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| **PERFORMA OF LESSON PLAN** | | | | | |
| **NAME OF THE FACULTY: Jashanpreet Kaur** | | | | |
| **DISCIPLINE: Comp, Mech A, Mech B** | | | | |
| **SEMESTER: Fourth** | | | | |
| **SUBJECT: English & Communication Skills-II** | | | | |
| **LESSION PLAN DURATION : 16 WEEKS** | | | | |
| **WORK LOAD PER WEEK: Lectures= 2+2** | | | | |
| **WEEK** | **THEORY** | | **PRACTICAL** | |
| **LECTURE DAY** | **TOPIC (WITH ASSIGNMENT & TESTS)** | **PRACTICAL DAY** | **TOPIC** |
| **1** | 1 | The Portrait of a Lady - Khushwant Singh |  | Reading Practice of the above lessons in the Lab Activity classes. |
| 2 | Modern means of Communication (Video Conferencing), e- mail, Teleconferencing |
| **2** | 3 | Effective Communication Skills: 7 C’s of Communication |  | Comprehension exercises of unseen passages along with the given lessons. |
| 4 | Correspondence: Enquiry letters, Placing orders, Complaint letters |
| **3** | 5 | Report Writing |  | Vocabulary enrichment and grammar exercises based on the above selective readings. |
| 6 | Memos |
| **4** | 7 | Prepositions, Conjunctions |  | Situational Conversation: Requesting and responding to requests; Expressing sympathy and condolence. |
| 8 | Presentation Skills: How to prepare and deliver a good presentation, Telephone Etiquettes |
| 1st Sessional Test | | | | |
| **5** | 9 | The Doctor’s Word by R K Narayan |  | Warning; Asking and giving information. |
| 10 | Speech by Dr Kiran Bedi at IIM Indore2007 Leadership Concepts |
| **6** | 11 | Non-verbal Communication – Significance |  | Getting and giving permission. |
| 12 | Types and Techniques for Effective Communication |
| **7** | 13 | Circulars, Press Release |  | Asking for and giving opinions. |
| 14 | Inspection Notes and tips for Note-taking |
| **8** | 15 | Punctuation, Idioms and Phrases |  | A small formal and informal speech. |
| 16 | Importance of developing employable and soft skills |
| **9** | 17 | Resume Writing: Definition, Kinds of Resume |  | Seminar |
| 18 | Difference between Bio-data and Curriculum Vitae and Preparing a Resume for Job/ Internship |
| 2nd Sessional | | | | |
| **10** | 19 | The Bet - by Anton Chekhov |  | Debate. |
| 20 | Barriers and Effectiveness in Listening Skills |
| **11** | 21 | Barriers and Effectiveness in Speaking Skills |  | Interview Skills: Preparing for the Interview and guidelines for success in the Interview and significance of acceptable body-language during the Interview. |
| 22 | Corrigendum writing |
| **12** | 23 | Pairs of words (Words commonly misused and confused), |  | Written and Oral Drills will be undertaken in the class to facilitate a holistic linguistic competency among learners. |
| 24 | Translation of Administrative and Technical Terms in Hindi or Mother tongue |
| **13** | 25 | Group discussions: Concept |  | Participation in a GD, Functional and Non-functional roles in GD, Case studies and Role plays. |
| 26 | Group discussions Fundamental |
| **14** | 27 | learning Group Dynamics. |  | Presentations, using audio-visual aids (including power-point). |
| 28 | Case Studies and Role Plays |
| **15** | 29 | Cover Letter |  | Telephonic interviews, face to face interviews. |
| 30 | Doubt Session |
| **16** | 31 | Revision |  | Presentations as Mode of Communication:  Persuasive Presentations using multi-media aids. |
| 32 | Revision |

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| **PERFORMA OF LESSON PLAN** | | | | | |
| **NAME OF THE FACULTY: Neetu Gupta** | | | | |
| **DISCIPLINE: Civil A, Civil B, Elect, Comp** | | | | |
| **SEMESTER: Fourth** | | | | |
| **SUBJECT: English & Communication Skills-II** | | | | |
| **LESSION PLAN DURATION : 16 WEEKS** | | | | |
| **WORK LOAD PER WEEK: Lectures= 2+2** | | | | |
| **WEEK** | **THEORY** | | **PRACTICAL** | |
| **LECTURE DAY** | **TOPIC (WITH ASSIGNMENT & TESTS)** | **PRACTICAL DAY** | **TOPIC** |
| **1** | 1 | The Portrait of a Lady - Khushwant Singh |  | Reading Practice of the above lessons in the Lab Activity classes. |
| 2 | Modern means of Communication (Video Conferencing), e- mail, Teleconferencing |
| **2** | 3 | Effective Communication Skills: 7 C’s of Communication |  | Comprehension exercises of unseen passages along with the given lessons. |
| 4 | Correspondence: Enquiry letters, Placing orders, Complaint letters |
| **3** | 5 | Report Writing |  | Vocabulary enrichment and grammar exercises based on the above selective readings. |
| 6 | Memos |
| **4** | 7 | Prepositions, Conjunctions |  | Situational Conversation: Requesting and responding to requests; Expressing sympathy and condolence. |
| 8 | Presentation Skills: How to prepare and deliver a good presentation, Telephone Etiquettes |
| 1st Sessional Test | | | | |
| **5** | 9 | The Doctor’s Word by R K Narayan |  | Warning; Asking and giving information. |
| 10 | Speech by Dr Kiran Bedi at IIM Indore2007 Leadership Concepts |
| **6** | 11 | Non-verbal Communication – Significance |  | Getting and giving permission. |
| 12 | Types and Techniques for Effective Communication |
| **7** | 13 | Circulars, Press Release |  | Asking for and giving opinions. |
| 14 | Inspection Notes and tips for Note-taking |
| **8** | 15 | Punctuation, Idioms and Phrases |  | A small formal and informal speech. |
| 16 | Importance of developing employable and soft skills |
| **9** | 17 | Resume Writing: Definition, Kinds of Resume |  | Seminar |
| 18 | Difference between Bio-data and Curriculum Vitae and Preparing a Resume for Job/ Internship |
| 2nd Sessional | | | | |
| **10** | 19 | The Bet - by Anton Chekhov |  | Debate. |
| 20 | Barriers and Effectiveness in Listening Skills |
| **11** | 21 | Barriers and Effectiveness in Speaking Skills |  | Interview Skills: Preparing for the Interview and guidelines for success in the Interview and significance of acceptable body-language during the Interview. |
| 22 | Corrigendum writing |
| **12** | 23 | Pairs of words (Words commonly misused and confused), |  | Written and Oral Drills will be undertaken in the class to facilitate a holistic linguistic competency among learners. |
| 24 | Translation of Administrative and Technical Terms in Hindi or Mother tongue |
| **13** | 25 | Group discussions: Concept |  | Participation in a GD, Functional and Non-functional roles in GD, Case studies and Role plays. |
| 26 | Group discussions Fundamental |
| **14** | 27 | learning Group Dynamics. |  | Presentations, using audio-visual aids (including power-point). |
| 28 | Case Studies and Role Plays |
| **15** | 29 | Cover Letter |  | Telephonic interviews, face to face interviews. |
| 30 | Doubt Session |
| **16** | 31 | Revision |  | Presentations as Mode of Communication:  Persuasive Presentations using multi-media aids. |
| 32 | Revision |

