LESSON PLAN

| DISCIPLINE: MATH |
| :---: | :---: | :---: |
| AND SCIENCE | | SEMESTER: |
| :---: |
| FIRST |$\quad$| NAME OF THE TEACHING FACULTY: |
| :---: |
| G. BALA KRUSHNA REDDY |


| Subject: <br> Communicative English | No. Of. Days per week class allotted: 4 | Semester from 25-10-202 to 31-01-2023 |
| :---: | :---: | :---: |
| Weeks: 15 | Class days | Theory (60) |
| First | $1{ }^{\text {st }}$ | Unit:1 <br> Literature appreciation: reading comprehension: a text related to birth order, practicing skimming the gist, scanning for necessary information |
|  | $2^{\text {nd }}$ | Reading comprehension: close reading for inference and evaluation, sentence making. |
|  | $3^{\text {rd }}$ | Reading comprehension: : main idea and supporting points increasing their anticipation skills (through word-guessing activity) |
|  | $4^{\text {th }}$ | Reading comprehension exposing them to some vocabulary item they are responsible for in the exam such as: mediator, order, engaging and excel at through reading text. |
| Second | $1^{\text {st }}$ | Reading comprehension: adapting an interesting text, out of the students reading books and implementing in the classroom, unseen passage for Comprehension |
|  | $2^{\text {nd }}$ | Standing up for yourself |
|  | $3^{\text {rd }}$ | Standing up for yourself (cont.) |
|  | $4^{\text {th }}$ | Standing up for yourself (cont.) |
| Third | $1^{\text {st }}$ | Standing up for yourself: question and answer discussion. |
|  | $2^{\text {nd }}$ | Inchcape rock |
|  | $3^{\text {rd }}$ | Inchcape rock |
|  | $4^{\text {th }}$ | Inchcape rock: question and answer discussion. |
| Fourth | $1^{\text {st }}$ | The magic of teamwork |
|  | $2^{\text {nd }}$ | The magic of teamwork (cont.) |
|  | $3^{\text {rd }}$ | The magic of teamwork (cont.) |
|  | $4^{\text {th }}$ | The magic of teamwork (cont.) |


| Fifth | $1^{\text {st }}$ | The magic of teamwork: question and answer discussion |
| :---: | :---: | :---: |
|  | $2^{\text {nd }}$ | To my true friend |
|  | $3^{\text {rd }}$ | To my true friend (cont.) |
|  | $4^{\text {th }}$ | To my true friend: question and answer discussion. |
| Sixth | $1^{\text {st }}$ | Unit: 2 <br> Various paragraphs taken up for Practice keeping in view the Synonyms \& antonyms |
|  | $2^{\text {nd }}$ | Various paragraphs taken up for Practice keeping in view the Synonyms \& antonyms (cont.) |
|  | $3{ }^{\text {rd }}$ | Same word used in different situations |
|  | $4^{\text {th }}$ | Same word used in different situations |
| Seventh | $1^{\text {st }}$ | Single word substitute |
|  | $2^{\text {nd }}$ | Unit: 3 countable an uncountable noun |
|  | $3^{\text {rd }}$ | Articles and determiners |
|  | $4^{\text {th }}$ | Modal verbs |
| Eighth |  | Tenses: present |
|  | $1^{\text {st }}$ |  |
|  | $2^{\text {nd }}$ | Tenses: past |
|  | $3^{\text {rd }}$ | Future time |
|  | $4^{\text {th }}$ | Voice-change |
| Ninth | $1^{\text {st }}$ | Subject-verb agreement |
|  | $2^{\text {nd }}$ | Unit:4 <br> Paragraph writing <br> Meaning, features of paragraph writing ( topic statement, supporting points and plot Compatibility) |
|  | $3^{\text {rd }}$ | Developing ideas into paragraphs ( describing place/ person/ object /situation and any General topic of interest) |
|  | $4^{\text {th }}$ | Notice, more samples of letters |


| Tenth | $1^{\text {st }}$ | Agenda \& minutes of meeting, more samples of letters |
| :---: | :---: | :---: |
|  | $2^{\text {nd }}$ | Report writing (format of a report, reporting an event / news), |
|  | $3^{\text {rd }}$ | Report writing (format of a report, reporting an event / news) (cont.), more samples of letters |
|  | $4^{\text {th }}$ | Writing personal letter, more samples of letters |
| Eleventh | $1^{\text {st }}$ | Letter to the principal, librarian, |
|  | $2^{\text {nd }}$ | Head of the department, and hostel superintendent, more samples of letters |
|  | $3^{\text {rd }}$ | Writing business letters Layout of a business letter Letter of enquiry |
|  | $4^{\text {th }}$ | Writing business letters Layout of a business letter Letter of placing an order |
| Twelfth | $1^{\text {st }}$ | Writing business letters Layout of a business letter execution of an order |
|  | $2^{\text {nd }}$ | Writing business letters Layout of a business letter Complaint, cancellation of an Order(features, format and example) |
|  | $3^{\text {rd }}$ | Job application (features, format and example) |
|  | $4^{\text {th }}$ | C.v.(features, format and example) |
| Thirteenth | $1^{\text {st }}$ | Unit-v <br> Elements of communication introduction to communication <br> 1. Meaning, definition and concept of communication <br> 2. Good communication and bad communication |
|  | $2^{\text {nd }}$ | 3. Communication model One-way communication model and two-way communication model with examples |
|  | $3^{\text {rd }}$ | 4. Process of communication and factors responsible for it Sender, message, channel, receiver / audience, feedback, noise, context |


