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| **PERFORMA OF LESSON PLAN** | | |
| **NAME OF THE FACULTY : Ms. Preetpal Kaur (Instructor)** | | |
| **DISCIPLINE : Arch, Civil-B, SCA** | | |
| **SEMESTER : First** | | |
| **SUBJECT : English and communication skill (Practical)** | | |
| **LESSION PLAN DURATION : 15 WEEKS** | | |
| **WORK LOAD PER WEEK : Practicals 4+4+7(SCA)** | | |
| **WEEK** | **Practical** |
| 1 | Reading Practice of lessons in the Lab Activity classes. |
| Comprehension exercises of unseen passages along with the lessons prescribed. |
| Vocabulary enrichment and grammar exercises based on the selected readings |
| 2 | Conversation Practice |
| 3 | Chapter-1.3 Comprehension Passages |
| 4 | Chapter 1.4 Comprehension Passages |
| 5 | Chapter 1.5 Comprehension Passages |
| 6 | Reading aloud Newspaper headlines and important articles |
| 7 | Introducing oneself, others and leave- taking(talking about yourself) |
| 8 | Just a minute (JAM) sessions: Speaking extempore for one minute on given topics |
| 9 | Just a minute (JAM) sessions: Speaking extempore for one minute on given topics |
|
| 10 | Narayan Murthy’s speech at LBSNA |
| 11 | Offering-Responding to offers |
| 12 | Apologizing & Forgiving, Complaining; |
| 13 | Talking about likes and dislikes |
| 14 | Self-introduction Mock |
| Situational Conversation |
| 15 | Revision |
| Revision |

**PERFORMA OF LESSON PLAN**

**NAME OF THE FACULTY : Ms. Neetu Gupta (Lecturer)**

**DISCIPLINE : Comp, Ece, Plastic**

**SEMESTER : 1st**

**SUBJECT : English & communication skill**

**LESSION PLAN DURATION : 15 WEEKS**

**WORK LOAD PER WEEK : Lectures (Theory) = 02 +02+02**

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| **WEEK** |  | | **THEORY** | |
| **LECTURE DAY** | **Coverage Date** | | **TOPIC (WITH ASSIGNMENT & TESTS)** |
| **1** | 1 |  | | Techniques of reading: Skimming and Scanning, Extensive and Intensive Reading: Textual Study |
| 2 |  | | Homecoming – R.N. Tagore |
| **2** | 3 |  | | Life Sketch of Sir Mokshagundam Visvesvarayya, |
| 4 |  | | Nouns |
| **3** | 5 |  | | Pronouns |
| 6 |  | | Significance, essentials and effectiveness of Written Communication |
| **4** | 7 |  | | Revision |
| 8 |  | | Revision |
| **1st sessional test** | | | | |
| **5** | 9 |  | | Life Sketch of Dr. Abdul Kalam |
| 10 |  | | Concept and Process of Communication |
| **6** | 11 |  | | Types of Communication (Verbal Communication) |
| 12 |  | | Barriers to communication |
| **7** | 13 |  | | Articles |
| 14 |  | | Verbs(Main and Auxiliary) |
| **8** | 15 |  | | Speaking Skill: Significance and essentials of Spoken Communication |
| 16 |  | | Listening Skill: Significance and essentials of Listening, Revision |
| **2nd sessional test** | | | | |
| **9** | 17 |  | | Narayan Murthy’s speech at LBSNA |
|  | 18 |  | | Narayan Murthy’s speech at LBSNA |
| **10** | 19 |  | | Tenses |
|  | 20 |  | | Tenses |
| **11** | 21 |  | | Notice Writing |
|  | 22 |  | | Notice Writing |
| **12** | 23 |  | | Official Letters and E-mails |
|  | 24 |  | | Official Letters and E-mails |
| **3rd sessional test** | | | | |
| **13** | 25 |  | | Frequently-used Abbreviations used in Letter-Writing |
|  | 26 |  | | Paragraph Writing |
| **14** | 27 |  | | Paragraph Writing |
|  | 28 |  | | Netiquettes |
| **15** | 29 |  | | Revision |
|  | 30 |  | | Revision |