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| **PERFORMA OF LESSON PLAN** | | | | | |
| **NAME OF THE FACULTY: Sharmila Sharma** | | | | |
| **DISCIPLINE: ECE, Arch, Auto, Plastic** | | | | |
| **SEMESTER: Fourth** | | | | |
| **SUBJECT: English & Communication Skills-II** | | | | |
| **LESSION PLAN DURATION : 16 WEEKS** | | | | |
| **WORK LOAD PER WEEK: Lectures= 2+2** | | | | |
| **WEEK** | **THEORY** | | **PRACTICAL** | |
| **LECTURE DAY** | **TOPIC (WITH ASSIGNMENT & TESTS)** | **PRACTICAL DAY** | **TOPIC** |
| **1** | 1 | The Portrait of a Lady - Khushwant Singh |  | Reading Practice of the above lessons in the Lab Activity classes. |
| 2 | Modern means of Communication (Video Conferencing), e- mail, Teleconferencing |
| **2** | 3 | Effective Communication Skills: 7 C’s of Communication |  | Comprehension exercises of unseen passages along with the given lessons. |
| 4 | Correspondence: Enquiry letters, Placing orders, Complaint letters |
| **3** | 5 | Report Writing |  | Vocabulary enrichment and grammar exercises based on the above selective readings. |
| 6 | Memos |
| **4** | 7 | Prepositions, Conjunctions |  | Situational Conversation: Requesting and responding to requests; Expressing sympathy and condolence. |
| 8 | Presentation Skills: How to prepare and deliver a good presentation, Telephone Etiquettes |
| 1st Sessional Test | | | | |
| **5** | 9 | The Doctor’s Word by R K Narayan |  | Warning; Asking and giving information. |
| 10 | Speech by Dr Kiran Bedi at IIM Indore2007 Leadership Concepts |
| **6** | 11 | Non-verbal Communication – Significance |  | Getting and giving permission. |
| 12 | Types and Techniques for Effective Communication |
| **7** | 13 | Circulars, Press Release |  | Asking for and giving opinions. |
| 14 | Inspection Notes and tips for Note-taking |
| **8** | 15 | Punctuation, Idioms and Phrases |  | A small formal and informal speech. |
| 16 | Importance of developing employable and soft skills |
| **9** | 17 | Resume Writing: Definition, Kinds of Resume |  | Seminar |
| 18 | Difference between Bio-data and Curriculum Vitae and Preparing a Resume for Job/ Internship |
| 2nd Sessional | | | | |
| **10** | 19 | The Bet - by Anton Chekhov |  | Debate. |
| 20 | Barriers and Effectiveness in Listening Skills |
| **11** | 21 | Barriers and Effectiveness in Speaking Skills |  | Interview Skills: Preparing for the Interview and guidelines for success in the Interview and significance of acceptable body-language during the Interview. |
| 22 | Corrigendum writing |
| **12** | 23 | Pairs of words (Words commonly misused and confused), |  | Written and Oral Drills will be undertaken in the class to facilitate a holistic linguistic competency among learners. |
| 24 | Translation of Administrative and Technical Terms in Hindi or Mother tongue |
| **13** | 25 | Group discussions: Concept |  | Participation in a GD, Functional and Non-functional roles in GD, Case studies and Role plays. |
| 26 | Group discussions Fundamental |
| **14** | 27 | learning Group Dynamics. |  | Presentations, using audio-visual aids (including power-point). |
| 28 | Case Studies and Role Plays |
| **15** | 29 | Cover Letter |  | Telephonic interviews, face to face interviews. |
| 30 | Doubt Session |
| **16** | 31 | Revision |  | Presentations as Mode of Communication:  Persuasive Presentations using multi-media aids. |
| 32 | Revision |

**PERFORMA OF LESSON PALN**

NAME OF THE FACULTY: Preetpal Kaur

DISCPLINE: Arch, Auto, Civil, Comp, Elect, ECE, Mech, Plastic

SEMESTER: 6th

SUBJECT: SOFT SKILLS

LESSON PLAN DURATION: 16 WEEKS

WORK LOAD PER WEEK PRACTICAL......

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| WEEK | PRACTICAL | |
| PRACTICAL DAY | TOPIC |
| 1 | 1 | Introduction to Soft Skills |
| 2 | Importance of Soft Skills |
| 2 | 1 | Communication Skills |
| 2 | Types of Communication |
| 3 | 1 | Verbal Communication |
| 2 | Non-Verbal Communication |
| 4 | 1 | Presentation |
| 2 | Activity regarding presentation |
| 5 | 1 | Time Management |
| 2 | Setting goals and objectives |
| 6 | 1 | Activity regarding aims |
| 2 | Improvements |
| 7 | 1 | Stress Managements |
| 2 | Consequences of external stress |
| 8 | 1 | Activity – Stress Management |
| 2 | Problem Solving |
| 9 | 1 | Problem Solving Techniques |
| 2 | Activity- Problem Solving |
| 10 | 1 | Career Opportunities |
| 2 | Current Opportunities |
| 11 | 1 | Future Opportunities |
| 2 | Activities regarding Career |
| 12 | 1 | Entrepreneurial Skills |
| 2 | Successful stories of Entrepreneurs |
| 13 | 1 | Activity - Entrepreneurial Skills |
| 2 | Viva -Voce |
| 14 | 1 | Quality and Quality Tools used in Industry |
| 2 | Examples regarding Quality Tools |
| 15 | 1 | Activity regarding Quality Tools |
| 2 | Revision of Topics |

