | | | | | | | 3 1 | Hours | | | |
| • Fo | ood and bevera | iges, Modal verbs, | Separable verbs | | | | , | 180 0 | j. | | |
| Unit 04: | | | | | | | 3 Hours | | | | |
| • Sin | mple sentence | s using modal / sep | parable verbs | | | - | | - | | | |
| Jnit 05: | | | | | | | 3 F | lours | | | |
| • Ar | ticles of cloth | ing | | | | | | | | | |
| Theor | ry: 15 Hrs | Tutorial: | Practical: | Project: | | Total 1 | Hours: | 15 Hrs | | | |
| TEXT BO | OKS | | | | | | \ | | | | |
| 1. Net | tzwerk A1 | 100 | | | , | | | | | | |

HOD 13 July.

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

| U23 | OL1203 | | Jananasa II | | | T | P | J | С | |
|---|--|--|--|---|-------------------|--------|---------------|--------|-------|--|
| 022 | | Japanese - II | | | 1 | 0 | 0 | 0 | 1 | |
| | Outcomes | | | <u>-</u> | | | | | | |
| At the en | nd of the cour | se, the student wi | ll be able to | | | | | | | |
| CO1: | Use verbs in | polite conversation | on or for dissuasion | and describe two | differe | nt ac | tivities | | | |
| CO2: | Demonstrat describe exp | e the application operiences | f causative verbs and | those that expre | ess abili | ty or | possib | | | |
| CO3: | Use plain-st | yle expressions, th | ose that state opinio | ns, and verbs and | d adjecti | ives | that go | with n | ouns | |
| CO4: | Express sen | Express sentences that use 'when' and 'if' and those that describe how services are given and received | | | | | | | | |
| CO5: | Read 126 le and II to pas | etters of Kanji, and ss the Japanese Lar | demonstrate adequage Proficiency | ate knowledge of the contract (JLPT) for the contract | f the les | ssons | s learnt | in Lev | els l | |
| | | | ourse Assessment n | | | | | | | |
| | | Direc | • | | | | Indirec | f | | |
| CIE test 1 | (30) | | Total CIE: 100 mar | · , | | | IIIuIICC | | | |
| CIE test II (30) CIE test III (40) Semester End Ex | | | | | C | Cours | se end s | urvey | | |
| Unit 01: | (23) | | | | | T | 2 | Hours | | |
| | Jords and work | s expressing reque | octo / Vanii 1 10 | | | | 3 | nours | | |
| Hr 3-4: A | sking for pern | nission; making sta activities / Kanji 2 | atements to prohibit | something / Kan | ji 11 - 20 | | | | | |
| Jnit 02: | | - | | | | | 3 | Hours | | |
| Hr 7-8: | Verbs that exp | ress 'I have to' | / Kanji 31-40 | | | | | | | |
| | | | ossibility / Kanji 41 | -50 | | | | | | |
| | Describing ex | kperience / Kanji 5 | 1-60 | | | | **** | | | |
| Jnit 03: | | | B y x | | | | 3] | Hours | | |
| | | pressions / Kanji (| | | | | | | | |
| | | ike 'I think that | d adjectives / Kanji | R1 00 | | | | | | |
| Jnit 04: | Quanty mg m | ouns with veros an | d adjectives / Kanji | 51-90 | | T | 2 1 | Hours | | |
| | Everagiona | ising 'When' | TT '' 01 100 | | | | - 31 | iouis | | |
| Hr 19-20: | EXDICISIONS | | Kan11 91-100 | | | | | | | |
| Hr 21-22: | Describing th | e giving and receiv | ving of services / Ka | nji 101-110 | | | | | | |
| Hr 21-22: | Describing th | | ving of services / Ka | nji 101-110 | | | 3] | Hours | | |
| Hr 21-22: Hr 23-24: J nit 05: | Describing th | e giving and receinsing 'If' / Kar | ving of services / Ka | nji 101-110 | | | 3] | Hours | | |
| Hr 21-22: Hr 23-24: Jnit 05: Hr 25-26: Hr 27-28: | Describing th Expressions u Preparing for Preparing for | e giving and receivating 'If' / Kar JLPT N5 JLPT N5 | ving of services / Ka | nji 101-110 | | | 3 1 | Hours | | |
| Hr 21-22: Hr 23-24: Jnit 05: Hr 25-26: Hr 27-28: Hr 29-30: | Describing the Expressions to Preparing for | e giving and receivations of the sing 'If' / Kar JLPT N5 JLPT N5 JLPT N5 | ving of services / Ka | nji 101-110 | | | 31 | Hours | | |
| Hr 21-22: Hr 23-24: Jnit 05: Hr 25-26: Hr 27-28: Hr 29-30: | Describing the Expressions to Preparing for | e giving and receivating 'If' / Kar JLPT N5 JLPT N5 | ving of services / Ka | nji 101-110 Project: | To | otal] | 3 l Hours: | | 3 | |
| Hr 21-22: Hr 23-24: Jnit 05: Hr 25-26: Hr 27-28: Hr 29-30: Theo | Preparing for Pr | e giving and receivating 'If' / Kar JLPT N5 JLPT N5 JLPT N5 JLPT N5 Tutorial: | ving of services / Kanji 111-126 Practical: | Project: | To | otal] | | | 3 | |
| Hr 21-22: Hr 23-24: Jnit 05: Hr 25-26: Hr 27-28: Hr 29-30: Theo | Preparing for Pr | e giving and receivating 'If' / Kar JLPT N5 JLPT N5 JLPT N5 JLPT N5 Tutorial: | ving of services / Ka nji 111-126 | Project: | To | otal] | | | 3 | |

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

B.E / B.. Tech Regulations 2626 005.

| U23 | OL1204 | * *** ******************************** | Korean - II | | L | T | 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 | | · · · · · · · · · · · · · · · · · · · | | - | | | |
| CO4: | Explain des | | | | | | | | |
| CO5: | Construct si | imple sentences / | | | | | | | |
| | engan a senggan a se | | Course Assessment | methods | | | | | |
| | | Direc | ct | | | | Indirec | t | |
| CIE test I | | | Total CIE: 100 ma | ırks | | | | | |
| CIE test II (30) | | | Semester End Examination: NIL | | | Cours | se end s | urvev | |
| CIE test I | II (40) | | | | | | | | |
| Unit 01: 7 | ime | | | | | | 3 | Hours | |
| Talking a | bout time | | | - | | | | | |
| Unit 02: D | Date | | | | | | 3 | Hours | |
| | | d days of the week | | | | | | | |
| Talking a | bout doing so | mething in the pas | st | | 21 | * | S. | | |
| Unit 03: | Location | | | | | | 3 | Hours | |
| Talking al | | mething at a locat | ion | | | we, | | | |
| Jnit 04: | Direction | | | | | | 3] | Hours | |
| Talking al | out direction | S | | | | | · · · · · · · · · · · · · · · · · · · | | |
| Jnit 05: F | | | | | | | 3] | Hours | |
| | | mething in the fut | ure | | | | | 1 | |
| | out plans for out hope for | | | | | | | | |
| | y: 15 Hrs | Tutorial: | Practical: | Project: | T | Total 1 | Hours: | 15 Hrs | |
| REFERENC | ES | | | 1 | | | | | |
| | itamin Korean | | | | | | | | |

M- 7 7 2 2 24.

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,
SALEM - 636 000.