|  | $4^{\text {th }}$ | Professional communication <br> 1. Meaning of professional communication <br> 2. Types of professional communication |
| :---: | :---: | :---: |
| Fourteenth | $1^{\text {st }}$ | professional communication Formal or systematic communication Upward communication (how it takes place, symbol, merits and demerits) Down-ward communication (how it takes place, symbol, merits and demerits) Parallel communication (how it takes place, symbol, merits and demerits) |
|  | $2^{\text {nd }}$ | Professional communication Informal communication Grape vine communication (how it takes place, symbol, merits and demerits) |
|  | $3^{\text {rd }}$ | non- verbal communication Meaning of nonverbal communication |
|  | $4^{\text {th }}$ | Different areas of non-verbal communication |
| Fifteenth | $1^{\text {st }}$ | Kinesics or body language (postures and gestures, facial expression and eye Contact) |
|  | $2^{\text {nd }}$ | non- verbal communication <br> Proxemics or spatial language (private space, personal space, social space, public Space) |
|  | $3^{\text {rd }}$ | non- verbal communication <br> Language of signs and symbols(audio sign and visual sign in everyday life with merits And demerits) |
|  | $4^{\text {th }}$ | Question samples set practice... |

LESSON PLAN

| DISCIPLINE: MATH |
| :---: | :---: | :---: |
| AND SCIENCE |$\quad$| SEMESTER: |
| :---: |
| FIRST |$\quad$| NAME OF THE TEACHING |
| :---: |
| FACULTY: |


| Subject: Communicative English Lab | No. Of. Days per week class allotted: 4 | Semester from 25-10-22 to 31-01-2023 |
| :---: | :---: | :---: |
| Weeks: 15 | Class days | Practical (60) |
| First | $1{ }^{\text {st }}$ | Listening skill: introduction, learning objectives |
|  | $2^{\text {nd }}$ | Listening skill: introduction, learning objectives |
|  | $3^{\text {rd }}$ | Key vocabulary: understand, comprehension, sequence, directions |
|  | $4^{\text {th }}$ | Key vocabulary: understand, comprehension, sequence, directions |
| Second | $1{ }^{\text {st }}$ | Listening skill: materials, Length: 45 to 55 minute lessons |
|  | $2^{\text {nd }}$ | Listening skill: materials, Length: 45 to 55 minute lessons |
|  | $3^{\text {rd }}$ | Listening dialogs |
|  | $4^{\text {th }}$ | Listening dialogs |
| Third | $1^{\text {st }}$ | Listen and draw a story, read or makes up a story and as the students listen they draw the different scenes. |
|  | $2^{\text {nd }}$ | Listening skill: Listen and draw a story, read or makes up a story and as the students listen they draw the different scenes. |
|  | $3^{\text {rd }}$ | Speaking skill: reading aloud of dialogues, texts, poems |


|  | $4^{\text {th }}$ | Reading aloud of dialogues, texts, poems |
| :---: | :---: | :---: |
| Fourth | $1^{\text {st }}$ | Speeches focusing on intonation. |
|  | $2^{\text {nd }}$ | Speeches focusing on intonation. |
|  | $3^{\text {rd }}$ | Introducing oneself |
|  | $4^{\text {th }}$ | Introducing oneself |
| Fifth | $1^{\text {st }}$ | Introducing others |
|  | $2^{\text {nd }}$ | Introducing others |
|  | $3^{\text {rd }}$ | Greeting, starting a Conversation |
|  | $4^{\text {th }}$ | Greeting, starting a Conversation |
| Sixth | $1^{\text {st }}$ | Talking about oneself |
|  | $2^{\text {nd }}$ | Talking about oneself |
|  | $3^{\text {rd }}$ | Teach both formal and informal conversation skills |
|  | $4^{\text {th }}$ | Teach both formal and informal conversation skills |
| Seventh | $1^{\text {st }}$ | Role-plays on any two- situations |
|  | $2^{\text {nd }}$ | Role-plays on any two- situations |
|  | $3^{\text {rd }}$ | Telephonic conversation |
|  | $4^{\text {th }}$ | Telephonic conversation |
| Eighth |  | Developing oral communication skills |
|  | $1^{\text {st }}$ |  |
|  | $2^{\text {nd }}$ | Speaking skill: debate |
|  | $3^{\text {rd }}$ | Personality development: initiation |
|  | $4^{\text {th }}$ | Physical appearance |
| Ninth | $1^{\text {st }}$ | Physical appearance |
|  | $2^{\text {nd }}$ |  |
|  |  | Audience purpose |
|  | $3^{\text {rd }}$ | Audience purpose |
|  | $4^{\text {th }}$ | Using mind maps and brainstorming to explore ideas. |


| Tenth | $1^{\text {st }}$ | Using mind maps and brainstorming to explore ideas. |
| :---: | :---: | :---: |
|  | $2^{\text {nd }}$ | Using role play/dialogue/drama |
|  | $3^{\text {rd }}$ | Using role play/dialogue/drama |
|  | $4^{\text {th }}$ | Personality development |
| Eleventh | $1^{\text {st }}$ | Interpersonal skills: appropriate use of nonverbal skills in face-to-face communication |
|  | $2^{\text {nd }}$ | Viva- voice |
|  | $3^{\text {rd }}$ | Viva- voice, |
|  | $4^{\text {th }}$ | Group-interviews, |
| Twelfth | $1^{\text {st }}$ | Group-interviews, |
|  | $2^{\text {nd }}$ | Group discussion |
|  | $3^{\text {rd }}$ | Group discussion |
|  | $4^{\text {th }}$ | Seminars |
| Thirteenth <br>  <br>  <br>  <br> Fourteenth | $1^{\text {st }}$ | Seminars |
|  | $2^{\text {nd }}$ | Interpersonal skills: seminars |
|  | $3^{\text {rd }}$ | Presenting in group discussion, seminars and conferences: group discussion |
|  | $4^{\text {th }}$ | Group discussion |
|  | $1^{\text {st }}$ | Conferences |
| Fourteenth | $2^{\text {nd }}$ | Conferences |