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| **PERFORMA OF LESSON PLAN** | | | | | | | | |
| **NAME OF THE FACULTY : Dr. Sunita Rani (Sr. Lecturer)** | | | | | | | | |
| **DISCIPLINE :Mech A, Mech B** | | | | | | | | |
| **SEMESTER : SECOND** | | | | | | | | |
| **SUBJECT : APPLIED CHEMISTRY (Theory)** | | | | | | | | |
| **LESSION PLAN DURATION : 15 WEEKS** | | | | | | | | |
| **WORK LOAD PER WEEK :Lectures= 3+3** | | | | | | | | |
| **WEEK** | **THEORY** | | | | | | | | |
| **LECTURE DAY** | |  | | **TOPIC (WITH ASSIGNMENT & TESTS)** | | | | |
| 1 | 1 | |  | | Introduction of Atomic Structure, Bohr’s model of atom | | | | |
| 2 | |  | | Dual character of matter: derivation of de-Broglie’s equation Heisenberg’s Principle of Uncertainty, modern concept of atomic structure | | | | |
| 3 | |  | | Definition of orbitals shapes ofs,pandd-orbitals | | | | |
| 2 | 4 | |  | | Quantum number sandtheirsignificance | | | | |
| 5 | |  | | AufbauandPauli’sexclusionprinciples Hund’srule | | | | |
| 6 | |  | | Electronic configurationofelementsuptoatomicnumber 30. | | | | |
| 3 | 7 | |  | | Periodic TableModernPeriodiclawandPeriodictable, Classificationofelementsintos,p | | | | |
| 8 | |  | | Classificationofelementsintod, f-blocks,metals,non-metalsandmetalloids | | | | |
| 9 | |  | | Chemicalbonding:causeofbonding,ionicbond Physicalproperties ofionic, | | | | |
| 4 | 10 | |  | | Covalentbond,andmetallicbond(electronseaorgasmodel), Physicalproperties covalentandmetallic substances. | | | | |
| 11 | |  | | Doubt Quarries and Revision | | | | |
| 12 | |  | | Metals: mechanical properties of metals such as conductivity, elasticity, strength and stiffness,luster, hardness, toughness, ductility, malleability | | | | |
| **1st Sessional test** | | | | | | | | | |
| 5 | 13 | |  | | Metals: mechanical properties of metals such as, brittleness, and impact resistance and theiruses. Definition of a mineral, ore, gangue, flux and slag | | | | |
| 14 | |  | | Metallurgy of iron from haematite using ablastfurnace Commercialvarieties ofiron | | | | |
| 15 | |  | | Alloys: definition, necessity of making alloys, composition, properties and uses of duralumin andsteel.Heattreatmentofsteel-normalizing,annealing,quenching,tempering. | | | | |
| 6 | 16 | |  | | Doubt Quarries and Revision | | | | |
| 17 | |  | | Solutions: definition, expression of the concentration of a solution in percentage (w/w, w/v andv/v),normality,molarityandmolalityandppm. | | | | |
| 18 | |  | | Simpleproblemsonsolutionpreparation | | | | |
| 7 | 19 | |  | | Arrhenius concept of acids and bases, strong and weak acids and bases, pH value of a solutionanditssignificance,pHscale | | | | |
| 20 | |  | | Simplenumericalproblems onpHofacidsandbases. | | | | |
| 21 | |  | | Hard and soft water, causes of hardness of water, types of hardness– temporary and permanent hardness | | | | |
| 8 | 22 | |  | | Expression of hardness of water, ppm unit of hardness; disadvantages of hard water;removal of hardness | | | | |
| 23 | |  | | Removal of temporary hardness by boiling and Clark’smethod; removalofpermanent hardness of water by Ion-Exchange method | | | | |
| 24 | |  | | Boiler problems caused byhard water: scale and sludge formation, priming and foaming, caustic embrittlement;watersterilizationbychlorine,UVradiationandRO | | | | |
| 9 | 25 | |  | | Doubt Quarries and Revision | | | | |
| 26 | |  | | Fuels:definitionandclassificationofhigherandlowercalorificvalues,unitsofcalorificvalue | | | | |
| 27 | |  | | Characteristics of an ideal fuel. Petroleum: composition and refining of petroleum | | | | |
| 2nd Sessional Test | | | | | | | | | |
| 10 | 28 | |  | | Gaseousfuels: composition, properties and uses of CNG, PNG, LNG, LPG | | | | |
| 29 | |  | | Relative advantages of liquidandgaseousfuels oversolidfuels.Scopeofhydrogenasfuturefuel. | | | | |
| 30 | |  | | Lubricants-Functionsandqualitiesofagoodlubricant,classificationoflubricants | | | | |
| 11 | 31 | |  | | Lubrication mechanism (brief idea only | | | | |
| 32 | |  | | Physical properties (brief idea only) of alubricant: oiliness, viscosity, viscosity index, flash and fire point, ignition temperature, pourpoint. | | | | |
| 33 | |  | | Doubt Quarries and Revision | | | | |
| 12 | 34 | |  | | PolymersandPlastics:definitionofpolymer,classification,additionandcondensationpolymerization | | | | |
| 35 | |  | | Preparationpropertiesandusesofpolythene,PVC,Nylon-66 | | | | |
| 36 | |  | | Preparationpropertiesanduses Bakelite;definition of plastic | | | | |
| 13 | 37 | |  | | Thermoplastics and thermosetting polymers; natural rubber and neoprene,othersyntheticrubbers (names only). | | | | |
| 38 | |  | | Corrosion: definition, dry and wet corrosion | | | | |
| 39 | |  | | Factors affecting rate of corrosion, methods ofpreventionofcorrosion—hotdipping | | | | |
| 14 | 40 | |  | | Preventionofcorrosion metalcladding,cementation,quenching,cathodicprotectionmethods | | | | |
| 41 | |  | | Introductionandapplicationofnanotechnology:nano-materials | | | | |
| 42 | |  | | Classification,applications ofnanotechnologyinvarious engineeringapplications(brief) | | | | |
| **3rd Sessional test** | | | | | | | | | |
| 15 | 43 | |  | | Doubt Quarries and Revision | | | | |
| 44 | |  | | Revision and discussion of previous year Q. Papers | | | | |
| 45 | |  | | Revision and discussion of previous year Q. Papers | | | | |
| **PERFORMA OF LESSON PLAN** | | | | | | |
| **NAME OF THE FACULTY :Sunita Rani (Lecturer)** | | | | | | |
| **DISCIPLINE :Mech A, Mech B** | | | | | | |
| **SEMESTER : Second** | | | | | | |
| **SUBJECT : APPLIED CHEMISTRY (Practical)** | | | | | | |
| **LESSION PLAN DURATION : 15 WEEKS** | | | | | | |
| **WORK LOAD PER WEEK :Practicals = 4+4** | | | | | | |
| **WEEK** | **Practical** | | | | | | |
| **LECTURE DAY** |  | | **Name of Practical** | | | |
|  | |  | |  | |
| 1 | 1 |  | |  | | Topreparestandardsolutionofoxalicacid | |
| 2 | 2 |  | |  | | To dilutethe givenKMnO4solution | |
| 3 | 3 |  | |  | | To find outthestrengthingrams perlitreofanunknownsolutionofsodiumhydroxideusingastandard(N/10)oxalicacidsolution | |
| 4 | 4 |  | |  | | To find outthestrengthingrams perlitreofanunknownsolutionofsodiumhydroxideusingastandard(N/10)oxalicacidsolution | |
| 5 | 5 |  | |  | | To findoutthetotalalkalinityinpartspermillion(ppm)ofawatersample withthe help ofastandardsulphuricacidsolution. | |
| 6 | 6 |  | |  | | To findoutthetotalalkalinityinpartspermillion(ppm)ofawatersample withthe help ofastandardsulphuricacidsolution. | |
| 7 | 7 |  | |  | | To determinethetotalhardnessofgivenwatersamplebyEDTA method | |
| 8 | 8 |  | |  | | To determinethetotalhardnessofgivenwatersamplebyEDTA method | |
| 9 | 9 |  | |  | | Todetermine theamountoftotaldissolved solids(TDS)inppminagivensample ofwatergravimetrically | |
| 10 | 10 |  | |  | | TodeterminethepHofdifferentsolutionsusingadigitalpHmeter | |
| 11 | 11 |  | |  | | Todeterminethecalorificvalueofasolid/liquidfuelusingaBombcalorimeter | |
| 12 | 12 |  | |  | | To determine theviscosityofalubricatingoilusingaRedwoodviscometer | |
| 13 | 13 |  | |  | | To determine theviscosityofalubricatingoilusingaRedwoodviscometer | |
| 14 | 14 |  | |  | | ToprepareasampleofPhenol-formaldehyderesin(Bakelite)/Nylon-66inthelab | |
| 15 | 15 |  | |  | | ToprepareasampleofPhenol-formaldehyderesin(Bakelite)/Nylon-66inthelab | |

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| **PERFORMA OF LESSON PLAN** | | | | | | | | | |
| **NAME OF THE FACULTY : Ravinder Kumar (Lecturer)** | | | | | | | | | |
| **DISCIPLINE : Automobile** | | | | | | | | | |
| **SEMESTER : Second** | | | | | | | | | |
| **SUBJECT : APPLIED CHEMISTRY (Theory)** | | | | | | | | | |
| **LESSION PLAN DURATION : 15 WEEKS** | | | | | | | | | |
| **WORK LOAD PER WEEK : Lectures = 3** | | | | | | | | | |
| **WEEK** | | **THEORY** | | | | | | | | | |
| **LECTURE DAY** | |  | | | | **TOPIC (WITH ASSIGNMENT & TESTS)** | | | |
| 1 | | 1 | |  | | | | Introduction of Atomic Structure, Bohr’s model of atom | | | |
| 2 | |  | | | | Dual character of matter: derivation of de- Broglie’s equation Heisenberg’s Principle of Uncertainty, modern concept of atomic structure | | | |
| 3 | |  | | | | Definition of orbitals shapes of s, p and d-orbitals | | | |
| 2 | | 4 | |  | | | | Quantum numbers and their significance | | | |
| 5 | |  | | | | Aufbau and Pauli’s exclusion principles Hund’s rule | | | |
| 6 | |  | | | | Electronic configuration of elements up to atomic number 30. | | | |
| 3 | | 7 | |  | | | | Periodic Table Modern Periodic law and Periodic table, Classification of elements into s, p | | | |
| 8 | |  | | | | Classification of elements into d, f-blocks, metals, non-metals and metalloids | | | |
| 9 | |  | | | | Chemical bonding: cause of bonding, ionic bond Physical properties of ionic, | | | |
| 4 | | 10 | |  | | | | Covalent bond, and metallic bond (electron sea or gas model), Physical properties covalent and metallic substances. | | | |
| 11 | |  | | | | Doubt Quarries and Revision | | | |
| 12 | |  | | | | Metals: mechanical properties of metals such as conductivity, elasticity, strength and stiffness, luster, hardness, toughness, ductility, malleability | | | |
| **1st Sessional test** | | | | | | | | | | | |
| 5 | | 13 | |  | | | | Metals: mechanical properties of metals such as, brittleness, and impact resistance and their uses. Definition of a mineral, ore, gangue, flux and slag | | | |
| 14 | |  | | | | Metallurgy of iron from haematite using a blast furnace Commercial varieties of iron | | | |
| 15 | |  | | | | Alloys: definition, necessity of making alloys, composition, properties and uses of duralumin and steel. Heat treatment of steel- normalizing, annealing, quenching, tempering. | | | |
| 6 | | 16 | |  | | | | Doubt Quarries and Revision | | | |
| 17 | |  | | | | Solutions: definition, expression of the concentration of a solution in percentage (w/w, w/v and v/v), normality, molarity and molality and ppm. | | | |
| 18 | |  | | | | Simple problems on solution preparation | | | |
| 7 | | 19 | |  | | | | Arrhenius concept of acids and bases, strong and weak acids and bases, pH value of a solution and its significance, pH scale | | | |
| 20 | |  | | | | Simple numerical problems on pH of acids and bases. | | | |
| 21 | |  | | | | Hard and soft water, causes of hardness of water, types of hardness – temporary and permanent hardness | | | |
| 8 | | 22 | |  | | | | Expression of hardness of water, ppm unit of hardness; disadvantages of hard water; removal of hardness | | | |
| 23 | |  | | | | Removal of temporary hardness by boiling and Clark’s method; removal of permanent hardness of water by Ion-Exchange method | | | |
| 24 | |  | | | | Boiler problems caused by hard water: scale and sludge formation, priming and foaming, caustic embrittlement; water sterilization by chlorine, UV radiation and RO | | | |
| 9 | | 25 | |  | | | | Doubt Quarries and Revision | | | |
| 26 | |  | | | | Fuels: definition and classification of higher and lower calorific values, units of calorific value | | | |
| 27 | |  | | | | Characteristics of an ideal fuel. Petroleum: composition and refining of petroleum | | | |
| 2nd Sessional Test | | | | | | | | | | | |
| 10 | | 28 | |  | | | | Gaseous fuels: composition, properties and uses of CNG, PNG, LNG, LPG | | | |
| 29 | |  | | | | Relative advantages of liquid and gaseous fuels over solid fuels. Scope of hydrogen as future fuel. | | | |
| 30 | |  | | | | Lubricants- Functions and qualities of a good lubricant, classification of lubricants | | | |
| 11 | | 31 | |  | | | | Lubrication mechanism (brief idea only | | | |
| 32 | |  | | | | Physical properties (brief idea only) of a lubricant: oiliness, viscosity, viscosity index, flash and fire point, ignition temperature, pour point. | | | |
| 33 | |  | | | | Doubt Quarries and Revision | | | |
| 12 | | 34 | |  | | | | Polymers and Plastics: definition of polymer, classification, addition and condensation polymerization | | | |
| 35 | |  | | | | Preparation properties and uses of polythene, PVC, Nylon-66 | | | |
| 36 | |  | | | | Preparation properties and uses Bakelite; definition of plastic | | | |
| 13 | | 37 | |  | | | | Thermoplastics and thermosetting polymers; natural rubber and neoprene, other synthetic rubbers (names only). | | | |
| 38 | |  | | | | Corrosion: definition, dry and wet corrosion | | | |
| 39 | |  | | | | Factors affecting rate of corrosion, methods of prevention of corrosion—hot dipping | | | |
| 14 | | 40 | |  | | | | Prevention of corrosion metal cladding, cementation, quenching, cathodic protection methods | | | |
| 41 | |  | | | | Introduction and application of nanotechnology: nano-materials | | | |
| 42 | |  | | | | Classification, applications of nanotechnology in various engineering applications (brief) | | | |
| **3rd Sessional test** | | | | | | | | | | | |
| 15 | | 43 | |  | | | | Doubt Quarries and Revision | | | |
| 44 | |  | | | | Revision and discussion of previous year Q. Papers | | | |
| 45 | |  | | | | Revision and discussion of previous year Q. Papers | | | |
| **PERFORMA OF LESSON PLAN** | | | | | | | | | |
| **NAME OF THE FACULTY : Ravinder Kumar (Lecturer)** | | | | | | | | | |
| **DISCIPLINE : Automobile** | | | | | | | | | |
| **SEMESTER : Second** | | | | | | | | | |
| **SUBJECT : APPLIED CHEMISTRY (Practical)** | | | | | | | | | |
| **LESSION PLAN DURATION : 15 WEEKS** | | | | | | | | | |
| **WORK LOAD PER WEEK : Practicals = 4** | | | | | | | | | |
| **WEEK** | | **Practical** | | | | | | | | | |
| **LECTURE DAY** | | **Coverage date** | | | | **Name of Practical** | | | |
| **G1** | | **G2** |  | | | | |
| 1 | | 1 | |  | |  | To prepare standard solution of oxalic acid | | | | |
| 2 | | 2 | |  | |  | To dilute the given KMnO4 solution | | | | |
| 3 | | 3 | |  | |  | To find out the strength in grams per litre of an unknown solution of sodium hydroxide using a standard (N/10) oxalic acid solution | | | | |
| 4 | | 4 | |  | |  | Checking of Practical Files | | | | |
| 5 | | 5 | |  | |  | To find out the total alkalinity in parts per million (ppm) of a water sample with the help of a standard sulphuric acid solution. | | | | |
| 6 | | 6 | |  | |  | To determine the total hardness of given water sample by EDTA method | | | | |
| 7 | | 7 | |  | |  | Checking of Practical Files | | | | |
| 8 | | 8 | |  | |  | To determine the total hardness of given water sample by EDTA method | | | | |
| 9 | | 9 | |  | |  | To determine the amount of total dissolved solids(TDS) in ppm in a given sample of water gravimetrically | | | | |
| 10 | | 10 | |  | |  | To determine the pH of different solutions using a digital pH meter | | | | |
| 11 | | 11 | |  | |  | To determine the calorific value of a solid/liquid fuel using a Bomb calorimeter | | | | |
| 12 | | 12 | |  | |  | Checking of Practical Files & Viva | | | | |
| 13 | | 13 | |  | |  | To determine the viscosity of a lubricating oil using a Redwood viscometer | | | | |
| 14 | | 14 | |  | |  | To prepare a sample of Phenol-formaldehyde resin (Bakelite)/Nylon-66 in the lab | | | | |
| 15 | | 15 | |  | |  | Checking of Practical Files & Viva | | | | |

**PERFORMA OF LESSON PLAN**

**NAME OF THE FACULTY : RAVINDER KUMAR (LECTURER)**

**DISCIPLINE : Arch, Civil A, Civil B, Comp, Elect, ECE,**

**SEMESTER :2nd**

**SUBJECT :ESDM**

**LESSION PLAN DURATION : 15 WEEKS**

**WORK LOAD PER WEEK : Lectures = 02+02+02+02+02+02**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **WEEK** |  | | **THEORY** | |
| **LECTURE DAY** |  | | **TOPIC (WITH ASSIGNMENT & TESTS)** |
| **1** | 1 |  | | **Introduction** |
| 2 |  | | Basics of ecology , Eco system- concept |
| **2** | 3 |  | | Sustainable development |
| 4 |  | | Renewable and non-renewable Sources of energy and their advantages& disadvantages |
| **3** | 5 |  | | Rain water harvesting |
| 6 |  | | Deforestation – its effects & control measures |
| **4** | 7 |  | | Air Pollution: Source of air pollution |
| 8 |  | | Effect of air pollution on human health, economy, Air pollution control methods |
| **5** | 9 |  | | Defination and Source of noise pollution, Unit of noise, Effect of noise pollution, Acceptable noise level, Different method of minimizing noise pollution |
| 10 |  | | Revision of Air and Noise Pollution |
| **1st sessional test** | | | | |
| **6** | 11 |  | | Water Pollution: Impurities in water, Cause of water pollution |
| 12 |  | | Source of water pollution. Effect of water pollution on human health, Concept of DO, BOD, COD |
| **7** | 13 |  | | Prevention of water pollution- Water treatment processes, Sewage treatment |
| 14 |  | | Water quality standard. Defination and Sources of soil pollution |
| **8** | 15 |  | | Effects and Control of soil pollution, Types of Solid waste- House hold, Industrial, Agricultural, Biomedical, |
| 16 |  | | Disposal of solid waste, Solid waste management E-waste, E – waste management |
| **9** | 17 |  | | Impact of Energy Usage on Environment Global Warming |
|  | 18 |  | | Green House Effect, Depletion of Ozone Layer, Acid Rain |
| **10** | 19 |  | | Eco-friendly Material, Recycling of Material, Concept of Green Buildings |
|  | 20 |  | | Concept of Carbon Credit & Carb on footprint. |
| **11** | 21 |  | | Revision of Impact of Energy Usage on Environment |
| **2nd sessional test** | | | | |
|  | 22 |  | | Natural Disaster: such as Flood, Cyclone |
| **12** | 23 |  | | Natural Disaster: Earthquakes and Land slides etc |
|  | 24 |  | | Man-made Disaster: such as Fire, Industrial Pollution |
| **13** | 25 |  | | Man-made Disaster: Nuclear Disaster, Biological Disasters, Accidents (Air, Sea Rail & Road) |
|  | 26 |  | | Man-made Disaster: Structural failures (Building and Bridge),War& Terrorism etc. |
| **14** | 27 |  | | Disaster Preparedness Plan Prediction, Disaster Preparedness Early Warnings and Safety Measures of Disaster |
|  | 28 |  | | Psychological response and Management(Trauma, Stress), Psychological response and Management(Rumour and Panic) |
| 3rd Sessional test | | | | |
| **15** | 29 |  | | Revision and discussion of previous year Q. Papers |
|  | 30 |  | | Revision and discussion of previous year Q. Papers |