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|  | $3^{\text {rd }}$ | Presenting in group discussion, seminars and <br> conferences: leadership quality |
|  | $4^{\text {th }}$ | Leadership quality |
|  | $1^{\text {st }}$ | Time management |
|  |  |  |
|  |  |  |
|  | $2^{\text {nd }}$ | Time management |
|  | $3^{\text {rd }}$ | Achieving the target |
|  | $4^{\text {th }}$ | Checking The Record... |

## LESSONPLAN

| DISCIPLINE:MATH | SEMESTER: | NAMEOF THE TEACHING FACULTY: |
| :---: | :---: | :---: |
| AND SCIENCE | FIRST | 1. DIPTI LAXMI BHUYAN |
|  |  | 2. G. Susmita |


| SUBJECT: <br> ENGG. <br> CHEMIST <br> RY | $\begin{aligned} & \hline \text { NO.OF.CL } \\ & \text { ASSES } \\ & \text { ALLOTED } \\ & \text { PER } \\ & \text { WEEK } \end{aligned}$ | SEMESTER FROM: 25/10/2022 TO 31/01/2023 |
| :---: | :---: | :---: |
| WEEK | $\begin{aligned} & \text { CLASS/ } \\ & \text { DAY } \end{aligned}$ | THEORY |
| 1ST | $1^{\text {ST }}$ | -Introduction, Matter and its states. |
|  | $2^{\text {ND }}$ | -Atomic structure: fundamental particles (electron, proton and neutron), their properties. |
|  | $3^{\text {RD }}$ | -Atomic number and mass no. , definition, examples and properties of isotopes, isotones and isobars. <br> -Definitions of atomic weight, mol. Weight, equivalent weight. |
|  | $4^{\text {TH }}$ | -Rutherford's atomic model. <br> -Equivalent weight of acid, bases and salts. -concept of Arrhenius theory with examples. |
| 2ND | $1^{\text {ST }}$ | -Bohr's atomic model <br> -Molarity and Normality with numericals. -Lowry Bronsted theory with examples. |
|  | $2^{\text {ND }}$ | Bohr and Bury Scheme and AUFBAU'S Principle. -Molality with examples <br> -LEWIS theory for Acid and Base with examples. |
|  | $3^{\text {RD }}$ | -Hund's rule with examples. -Importance of ph in industry. <br> -Neutralization. |
|  | $4^{\text {TH }}$ | -Electronic configuration. <br> -Ph of solutions with numericals. <br> -Definition and types of salts. |
| 3RD | $1^{\text {ST }}$ | -Numericals |
|  | $2^{\text {ND }}$ | -Correction of class note -clearing of doubts. |
|  | $3^{\text {RD }}$ | -Numericals. |
|  | $4^{\text {TH }}$ | -Chemical bonding, definition, cause of bonding -Normal and Acidic salts with examples. |
| 4TH | $1^{\text {ST }}$ | -Ionic bond: definition, examples. <br> -Basic and Double salts with examples. |
|  | $2^{\text {ND }}$ | -Covalent bond: definition with examples. -Complex and Mixed salts with examples. |


|  | $3^{\text {RD }}$ | Coordinate bond: definition with examples. -Numericals. |
| :---: | :---: | :---: |
|  | $4^{\text {TH }}$ | -Electrochemistry: definition of electrolytes, their types, non electrolytes with examples. <br> -Numericals. |
| 5TH | $1^{\text {ST }}$ | -Electrolysis(principle) <br> -Numericals. |
|  | $2^{\text {ND }}$ | Electrolysis of molten NaCl and Aqueous NaCl -Numericals. |
|  | $3^{\text {RD }}$ | -Faraday's laws of electrolysis. <br> -Numericals on faraday's laws. |
|  | $4^{\text {TH }}$ | -Electroplating (zinc plating). |
| 6TH | $1^{\text {ST }}$ | -Class note correction. |
|  | $2^{\text {ND }}$ | -Note checking and numericals. |
|  | $3^{\text {RD }}$ | -Corrosion and its types. <br> -Water treatment: sources of water,hard and soft water. |
|  | $4^{\text {TH }}$ | -Rusting of iron and water line corrosion. <br> -Hardness, types of hardness. |
| 7TH | $1^{\text {ST }}$ | -Protection from corrosion by alloying and galvanisation. -Removal of hardness by lime soda method. |
|  | $2^{\text {ND }}$ | -Hydrocarbons: definitions, general formula, examples. -Advantages of hot lime over cold lime process. |
|  | $3^{\text {RD }}$ | -Rules for iupac system of nomenclature for alkanes, alcohols, alkyl halides. <br> -Organic ion exchange method. |
|  | $4^{\text {TH }}$ | -Rules for IUPAC system of nomenclature for alkenes and alkynes. <br> -Lubricants: definition and types, uses. |
| 8TH | $1^{\text {ST }}$ | -Rules for writing the structural formula from IUPAC names, bond line notation. <br> -Purpose of lubrication. |
|  | $2^{\text {ND }}$ | -Revision. |
|  | $3^{\text {RD }}$ | -Aromatic hydrocarbons and Huckel's rule. -Numericals. |
|  | $4^{\text {TH }}$ | -Difference between aliphatic and aromatic hydrocarbons, uses of common aromatic compounds. <br> -Fuel: definition, classification. |