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| **PERFORMA OF LESSON PLAN** | | | | |
| **NAME OF THE FACULTY : Roshan Lal** | | | | | |
| **DISCIPLINE : Computer** | | | | | |
| **SEMESTER : SECOND** | | | | | |
| **SUBJECT : APPLIED MATHEMATICS** | | | | | |
| **LESSION PLAN DURATION : 16 WEEKS** | | | | | |
| **WORK LOAD PER WEEK :Lectures= 20** | | | | | |
| **WEEK** | **THEORY** | | **PRACTICAL** | | |
| **LECTURE DAY** | **TOPIC (WITH ASSIGNMENT & TESTS)** | **PRACTICAL DAY** | **TOPIC** | |
| **1** | 1 | Definition of function, its types | **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 2 | Concept of Algebraic limits |
| 3 | Concept of Trigonometric, Exponential & log-limits |
| 4 | Numericals |
| **2** | 5 | Differentiation of xn , sin x by first principle | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 6 | Differentiation of cos x, tan x by first principle |
| 7 | Differentiation of sum and difference of function |
| 8 | Differentiation of product of function |
| **3** | 9 | Differentiation of quotient of functions | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 10 | Differentiation of trigonometric functions |
| 11 | Differentiation of inverse trigonometric function |
| 12 | Differentiation of Logarithmic function |
| **4** | 13 | Successive differentiation | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 14 | Application of diff. in Rate measures |
| 15 | Maxima and minima |
| 16 | Assignment-1 and Numericals |
| **5** | 17 | Numericals | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 18 | 1st Sessional Test (Tentative) |
| 19 | 1st Sessional Test (Tentative) |
| 20 | 1st Sessional Test (Tentative) |
| **6** | 21 | Integration as inverse operation of differentiation | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 22 | Simple standard integrals |
| 23 | Numericals |
| 24 | Integration by substitution method |
| **7** | 25 | Integration by Parts | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 26 | Evaluation of |
| 27 | Numericals |
| 28 | Assignment-2 |
| **8** | 29 | Applications of integration Area under a curve and axis | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 30 | Numerical integration by Trapezoidal Rule |
| 31 | Numerical integration by Simpson’s 1/3rd    Rule |
| 32 | Numericals |
| **9** | 33 | Differential, order, degree, type linearity | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 34 | Function of O.D.E. (upto 1st order) |
| 35 | Solution of O.D.E. (1st order) by variable |
| 36 | Assignment-3 |
| **10** | 37 | 2nd Sessional Test (Tentative) | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 38 | 2nd Sessional Test (Tentative) |
| 39 | 2nd Sessional Test (Tentative) |
| 40 | 2nd Sessional Test (Tentative) |
| **11** | 41 | Measure of central tendency: mean | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 42 | Measure of central tendency: median |
| 43 | Measure of central tendency: mode |
| 44 | Numericals |
| **12** | 45 | Measure of dispersion: Mean Deviation | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 46 | Measure of dispersion: Standard Deviation |
| 47 | Numericals |
| 48 | Assignment-4 |
| **13** | 49 | Software- Theoretical Introduction | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 50 | Basic Diff. Between MATLAB and Sclab software |
| 51 | Calculation with MATLAB or ScLab Representation of Matrix (2X2 order) |
| 52 | Add, sub of Matrices (2x2 order) in MATLAB or ScLab |
| **14** | 53 | 3rd Sessional Test (Tentative) | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 54 | 3rd Sessional Test (Tentative) |
| 55 | 3rd Sessional Test (Tentative) |
| 56 | 3rd Sessional Test (Tentative) |
| **15** | 57 | Revision | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 58 | Practice of Previous Question papers |
| 59 | Practice of Previous Question papers |
| 60 | Revision |
| **16** | 61 | Practice of Previous Question papers | **\_** | **\_** | |
| 62 | Practice of Previous Question papers |
| 63 | Revision |
| 64 | Revision |

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| **PERFORMA OF LESSON PLAN** | | | | |
| **NAME OF THE FACULTY : KANUPRIYA** | | | | | |
| **DISCIPLINE : AUTO, CIVIL-A, CIVIL-B, ELTX, MECH-B** | | | | | |
| **SEMESTER : SECOND** | | | | | |
| **SUBJECT : APPLIED MATHEMATICS** | | | | | |
| **LESSION PLAN DURATION : 16 WEEKS** | | | | | |
| **WORK LOAD PER WEEK :Lectures= 20** | | | | | |
| **WEEK** | **THEORY** | | **PRACTICAL** | | |
| **LECTURE DAY** | **TOPIC (WITH ASSIGNMENT & TESTS)** | **PRACTICAL DAY** | **TOPIC** | |
| **1** | 1 | Definition of function, its types | **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 2 | Concept of Algebraic limits |
| 3 | Concept of Trigonometric, Exponential & log-limits |
| 4 | Numericals |
| **2** | 5 | Differentiation of xn , sin x by first principle | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 6 | Differentiation of cos x, tan x by first principle |
| 7 | Differentiation of sum and difference of function |
| 8 | Differentiation of product of function |
| **3** | 9 | Differentiation of quotient of functions | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 10 | Differentiation of trigonometric functions |
| 11 | Differentiation of inverse trigonometric function |
| 12 | Differentiation of Logarithmic function |
| **4** | 13 | Successive differentiation | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 14 | Application of diff. in Rate measures |
| 15 | Maxima and minima |
| 16 | Assignment-1 and Numericals |
| **5** | 17 | Numericals | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 18 | 1st Sessional Test (Tentative) |
| 19 | 1st Sessional Test (Tentative) |
| 20 | 1st Sessional Test (Tentative) |
| **6** | 21 | Integration as inverse operation of differentiation | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 22 | Simple standard integrals |
| 23 | Numericals |
| 24 | Integration by substitution method |
| **7** | 25 | Integration by Parts | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 26 | Evaluation of |
| 27 | Numericals |
| 28 | Assignment-2 |
| **8** | 29 | Applications of integration Area under a curve and axis | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 30 | Numerical integration by Trapezoidal Rule |
| 31 | Numerical integration by Simpson’s 1/3rd    Rule |
| 32 | Numericals |
| **9** | 33 | Differential, order, degree, type linearity | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 34 | Function of O.D.E. (upto 1st order) |
| 35 | Solution of O.D.E. (1st order) by variable |
| 36 | Assignment-3 |
| **10** | 37 | 2nd Sessional Test (Tentative) | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 38 | 2nd Sessional Test (Tentative) |
| 39 | 2nd Sessional Test (Tentative) |
| 40 | 2nd Sessional Test (Tentative) |
| **11** | 41 | Measure of central tendency: mean | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 42 | Measure of central tendency: median |
| 43 | Measure of central tendency: mode |
| 44 | Numericals |
| **12** | 45 | Measure of dispersion: Mean Deviation | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 46 | Measure of dispersion: Standard Deviation |
| 47 | Numericals |
| 48 | Assignment-4 |
| **13** | 49 | Software- Theoretical Introduction | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 50 | Basic Diff. Between MATLAB and Sclab software |
| 51 | Calculation with MATLAB or ScLab Representation of Matrix (2X2 order) |
| 52 | Add, sub of Matrices (2x2 order) in MATLAB or ScLab |
| **14** | 53 | 3rd Sessional Test (Tentative) | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 54 | 3rd Sessional Test (Tentative) |
| 55 | 3rd Sessional Test (Tentative) |
| 56 | 3rd Sessional Test (Tentative) |
| **15** | 57 | Revision | **\_**  **\_**  **\_**  **\_** | **\_**  **\_**  **\_**  **\_** | |
| 58 | Practice of Previous Question papers |
| 59 | Practice of Previous Question papers |
| 60 | Revision |
| **16** | 61 | Practice of Previous Question papers | **\_** | **\_** | |
| 62 | Practice of Previous Question papers |
| 63 | Revision |
| 64 | Revision |