| 9TH | $1^{\text {ST }}$ | -Metallurgy: minerals, ores with examples. <br> -Uses and composition of diesel, petrol and kerosene. |
| :---: | :---: | :---: |
|  | $2^{\text {ND }}$ | -Metallurgical operations. -Producer gas and water gas. |
|  | $3^{\text {RD }}$ | -Gravity separation and Magnetic separation of ore concentration. -LPG, CNG and Coal gas. |
|  | $4^{\text {TH }}$ | -Froth floatation and Leaching methods of ore concentration. -Class note checking and discussion of questions . |
| 10TH | $1^{\text {ST }}$ | -Revision. |
|  | $2^{\text {ND }}$ | -Numericals and class note correction. |
|  | $3^{\mathrm{RD}}$ | -Polymers. |
|  | $4^{\text {TH }}$ | -Definition of monomer, homo-polymer, co-polymer. |
| 11TH | $1^{\text {ST }}$ | -Degree of polymerization. |
|  | $2^{\text {ND }}$ | -Thermosetting, thermoplastic. |
|  | $3^{\text {RD }}$ | -Revision. |
|  | $4^{\text {TH }}$ | -Composition and uses of polythene. |
| 12TH | $1^{\text {ST }}$ | Calcination and roasting. -composition and uses of poly vinyl chloride. |
|  | $2^{\text {ND }}$ | -Smelting, flux, slag with definitions and examples. -composition and uses of Bakelite. |
|  | $3^{\text {RD }}$ | -Refining of metal. |
|  | $4^{\text {TH }}$ | -Alloys and types with examples. -Elastomers. |
| 13 TH | $1^{\text {ST }}$ | -Correction of assignments. |
|  | $2^{\text {ND }}$ | -Drawbacks of natural rubber. |
|  | $3^{\text {RD }}$ | -Vulcanisation of rubber. |
|  | $4^{\text {TH }}$ | -Advantages of vulcanised rubber over raw rubber. |
| 14 TH | $1^{\text {ST }}$ | -Uses and examples of insecticides. |
|  | $2^{\text {ND }}$ | -Revision. |
|  | $3^{\text {RD }}$ | -Examples and uses of herbicides and fungicides. |
|  | $4^{\text {TH }}$ | -Revision. |
| 15 TH | $1^{\text {ST }}$ | -Note correction. |
|  | $2^{\text {ND }}$ | -Bio fertilizers. |
|  | $3^{\text {RD }}$ | -Numericals and revision. |
|  | $4^{\text {TH }}$ | -Discussion of possible questions for semester exam. |


| DISCIPLINE: | SEMESTER: | NAME OF THE TEACHING FACULTY: |
| :---: | :---: | :---: |
| MATH AND | FIRST | 1. DIPTI LAXMI BHUYAN |
| SCIENCE |  | 2. G. Susmita |


| SUBJECT: ENGG. <br> CHEMIST <br> RY LAB | $\begin{gathered} \hline \text { NO.OF. } \\ \text { CLASSES } \\ \text { ALLOTED } \\ \text { PER } \\ \text { WEEK } \end{gathered}$ | SEMESTER FROM: 25/10/2022 TO 31/01/2023 |
| :---: | :---: | :---: |
| WEEK | $\begin{gathered} \text { CLASS } \\ \text { DAY } \end{gathered}$ | PRACTICAL |
| 1ST | $1^{\text {ST }}$ | Introduction to chemistry lab, about safety measures, about maintenance of practical records. |
|  | $2^{\text {ND }}$ | Introduction to the students about use of different lab equipments and how to handle them safely. |
| 2ND | $1^{\text {ST }}$ | Dictation of the procedure of exp. 1, preparation and study of properties of $\mathrm{CO}_{2}$ gas, explanation of theory with equations. |
|  | $2^{\mathrm{ND}}$ | Checking of rough practical record and demonstratation of the experiment. |
| 3RD | $1^{\text {ST }}$ | Expt. Conducted by the students. |
|  | $2^{\text {ND }}$ | Correction of practical records, discussion of viva questions of the expt. |
| 4TH | $1^{\text {ST }}$ | Dictation of the procedure of exp. 2. Preparation and study of properties of ammonia gas. Explanation Of Theory With Equations. |
|  | $2^{\text {ND }}$ | Checking of rough practical record and demonstratation of the experiment. |
| 5TH |  | Expt. Conducted by the Students. |
|  | $2^{\mathrm{ND}}$ | Checking of practical records and discussion of viva questions of expt. 2. |
| 6TH | $1^{\text {ST }}$ | Dictation of the procedure of exp. 3. Crystallization of $\mathrm{CuSO}_{4}$. Explanation Of Theory With Equations. |
|  | $2^{\text {ND }}$ | Checking of rough practical record and demonstration of the experiment. |


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| 7TH |  | Expt. Conducted by the Students. |
|  | $2^{\text {ND }}$ | Checking of practical records and discussion of viva questions of expt. 3. |
| 8TH | $1^{\text {ST }}$ | Dictation of the procedure of exp. 4. Acid Base Titration. Explanation Of Theory With Equations. |
|  | $2^{\text {ND }}$ | Checking of rough practical record and demonstration of the experiment. |
| 9TH | $1^{\text {ST }}$ | Expt. Conducted by the Students Acidimetry. |
|  | $2^{\text {ND }}$ | Expt. Conducted by the Students Alkalimetry. |
| 10TH | $1^{\text {ST }}$ | Checking of practical records and discussion of viva questions of expt. 4. |
|  | $2^{\text {ND }}$ | Dictation of the procedure of exp. 5. Test of acid radicals. |
| 11TH | $1^{\text {ST }}$ | Checking of rough practical record and demonstration of the experiment. |
|  | $2^{\text {ND }}$ | Expt. Conducted by the Students. |
| 12TH | $1^{\text {ST }}$ | Checking of practical records and discussion of viva questions of expt. 5. |
|  | $2^{\text {ND }}$ |  |
| 13TH | $1^{\text {ST }}$ | Dictation of the procedure of exp. 6. Test of basic radicals (known). |
|  | $2^{\text {ND }}$ | Checking of rough practical record and demonstration of the experiment. |
| 14TH | $1^{\text {ST }}$ | Expt. Conducted by the Students. |
|  | $2^{\text {ND }}$ | Test of unknown acid and basic radicals. |


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| 15 TH | $1^{\mathrm{ST}}$ | Test of unknown salt. |
|  | $2^{\mathrm{ND}}$ | Checking of practical records and viva voice. |

## LESSON PLAN

| DISCIPLINE: MATH AND | SEMESTER: FIRST | NAME OF THE TEACHING FACULTIES: |
| :---: | :---: | :---: |
| SCIENCE |  | MANASWINEE PATNAIK |
|  | GUNTUKU SUSMITA |  |


| SUBJECT: ENGG. PHYSICS | NO. OF. <br> CLASSES <br> ALLOTED <br> PER <br> WEEK | SEMESTER FROM 25/10/2022 TO 31/01/2023 |  |  |
| :---: | :---: | :---: | :---: | :---: |
| WEEK | $\begin{gathered} \hline \text { CLASS } \\ \text { DAY } \end{gathered}$ | THEORY | CLASS DAY | PRACTICAL |
| 1ST | $1^{\text {ST }}$ | Physical quantities, fundamental and derived units, systems of units | $1^{\text {ST }}$ | Introduction To Physics Lab |
|  | $2^{\text {ND }}$ | dimension and Dimensional formulae of physical quantities. |  |  |
|  | $3^{\text {RD }}$ | Work- Formula \& SI units. | $2^{\text {ND }}$ | Identification Of Instruments In Physics Lab |
|  | $4^{\text {TH }}$ | Friction - Concept. Types of friction (static, dynamic), Limiting Friction |  |  |
| 2ND | $1^{\text {ST }}$ | Principle of homogeneity, Checking the dimensional correctness | $1^{\text {ST }}$ | Detection \& Demonstration Of Slide Calipers |
|  | $2^{\text {ND }}$ | Scalar and Vector, Vector Representation ,types of vectors. Triangle and Parallelogram law of vector Addition, Numerical. |  |  |
|  | $3^{\text {RD }}$ | Laws of Limiting Friction | $2^{\text {ND }}$ | Determine The Volume Of A Hollow Cylinder By Using A Slide Calipers \& Checking The Observation Note. |
|  | $4^{\text {TH }}$ | Coefficient of Friction, Numericals.Methods to reduce friction. |  |  |


| 3RD | $1^{\text {ST }}$ | Resolution of Vectors - Numericals. | $1^{\text {ST }}$ | Determine The Volume Of A Solid Cylinder By Using A Slide Calipers \& Checking The Observation Note. |
| :---: | :---: | :---: | :---: | :---: |
|  | $2^{\text {ND }}$ | Vector multiplication (scalar product and vector product of vectors). |  |  |
|  | $3^{\mathrm{RD}}$ | Numericals, Class Note Checking | $2^{\text {ND }}$ | Checking The Record \& Viva Voce Of Exp-1 \& Exp-2. |
|  | $4^{\text {TH }}$ | Newton's Laws of Gravitation, Universal Gravitational Constant |  |  |
| 4TH | $1^{\text {ST }}$ | Concept of Rest and Motion,Displacement, Speed, Velocity, Acceleration \& FORCE | $1^{\text {ST }}$ | Detection \& Demonstration Of Screw Gauge. |
|  | $2^{\text {ND }}$ | Equations of Motion under Gravity (upward and downward motion) |  |  |
|  | $3^{\text {RD }}$ | Acceleration due to gravity ,Concept of mass and weight. | $2^{\text {ND }}$ | Determine The Cross Sectional Area Of A Thin Wire By Using A Screw Gauge \& Checking The Observation Note. |
|  | $4^{\text {TH }}$ | Relation between $g$ and G.Variation of $g$ with altitude and depth |  |  |
| 5TH | $1^{\text {ST }}$ | Circular motion: Angular displacement, Angular velocity and Angular acceleration, Relation between -(i) Linear \& Angular velocity, (ii) Linear \& Angular acceleration). | $1^{\text {ST }}$ | Determine The Cross Sectional Area Of A Glass Piece By Using A Screw Gauge \& Checking The Observation Note. |
|  | $2^{\text {ND }}$ | Projectile, Expression for Equation of Trajectory, Time of Flight, |  |  |
|  | $3^{\text {RD }}$ | Kepler's Laws of Planetary Motion | $2^{\text {ND }}$ | Checking The Record \& Viva Voce Of Exp-3 \& Exp-4. |
|  | $4^{\text {TH }}$ | Numericals, Class Note \& Assignment Checking |  |  |
| 6TH | $1^{\text {ST }}$ | Maximum Height and Horizontal Range for a projectile fired at an angle, Condition for maximum Horizontal Range. | $1^{\text {ST }}$ | Detection \& Demonstration Of Spherometer. |
|  | $2^{\text {ND }}$ | Numericals, Class Note \& Assignment Checking |  |  |
|  | $3^{\text {RD }}$ | Oscillations,Simple Harmonic Motion (SHM) | $2^{\text {ND }}$ | Determine The Convex Radius Of Curvature Of Watch Glass By Using A Spherometer \& Checking The Observation Note. |
|  | $4^{\text {TH }}$ | Expression for displacement, velocity, acceleration of a particle in SHM. |  |  |