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| **PERFORMA OF LESSON PLAN** | | | |
| **NAME OF THE FACULTY : PUSHPENDRA PRATAP** | | | | |
| **DISCIPLINE : ELECTRICAL, MECH-A** | | | | |
| **SEMESTER : SECOND** | | | | |
| **SUBJECT : APPLIED MATHEMATICS** | | | | |
| **LESSION PLAN DURATION : 16 WEEKS** | | | | |
| **WORK LOAD PER WEEK :Lectures = 12** | | | | |
| **WEEK** | **THEORY** | | **PRACTICAL** | |
| **LECTURE DAY** | **TOPIC (WITH ASSIGNMENT & TESTS)** | **PRACTICAL DAY** | |
| **1** | 1 | Definition of function, its types | **\_** | |
| 2 | Concept of Algebraic limits |
| 3 | Concept of Trigonometric, Exponential & log-limits |
| 4 | Numericals |
| **2** | 5 | Differentiation of xn , sin x by first principle | **\_** | |
| 6 | Differentiation of cos x, tan x by first principle |
| 7 | Differentiation of sum and difference of function |
| 8 | Differentiation of product of function |
| **3** | 9 | Differentiation of quotient of functions | **\_** | |
| 10 | Differentiation of trigonometric functions |
| 11 | Differentiation of inverse trigonometric function |
| 12 | Differentiation of Logarithmic function |
| **4** | 13 | Successive differentiation | **\_** | |
| 14 | Application of diff. in Rate measures |
| 15 | Maxima and minima |
| 16 | Assignment-1 and Numericals |
| **5** | 17 | Numericals | **\_** | |
| 18 | 1st Sessional Test (Tentative) |
| 19 | 1st Sessional Test (Tentative) |
| 20 | 1st Sessional Test (Tentative) |
| **6** | 21 | Integration as inverse operation of differentiation | **\_** | |
| 22 | Simple standard integrals |
| 23 | Numericals |
| 24 | Integration by substitution method |
| **7** | 25 | Integration by Parts | **\_** | |
| 26 | Evaluation of |
| 27 | Numericals |
| 28 | Assignment-2 |
| **8** | 29 | Applications of integration Area under a curve and axis | **\_** | |
| 30 | Numerical integration by Trapezoidal Rule |
| 31 | Numerical integration by Simpson’s 1/3rd    Rule |
| 32 | Numericals |
| **9** | 33 | Differential, order, degree, type linearity | **\_** | |
| 34 | Function of O.D.E. (upto 1st order) |
| 35 | Solution of O.D.E. (1st order) by variable |
| 36 | Assignment-3 |
| **10** | 37 | 2nd Sessional Test (Tentative) | **\_** | |
| 38 | 2nd Sessional Test (Tentative) |
| 39 | 2nd Sessional Test (Tentative) |
| 40 | 2nd Sessional Test (Tentative) |
| **11** | 41 | Measure of central tendency: mean | **\_** | |
| 42 | Measure of central tendency: median |
| 43 | Measure of central tendency: mode |
| 44 | Numericals |
| **12** | 45 | Measure of dispersion: Mean Deviation | **\_** | |
| 46 | Measure of dispersion: Standard Deviation |
| 47 | Numericals |
| 48 | Assignment-4 |
| **13** | 49 | Software- Theoretical Introduction | **\_** | |
| 50 | Basic Diff. Between MATLAB and Sclab software |
| 51 | Calculation with MATLAB or ScLab Representation of Matrix (2X2 order) |
| 52 | Add, sub of Matrices (2x2 order) in MATLAB or ScLab |
| **14** | 53 | 3rd Sessional Test (Tentative) | **\_** | |
| 54 | 3rd Sessional Test (Tentative) |
| 55 | 3rd Sessional Test (Tentative) |
| 56 | 3rd Sessional Test (Tentative) |
| **15** | 57 | Revision | **\_** | |
| 58 | Practice of Previous Question papers |
| 59 | Practice of Previous Question papers |
| 60 | Revision |
| **16** | 61 | Practice of Previous Question papers | **\_** | |
| 62 | Practice of Previous Question papers |
| 63 | Revision |
| 64 | Revision |

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|  | | **PERFORMA OF LESSON PLAN** | | | | | |
|  | | **NAME OF THE FACULTY : SARITA MANN** | | | | | | |
|  | | **DISCIPLINE : MECHANICAL-A,AUTO, ELECTRICAL** | | | | | | |
|  | | **SEMESTER : SECOND** | | | | | | |
|  | | **SUBJECT : APPLIED PHYSICS** | | | | | | |
|  | | **LESSION PLAN DURATION : 16 WEEKS** | | | | | | |
|  | | **WORK LOAD PER WEEK : Lectures= 2+2+2Practicals = 4+4 +4** | | | | | | |
| **WEEK** |  | | | **THEORY** | | **PRACTICAL** | | |
| **LECTURE DAY** | |  | | **TOPIC (WITH ASSIGNMENT & TESTS)** |  | **TOPIC** | |
| **1** | 1 | |  | | UNIT-1. Waves: definition, types (mechanical and electromagnetic wave)  Wave motion- transverse and longitudinal with examples | 1 | Familiarization with apparatus (resistor, rheostat, key, ammeter, voltmeter, telescope,  microscope etc.) | |
| 2 | |  | | Wave motion-transverse and longitudinal, terms used in wave motion and relation between wave velocity, frequency and wavelength |
| **2** | 3 | |  | | Simple harmonic motion (SHM): definition, examples, Cantilever | 2 | To find the time period of a simple pendulum. | |
| 4 | |  | | Free, forced and resonant vibrations with examples |
| **3** | 5 | |  | | Sound waves: types (infrasonic, audible, ultrasonic)  coefficient of absorption of sound, echo, noise | 3 | To study variation of time period of a simple pendulum with change in length ofpendulum. | |
| 6 | |  | | UNIT-2. Reflection and refraction of light with laws, refractive index |
| **4** | 7 | |  | | Lens: introduction, lens formulae (no derivation), power of lens and simple numerical problems | 4 | File checking and viva-voce | |
| 8 | |  | | Total internal reflection and its applications, critical angle and conditions for total internal reflection |
| **5** | 9 | |  | | Revision | 5 | To determine and verify the time period of Cantilever. | |
| 10 | |  | | 1st sessional test |
| **6** | 11 | |  | | Superposition of waves (concept only), definition of interference, Diffraction and Polarization of waves | 6 | To verify Ohm’s laws by plotting a graph between voltage and current. | |
| 12 | |  | | Introduction to Microscope, Telescope and their applications |
| **7** | 13 | |  | | Unit-3. Electrostatics and Electricity-Electric charge, unit of charge, conservation of charge | 7 | File checking and viva-voce | |
| 14 | |  | | Coulomb’s law of electrostatics, Electric field, electric lines of force (definition and properties), electric field intensity  due to a point charge |
| **8** | 15 | |  | | Definition of electric flux, Gauss law (statement and formula), Capacitor and capacitance | 8 | To study colour coding scheme of resistance. | |
| 16 | |  | | Electric current and its SI Unit, direct and alternating current |
| **9** | 17 | |  | | Resistance, conductance , Series and parallel combination of resistances, Ohm’s law | 9 | To verify laws of resistances in series combination. | |
| 18 | |  | | Numerical problems |
| **10** | 19 | |  | | Revision | **10** | To verify laws of resistance in parallel combination. | |
| 20 | |  | | 2nd sessional test |
| **11** | 21 | |  | | Definition of energy level, energy bands, Types of materials (conductor, semiconductor, insulator and dielectric) with examples , Intrinsic and extrinsic semiconductors | 11 | To find resistance of galvanometer by half deflection method | |
| 22 | |  | | Introduction to magnetism, type of magnetic materials: diamagnetic, paramagnetic and ferromagnetic materials with examples |
| **12** | 23 | |  | | Magnetic field, magnetic lines of force, magnetic flux Electromagnetic induction (definition) | 12 | To verify laws of reflection of light using mirror. | |
| 24 | |  | | Laser-introduction, principle of laser, Engineering and medical applications of laser |
| **13** | 25 | |  | | Fibre optics: Introduction to optical fibres (definition, principle), Fibre types (mono-mode, multi-mode) | 13 | To verify laws of refraction using glass slab. | |
| 26 | |  | | applications of fibre optics in medical, telecommunication and sensors |
| **14** | 27 | |  | | Nanotechnology: introduction, definition of nanomaterials with examples, properties at nanoscale, applications of nanotechnology | 14 | To find the focal length of a concave lens, using a convex lens. | |
| 28 | |  | | 3rd sessional test |
| **15** | 29 | |  | | Discussion of sessional test | 15 | File checking and viva-voce | |
| 30 | |  | | Numerical problems |
| **16** | 31 | |  | | Revision of question papers of last year | 16 | File checking and viva-voce | |
| 32 | |  | | Revision of question papers of last year |