| 7TH | $1^{\text {ST }}$ | Wave motion, Transverse and Longitudinal wave | $1^{\text {ST }}$ | Determine The Concave Radius Of Curvature Of Watch Glass By Using A Spherometer \& Checking The Observation Note. |
| :---: | :---: | :---: | :---: | :---: |
|  | $2^{\text {ND }}$ | wave parameters \& their relations |  |  |
|  | $3^{\text {RD }}$ | Electrostatics, Coulombs laws | $2^{\text {ND }}$ | Checking The Record \& Viva Voce Of Exp-5 \& Exp-6. |
|  | $4^{\text {TH }}$ | Unit charge,Absolute \& Relative Permittivity |  |  |
| 8TH | $1^{\text {ST }}$ | Ultrasonics Properties \& Applications. | $1^{\text {ST }}$ | Detection \& Demonstration Of Simple Pendulum. |
|  | $2^{\text {ND }}$ | NUMERICALS |  |  |
|  | $3^{\text {RD }}$ | Electric potential and Potential difference Electric field \& field intensity | $2^{\text {ND }}$ | Determine The Value Of ' $G$ ' By Simple Pendulum \& Checking The Observation Note. |
|  | $4^{\text {TH }}$ | Capacitance, Series and Parallel combination of Capacitors |  |  |
| 9TH | $1^{\text {ST }}$ | Heat and Temperature | $1^{\text {ST }}$ | Checking The Record \& Viva Voce Of Exp -7. |
|  | $2^{\text {ND }}$ | Specific Heat Capacity |  |  |
|  | $3^{\text {RD }}$ | Magnet, Properties of a magnet. Coulomb's Laws in Magnetism, Unit Pole | $2^{\text {ND }}$ | Detection \& Demonstration Of Prism. |
|  | $4^{\text {TH }}$ | Magnetic field \& Field intensity , Magnetic lines of force |  |  |
| 10TH | $1^{\text {ST }}$ | Thermal Expansion | $1^{\text {ST }}$ | Determine The Angle Of The Prism. |
|  | $2^{\text {ND }}$ | Coefficient of linear, superficial and cubical expansions of Solids \& their Relation |  |  |
|  | $3^{\text {RD }}$ | Magnetic \& Flux Density (B) | $2^{\text {ND }}$ | Determine The Angle Of Minimum Deviation By I~D Curve Method. |
|  | $4^{\text {TH }}$ | Electric Current, Ohm's law and its applications. |  |  |
| 11TH | $1^{\text {ST }}$ | Work and Heat, Joule's Mechanical Equivalent of Heat | $1^{\text {ST }}$ | Checking The Observation Note. |
|  | $2^{\text {ND }}$ | First Law of Thermodynamics |  |  |
|  | $3^{\text {RD }}$ | Series and Parallel combination of resistors | $2^{\text {ND }}$ | Checking The Record \& Viva Voce Of Exp -8. |
|  | $4^{\text {TH }}$ | Kirchhoff's laws |  |  |
| 12TH | $1^{\text {ST }}$ | Change of state , Latent Heat | $1^{\text {ST }}$ | Detection \& Demonstration Of Bar Magnet-1. |
|  | $2^{\text {ND }}$ | NUMERICALS |  |  |
|  | $3^{\text {RD }}$ | Wheatstone's Bridge | $2^{\text {ND }}$ | Trace The Lines Of Force Due To A Bar Magnet With North Pole Pointing North And Locate The Neutral Points. |
|  | $4^{\text {TH }}$ | Numericals |  |  |


| 13TH | $1^{\text {ST }}$ | Reflection \& Refraction | $1^{\text {ST }}$ | Checking Bar Magnet-1. |
| :---: | :---: | :---: | :---: | :---: |
|  | $2^{\text {ND }}$ | Refractive index, Refraction through Prism (Ray Diagram) |  |  |
|  | $3^{\text {RD }}$ | Classnote \& Assignment Checking | $2^{\text {ND }}$ | Checking The Record \& Viva Voce Of Exp -9. |
|  | $4^{\text {TH }}$ | Electromagnetism ,Force acting on a current carrying conductor placed in a uniform magnetic field, |  |  |
| 14TH | $1^{\text {ST }}$ | Critical Angle and Total internal reflection | $1^{\text {ST }}$ | Detection \& Demonstration Of Bar Magnet-2. |
|  | $2^{\text {ND }}$ | Fiber Optics \& Numericals |  |  |
|  | $3^{\text {RD }}$ | Fleming's Left Hand Rule | $2^{\text {ND }}$ | Trace The Lines Of Force Due To A Bar Magnet With North Pole Pointing South And Locate The Neutral Points. |
|  | $4^{\text {TH }}$ | Faraday's Laws of Electromagnetic Induction, Lenz's Law (Statement) Fleming's Right Hand Rule |  |  |
| 15TH | $1^{\text {ST }}$ | LASER -Properties \& Applications | $1^{\text {ST }}$ | Checking Bar Magnet-2. |
|  | $2^{\text {ND }}$ | Principle of LASER |  |  |
|  | $3^{\text {RD }}$ | Wireless Transmission - Ground Waves, Sky Waves, Space Waves | $2^{\text {ND }}$ | Checking The Record \& Viva Voce Of Exp -10. |
|  | $4^{\text {TH }}$ | Numericals \& Assignment Checking |  |  |

## LESSON PLAN

| DISCIPLINE: <br> MATH AND <br> SCIENCE | SEMESTER: <br> FIRST | NAME OF THE TEACHING FACULTIES: <br> Shishir Kumar Naik <br> Sankar Kumar Pradhan |
| :---: | :---: | :---: |


| SUBJECT: ENGG. MATHEMATICS-I | NO. OF. DAYS PER WEEK CLASS ALLOTED | SEMESTER: $25 / 10 / 2022 \text { to } 31 / 01 / 2023$ |
| :---: | :---: | :---: |
| WEEK | CLASS DAY | THEORY |
| $1^{\mathrm{ST}}$ | $1^{\text {ST }}$ | INTRODUCTION TO DETERMINANTS |
|  | $2^{\text {ND }}$ | INTRODUCTION TO TRIGONOMETRY |
|  | $3^{\text {RD }}$ | MINORS AND CO-FACTORS |
|  | $4{ }^{\text {TH }}$ | TRIGONOMETRICAL RATIOS OF CERTAIN ANGLES |
|  | $5^{\text {TH }}$ | EXPANSION OF DETERMINANTS |
|  | $6^{\text {TH }}$ | PRACTICE PROBLEMS ON DETERMINANTS (TUTORIAL CLASS) |
| $2^{N D}$ | $1^{\text {ST }}$ | PROBLEMS BASED ON T-RATIOS |
|  | $2^{\text {ND }}$ | PROPERTIES OF DETERMINANTS |
|  | $3^{\text {RD }}$ | COMPOUND ANGLES |
|  | $4^{\text {TH }}$ | PROBLEMS USING PROPERTIES OF DETERMINANTS |
|  | $5^{\text {TH }}$ | PROBLEMS BASED ON COMPOUND ANGLES |
|  | $6^{\text {TH }}$ | PRACTICE PROBLEMS ON TRIGONOMETRY |
| $3^{R D}$ | $1^{\text {ST }}$ | CRAMER'S RULE |
|  | $2^{\text {ND }}$ | TRANSFORMATION OF SUMS OR DIFFERENCE IN-TO PRODUCTS |
|  | $3^{\text {RD }}$ | PROBLEMS USING CRAMER'S RULE |
|  | $4^{\text {TH }}$ | MULTIPLE ANGLES |
|  | $5^{\text {TH }}$ | MATRIX AND ITS ORDER |
|  | $6^{\text {TH }}$ | PRACTICE PROBLEMS ON CRAMER'S RULE |
| $4^{T H}$ | $1^{\text {ST }}$ | PROBLEMS BASED ON MULTIPLE ANGLES |
|  | $2^{\text {ND }}$ | TYPES OF MATRICES WITH EXAMPLES |
|  | $3{ }^{\text {RD }}$ | SUB-MULTIPLE ANGLES |
|  | $4^{\text {TH }}$ | EQUALITY OF MATRICES |


|  | $5^{\text {TH }}$ | PROBLEMS BASED ON SUB-MULTIPLE ANGLES |
| :---: | :---: | :---: |
|  | $6^{\text {TH }}$ | DOUBT CLEAR ON MULTIPLE AND SUBMULTIPLE ANGLES |
|  | $1^{\text {ST }}$ | ALGEBRA OF MATRICES |
|  | $2^{\text {ND }}$ | DEFINE INVERSE CIRCULAR FUNCTIONS |
|  | $3^{\text {RD }}$ | ADJOINT AND INVERSE OF A MATRIX |
| $5^{\mathrm{TH}}$ | $4^{\text {TH }}$ | PROPERTIES OF INVERSE CIRCULAR FUNCTIONS |
|  | $5^{\text {TH }}$ | PROBLEMS ON ADJOINT AND INVERSE OF A MATRIX |
|  | $6^{\text {TH }}$ | PRACTICE PROBLEMS ON MATRICES |
|  | $1^{\text {ST }}$ | PROBLEMS ON USING PROPERTIES OF INVERSE TRIGONOMETRIC FUNCTIONS |
|  | $2^{\text {ND }}$ | SOLUTION OF A SYSTEM OF LINEAR EQUATIONS BY MATRIX METHOD |
| $6^{T H}$ | $3^{\text {RD }}$ | PROPERTIES OF INVERSE CIRCULAR FUNCTIONS |
|  | $4^{\text {TH }}$ | PROBLEMS BASED ON MATRIX METHOD |
|  | $5^{\text {TH }}$ | PROBLEMS ON USING PROPERTIES OF INVERSE TRIGONOMETRIC FUNCTIONS |
|  | $6^{\text {TH }}$ | CLASS NOTE CHECKING |
|  | $1^{\text {ST }}$ | INTRODUCTION OF GEOMETRY IN TWO DIMENSION |
|  | $2^{\text {ND }}$ | DISTANCE FORMULAE,DIVISION FORMULAE,AREA OF A TRIANGLE |
| $7^{\mathrm{TH}}$ | $3^{\text {RD }}$ | PROBLEMS BASED ON DISTANCE,DIVISON AND AREA OF TRIANGLE |
|  | $4^{\text {TH }}$ | SLOPE OF A LINE AND ANGLE BETWEEN TWO LINES AND PROBLEMS |
|  | $5^{\text {TH }}$ | CONDITION OF PERPENDICULARITY AND PARALLELISM AND PROBLEMS |
|  | $6^{\text {TH }}$ | DOUBT CLEARING CLASS |
|  | $1^{\text {ST }}$ | DIFFERENT FORMS OF STRAIGHT LINES SLOPEINTERCEPT FORM ,ONE POINT FORM |
|  | $2^{\text {ND }}$ | PROBLEMS ON SLOPE AND ONE- POINT FORM |
|  | $3^{\text {RD }}$ | TWO-POINT FORM AND INTERCEPT FORM |
|  | $4^{\text {TH }}$ | PROBLEMS ON TWO-POINT AND INTERCEPT FORM |
|  | $5^{\text {TH }}$ | PERPENDICULAR FORM AND PROBLEMS |
|  | $6^{\text {TH }}$ | DOUBT CLEARING CLASS |
|  | $1^{\text {ST }}$ | EQUATION OF A LINE PASSING THROUGH A |