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|  | | **PERFORMA OF LESSON PLAN** | | | | | |
|  | | **NAME OF THE FACULTY : LAVANEY MAHAJAN** | | | | | | |
|  | | **DISCIPLINE : COMP, CIVIL -B, ECE** | | | | | | |
|  | | **SEMESTER : SECOND** | | | | | | |
|  | | **SUBJECT : APPLIED PHYSICS** | | | | | | |
|  | | **LESSION PLAN DURATION : 16 WEEKS** | | | | | | |
|  | | **WORK LOAD PER WEEK : Lectures= 2+2+2Practicals = 4+4 +4** | | | | | | |
| **WEEK** |  | | | **THEORY** | | **PRACTICAL** | | |
| **LECTURE DAY** | |  | | **TOPIC (WITH ASSIGNMENT & TESTS)** |  | **TOPIC** | |
| **1** | 1 | |  | | UNIT-1. Waves: definition, types (mechanical and electromagnetic wave)  Wave motion- transverse and longitudinal with examples | 1 | Familiarization with apparatus (resistor, rheostat, key, ammeter, voltmeter, telescope,  microscope etc.) | |
| 2 | |  | | Wave motion-transverse and longitudinal, terms used in wave motion and relation between wave velocity, frequency and wavelength |
| **2** | 3 | |  | | Simple harmonic motion (SHM): definition, examples, Cantilever | 2 | To find the time period of a simple pendulum. | |
| 4 | |  | | Free, forced and resonant vibrations with examples |
| **3** | 5 | |  | | Sound waves: types (infrasonic, audible, ultrasonic)  coefficient of absorption of sound, echo, noise | 3 | To study variation of time period of a simple pendulum with change in length ofpendulum. | |
| 6 | |  | | UNIT-2. Reflection and refraction of light with laws, refractive index |
| **4** | 7 | |  | | Lens: introduction, lens formulae (no derivation), power of lens and simple numerical problems | 4 | File checking and viva-voce | |
| 8 | |  | | Total internal reflection and its applications, critical angle and conditions for total internal reflection |
| **5** | 9 | |  | | Revision | 5 | To determine and verify the time period of Cantilever. | |
| 10 | |  | | 1st sessional test |
| **6** | 11 | |  | | Superposition of waves (concept only), definition of interference, Diffraction and Polarization of waves | 6 | To verify Ohm’s laws by plotting a graph between voltage and current. | |
| 12 | |  | | Introduction to Microscope, Telescope and their applications |
| **7** | 13 | |  | | Unit-3. Electrostatics and Electricity-Electric charge, unit of charge, conservation of charge | 7 | File checking and viva-voce | |
| 14 | |  | | Coulomb’s law of electrostatics, Electric field, electric lines of force (definition and properties), electric field intensity  due to a point charge |
| **8** | 15 | |  | | Definition of electric flux, Gauss law (statement and formula), Capacitor and capacitance | 8 | To study colour coding scheme of resistance. | |
| 16 | |  | | Electric current and its SI Unit, direct and alternating current |
| **9** | 17 | |  | | Resistance, conductance , Series and parallel combination of resistances, Ohm’s law | 9 | To verify laws of resistances in series combination. | |
| 18 | |  | | Numerical problems |
| **10** | 19 | |  | | Revision | **10** | To verify laws of resistance in parallel combination. | |
| 20 | |  | | 2nd sessional test |
| **11** | 21 | |  | | Definition of energy level, energy bands, Types of materials (conductor, semiconductor, insulator and dielectric) with examples , Intrinsic and extrinsic semiconductors | 11 | To find resistance of galvanometer by half deflection method | |
| 22 | |  | | Introduction to magnetism, type of magnetic materials: diamagnetic, paramagnetic and ferromagnetic materials with examples |
| **12** | 23 | |  | | Magnetic field, magnetic lines of force, magnetic flux Electromagnetic induction (definition) | 12 | To verify laws of reflection of light using mirror. | |
| 24 | |  | | Laser-introduction, principle of laser, Engineering and medical applications of laser |
| **13** | 25 | |  | | Fibre optics: Introduction to optical fibres (definition, principle), Fibre types (mono-mode, multi-mode) | 13 | To verify laws of refraction using glass slab. | |
| 26 | |  | | applications of fibre optics in medical, telecommunication and sensors |
| **14** | 27 | |  | | Nanotechnology: introduction, definition of nanomaterials with examples, properties at nanoscale, applications of nanotechnology | 14 | To find the focal length of a concave lens, using a convex lens. | |
| 28 | |  | | 3rd sessional test |
| **15** | 29 | |  | | Discussion of sessional test | 15 | File checking and viva-voce | |
| 30 | |  | | Numerical problems |
| **16** | 31 | |  | | Revision of question papers of last year | 16 | File checking and viva-voce | |
| 32 | |  | | Revision of question papers of last year |