| $\mathbf{g}^{\mathrm{TH}}$ |  | POINT AND PARALLEL TO A LINE |
| :---: | :---: | :---: |
|  | $2^{N D}$ | EQUATION OF ALINE PASSING THROUGH A POINT AND PERPENDICULAR TO A LINE |
|  | $3^{\text {RD }}$ | EQUATION OF A LINE PASSING THROUGH THE INTERSECTION OF TWO LINE |
|  | $4^{\text {TH }}$ | DISTANCE OF A POINT FROM A LINE |
|  | $5^{\text {TH }}$ | PROBLEMS BASED ON ABOVE |
|  | $6^{\text {TH }}$ | DOUBT CLEARING CLASS AND NOTE CHECKING |
|  | $1^{\text {ST }}$ | EQUATION OF A CIRCLE WITH CENTER AND RADIUS FORM |
|  | $2^{\text {ND }}$ | GENERAL EQUATION OF A CIRCLE |
| $10^{\mathrm{TH}}$ | $3^{\text {RD }}$ | EQUATION OF ACIRCLE WITH END POINT OF DIAMETER FORM |
|  | $4^{\text {TH }}$ | PROBLEMS ON CIRCLE |
|  | $5^{\text {TH }}$ | PROBLEMS ON CIRCLE |
|  | $6{ }^{\text {TH }}$ | DOUBT CLEARING CLASS |
|  | $1^{\text {ST }}$ | INTRODUCTION TO THREE DIMENSION |
|  | $2^{\text {ND }}$ | DISTANCE FORMULAE,SECTION FORMULAE |
| 11 TH | $3^{\text {RD }}$ | DIRECTION COSINE,DIRECTION RATIO OF A LINE |
|  | $4^{\text {TH }}$ | ANGLE BETWEEN TWO LINES,CONDITION OF PARALLELISM AND PERPENDICULARITY |
|  | $5^{\text {TH }}$ | EQUATION OF A PLANE IN GENERAL FORM |
|  | $6^{\text {TH }}$ | DOUBT CLEARING CLASS |
|  | $1^{\text {ST }}$ | ANGLE BETWEEN TWO PLANES |
|  | $2^{\text {ND }}$ | PERPENDICULAR DISTACE OF A POINT FROM A PLANE |
|  | $3^{\text {RD }}$ | PROBLEMS |
| $12^{\mathrm{IH}}$ | $4^{\text {TH }}$ | EQUATION OF A PLANE PASSING THROUGH A POINT AND (i)PARALLEL TO PLANE (ii)PERPENDICULAR TO A PLANE |
|  | $5^{\text {TH }}$ | PROBLEMS |
|  | $6^{\text {TH }}$ | DOUBT CLEARING CLASS |
|  | $1^{\text {ST }}$ | CLASS NOTE CHECKING |
| $3^{\text {TH }}$ | $2^{\text {ND }}$ | EQUATION OF A SPHERE WITH CENTER RADIUS FORM |
|  | $3^{\text {RD }}$ | GENERAL EQUATION OF A SPHERE |
|  | $4^{\text {TH }}$ | PROBLEMS BASED ON SPHERE |
|  | $5^{\text {TH }}$ | EQUATION OF A SPHERE WITH 2 END POINTS |


|  |  | OF A DIAMETER |
| :---: | :---: | :---: |
|  | $6^{\text {TH }}$ | DOUBT CLEARING CLASS |
| $14^{\mathrm{TH}}$ | $1^{\text {ST }}$ | NOTE CHECKING |
|  | $2^{\text {ND }}$ | PROBLEMS ON SPHERE |
|  | $3^{\text {RD }}$ | PROBLEMS ON 3-D |
|  | $4^{\text {TH }}$ | REVISION |
|  | $5^{\text {TH }}$ | CLASS TEST |
|  | $6^{\text {TH }}$ | DOUBT CLEARING CLASS |
| $15^{\mathrm{TH}}$ | $1^{\text {ST }}$ | REVISION ON DETERMINANTS AND MATRICES |
|  | $2^{\text {ND }}$ | REVISION ON TRIGONOMETRY |
|  | $3^{\text {RD }}$ | REVISION ON INVERSE TRIGONOMETRIC FUNCTIONS |
|  | $4^{\text {TH }}$ | REVISION ON 2-D |
|  | $5^{\text {TH }}$ | REVISION ON 3-D |
|  | $6^{\text {TH }}$ | DOUBT CLEARING CLASS |