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|  | **PERFORMA OF LESSON PLAN** | | | | | | |
|  | **NAME OF THE FACULTY : Mayur Rohilla** | | | | | | | |
|  | **DISCIPLINE : MECHANICAL-B, CIVIL-A** | | | | | | | |
|  | **SEMESTER : SECOND** | | | | | | | |
|  | **SUBJECT : APPLIED PHYSICS** | | | | | | | |
|  | **LESSION PLAN DURATION : 16 WEEKS** | | | | | | | |
|  | **WORK LOAD PER WEEK : Lectures= 2+2 Practicals = 4+4** | | | | | | | |
| **WEEK** | |  | | **THEORY** | | **PRACTICAL** | | |
| **LECTURE DAY** |  | | **TOPIC (WITH ASSIGNMENT & TESTS)** |  | **TOPIC** | |
| **1** | | 1 |  | | UNIT-1. Waves: definition, types (mechanical and electromagnetic wave)  Wave motion- transverse and longitudinal with examples | 1 | Familiarization with apparatus (resistor, rheostat, key, ammeter, voltmeter, telescope,  microscope etc.) | |
| 2 |  | | Wave motion-transverse and longitudinal, terms used in wave motion and relation between wave velocity, frequency and wavelength |
| **2** | | 3 |  | | Simple harmonic motion (SHM): definition, examples, Cantilever | 2 | To find the time period of a simple pendulum. | |
| 4 |  | | Free, forced and resonant vibrations with examples |
| **3** | | 5 |  | | Sound waves: types (infrasonic, audible, ultrasonic)  coefficient of absorption of sound, echo, noise | 3 | To study variation of time period of a simple pendulum with change in length ofpendulum. | |
| 6 |  | | UNIT-2. Reflection and refraction of light with laws, refractive index |
| **4** | | 7 |  | | Lens: introduction, lens formulae (no derivation), power of lens and simple numerical problems | 4 | File checking and viva-voce | |
| 8 |  | | Total internal reflection and its applications, critical angle and conditions for total internal reflection |
| **5** | | 9 |  | | Revision | 5 | To determine and verify the time period of Cantilever. | |
| 10 |  | | 1st sessional test |
| **6** | | 11 |  | | Superposition of waves (concept only), definition of interference, Diffraction and Polarization of waves | 6 | To verify Ohm’s laws by plotting a graph between voltage and current. | |
| 12 |  | | Introduction to Microscope, Telescope and their applications |
| **7** | | 13 |  | | Unit-3. Electrostatics and Electricity-Electric charge, unit of charge, conservation of charge | 7 | File checking and viva-voce | |
| 14 |  | | Coulomb’s law of electrostatics, Electric field, electric lines of force (definition and properties), electric field intensity  due to a point charge |
| **8** | | 15 |  | | Definition of electric flux, Gauss law (statement and formula), Capacitor and capacitance | 8 | To study colour coding scheme of resistance. | |
| 16 |  | | Electric current and its SI Unit, direct and alternating current |
| **9** | | 17 |  | | Resistance, conductance , Series and parallel combination of resistances, Ohm’s law | 9 | To verify laws of resistances in series combination. | |
| 18 |  | | Numerical problems |
| **10** | | 19 |  | | Revision | **10** | To verify laws of resistance in parallel combination. | |
| 20 |  | | 2nd sessional test |
| **11** | | 21 |  | | Definition of energy level, energy bands, Types of materials (conductor, semiconductor, insulator and dielectric) with examples , Intrinsic and extrinsic semiconductors | 11 | To find resistance of galvanometer by half deflection method | |
| 22 |  | | Introduction to magnetism, type of magnetic materials: diamagnetic, paramagnetic and ferromagnetic materials with examples |
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| **16** | | 31 |  | | Revision of question papers of last year | 16 | File checking and viva-voce | |
| 32 |  | | Revision of question papers of last year |

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| **GOVT. POLYTECHNIC, AMBALA CITY** | | | | | | | | |
| **LESSON PLAN** | | | | | | | | |
| **NAME OF FACULTY** | | **MR. MAYUR ROHILA** | | | | | | |
| **DISCIPLINE** | | **AUTOMOBILE ENGG.** | | | | | | |
| **SEMESTER** | | **2ND** | | | | | | |
| **SUBJECT** | | **APPLIED MECHANICS** | | | | | | |
| **LESSON PLAN DURATION:** | | **16 WEEKS** | | | | | | |
| **WORKLOAD(LECTURE/PRACTICAL):03LECTURES/WEEK, PRACTICALS-02HOURS/TURN/WEEK** | | | | | | | | |
| **DATE OF START LESSON PLAN** | | **15/02/2024 TO 14/06/2024** | | | | | | |
| **WEEK** | **THEORY** | | | | **PRACTICAL** | | | |
| **LECTURE DAY** | **TOPIC** | | | **PRACTICAL DAY** | | | **TOPIC** |
| 1st | 1st | Concept of mechanics, Classification of mechanics, utility of mechanics in engineering field | | | 1st | | | Verification of polygon law of forces using universal force table/Gravesend apparatus |
| 2nd | Concept of rigid body, scalar and vector quantities. | | |
| 3rd | Definition of force, measurement of force in SI units, its representation, types of force: Point force/concentrated force & Uniformly distributed force, effects of force, characteristics of a force | | |
| 2nd | 4th | Different force systems (coplanar and non-coplanar), principle of transmissibility of forces | | | 2nd | | | Verification of Lami’s theorem |
| 5th | Law of super position, Freebody diagram, Composition and resolution of coplanar concurrent forces, resultant force, | | |
| 6th | Method of composition offorces, laws of forces, parallelogram law of forces (with derivation), | | |
| 3rd | 7th | Triangle law offorces | | | 3rd | | | To verify law of moments by using Bell crank lever |
| 8th | polygon law of forces - graphically, analytically, resolution of forces, resolving a force into two rectangular components | | |
| 9th | Lami's theorem, Simple numericals, Equilibrium of forces and its determination. | | |
| 4th | 10th | | Concept of moment, Moment of a force and units of moment, Varignon's theorem (definition only), | | 4TH | | | Revision of previous practical |
| 11th | | Principle of moment and its applications (Levers–simple  And compound | |
|  | 12th | | **REVISION** | |  | | |  |
| 5th |  | | **SESSIONALTEST** | | | | | |
| 6th | 13th | | steelyard, safety valve | | 6th | | | To verify the forces in different member sofjib crane. |
| 14th | | Simple Numericals | |
| 15th | | Parallel forces (like and unlike parallel force), calculating their resultant, Concept of couple, its properties and effects | |
| 7th | 16th | | General conditions of equilibrium of bodies under coplanar forces, Position of resultant force by moment. | | 7th | | | To determine coefficient of friction between three pairs of given surface |
| 17th | | Definition and concept of friction, types of friction, force of friction, Laws of static friction, coefficient of friction, angle of friction, angle of repose, coneoffriction, | |
| 18th | | Equilibrium of a body lying on a horizontal plane, equilibrium of a body lying onaroughinclined plane. | |
| 8th | 19th | | Calculation of least force required to maintain equilibrium of a body on a rough inclined plane subjected to aforceacting along  The inclined plane | | 8th | | | To find out center of gravity of regular lamina. |
| 20th | | Subjected to a forecasting at some angle with the inclined plane, Simple Numericals | |
| 21st | | Concept, definition of centroid of plain figures and centre of gravity of symmetrical solid bodies. Axis  Of symmetry,Referenceaxis. | |
| 9th | 22nd | | Determination of centroid of plain and compo site lamina (T,  L,Cand I shape) using moment method only,centroid of bodies with removed portion. | | | | 9th | To find out center of gravity of irregular lamina. |
| 23rd | | Determination of center  Of gravity of solid bodies-cone, cylinder, hem is phere and sphere; composite bodies and bodies with  Portion removed. | | | |
| 24th | | **Simple numericals** | | | |
| 10th |  | | **SESSIONALTEST** | | | | | |
| 11th | 25th | | Newton’s laws of motion and their applications, Concept of momentum. Derivation offorce equation from second law of motion, | | | | 11th | To find the mechanical advantage, velocity ratio and efficiency of a screw jack. |
| 26th | | Conservation of momentum, impulse and impulsive force. | | | |
| 27th | | Numerical problems on second law of motion. Bodies tied with string,  Newton’s third law of motion, numerical problems, | | | |
| 12th | 28th | | Definition of effort, velocity ratio, mechanical advantage and efficiency of a machine and their relationship, law of machines, Simple and compound machine (Examples) | | | | 12th | To find the mechanical advantage, velocity ratio and efficiency of worm and worm wheel. |
| 29th | | Definition ofideal machine, rever | | | |
| 30th | | Effortlostinfriction, Loadlostin | | | |
| 13th | 31st | | System of pulleys first determination of velocityratio, mechanical advantage and efficiency | | | | 13th | Revision of previous practical |
| 32nd | | System of pulleys second determination of velocityratio, mechanical advantage and efficiency | | | |
| 33rd | | System of pulleys third, determination of velocity ratio, mechanical advantage and efficiency | | | |
| 14th | 34th | | | Determination of velocity ratio, mechanical advantage and efficiency. Working principle and application of Wheelan axle, | |  | 14th | To find mechanical advantage, velocity ratio and efficiency of single purchase crab. |
| 35th | | | Determination of velocity ratio, mechanical advantage and efficiency. Working principle and application of Weston’s Differential Pulley Block, | |
| 36th | | | Determination of velocity ratio, mechanical advantage and efficiency.Working principle and application simple screw jack | |
| 15th | 37th | | | Determination of velocity ratio, mechanical advantage and efficiency. Working principle and application worm and worm wheel, | | 15th | ivaVoice | |
| 38th | | | Determination of velocity ratio, mechanical advantage and efficiency. Working principle and application single winch crab | |
| 39th | | | Determination of velocity ratio, mechanical advantage and efficiency. Working principle and application double winch crab | |
| 16 |  | | | **SESSIONALTEST** | | | | |