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| **PERFORMA OF LESSON PLAN** | | |
| **NAME OF THE FACULTY : Ms. Neetu Gupta Lecturer** | | |
| **DISCIPLINE : Comp, ECE, Plastic, SCA** | | |
| **SEMESTER : First** | | |
| **SUBJECT : English and communication skill (Practical)** | | |
| **LESSION PLAN DURATION : 15 WEEKS** | | |
| **WORK LOAD PER WEEK : Practicals 4+4+2+3** | | |
| **WEEK** | **Practical** |
| 1 | Reading Practice of lessons in the Lab Activity classes. |
| Comprehension exercises of unseen passages along with the lessons prescribed. |
| Vocabulary enrichment and grammar exercises based on the selected readings |
| 2 | Conversation Practice |
| 3 | Chapter-1.3 Comprehension Passages |
| 4 | Chapter 1.4 Comprehension Passages |
| 5 | Chapter 1.5 Comprehension Passages |
| 6 | Reading aloud Newspaper headlines and important articles |
| 7 | Introducing oneself, others and leave- taking(talking about yourself) |
| 8 | Just a minute (JAM) sessions: Speaking extempore for one minute on given topics |
| 9 | Just a minute (JAM) sessions: Speaking extempore for one minute on given topics |
|
| 10 | Narayan Murthy’s speech at LBSNA |
| 11 | Offering-Responding to offers |
| 12 | Apologizing & Forgiving, Complaining; |
| 13 | Talking about likes and dislikes |
| 14 | Self-introduction Mock |
| Situational Conversation |
| 15 | Revision |
| Revision |

**PERFORMA OF LESSON PLAN**

**NAME OF THE FACULTY : Ms. Jashanpreet Kaur (Lecturer)**

**DISCIPLINE : Mech A, Mech B, Elect, Civil A**

**SEMESTER : 1st**

**SUBJECT : English & communication skill**

**LESSION PLAN DURATION : 15 WEEKS**

**WORK LOAD PER WEEK : Lectures (Theory) = 02 +02+02 +02**

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| **WEEK** |  | | **THEORY** | |
| **LECTURE DAY** | **Coverage Date** | | **TOPIC (WITH ASSIGNMENT & TESTS)** |
| **1** | 1 |  | | Techniques of reading: Skimming and Scanning, Extensive and Intensive Reading: Textual Study |
| 2 |  | | Homecoming – R.N. Tagore |
| **2** | 3 |  | | Life Sketch of Sir Mokshagundam Visvesvarayya, |
| 4 |  | | Nouns |
| **3** | 5 |  | | Pronouns |
| 6 |  | | Significance, essentials and effectiveness of Written Communication |
| **4** | 7 |  | | Revision |
| 8 |  | | Revision |
| **1st sessional test** | | | | |
| **5** | 9 |  | | Life Sketch of Dr. Abdul Kalam |
| 10 |  | | Concept and Process of Communication |
| **6** | 11 |  | | Types of Communication (Verbal Communication) |
| 12 |  | | Barriers to communication |
| **7** | 13 |  | | Articles |
| 14 |  | | Verbs(Main and Auxiliary) |
| **8** | 15 |  | | Speaking Skill: Significance and essentials of Spoken Communication |
| 16 |  | | Listening Skill: Significance and essentials of Listening, Revision |
| **2nd sessional test** | | | | |
| **9** | 17 |  | | Narayan Murthy’s speech at LBSNA |
|  | 18 |  | | Narayan Murthy’s speech at LBSNA |
| **10** | 19 |  | | Tenses |
|  | 20 |  | | Tenses |
| **11** | 21 |  | | Notice Writing |
|  | 22 |  | | Notice Writing |
| **12** | 23 |  | | Official Letters and E-mails |
|  | 24 |  | | Official Letters and E-mails |
| **3rd sessional test** | | | | |
| **13** | 25 |  | | Frequently-used Abbreviations used in Letter-Writing |
|  | 26 |  | | Paragraph Writing |
| **14** | 27 |  | | Paragraph Writing |
|  | 28 |  | | Netiquettes |
| **15** | 29 |  | | Revision |
|  | 30 |  | | Revision |

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| **PERFORMA OF LESSON PLAN** | | |
| **NAME OF THE FACULTY : Ms. Jashanpreet Kaur (Lecturer)**  **DISCIPLINE : Mech A, Mech B, Elect** | | |
| **SEMESTER : First** | | |
| **SUBJECT : English and communication skill (Practical)** | | |
| **LESSION PLAN DURATION : 15 WEEKS** | | |
| **WORK LOAD PER WEEK : Practicals = 4+4+4** | | |
| **WEEK** | | **Practical** | |
| 1 | Reading Practice of lessons in the Lab Activity classes. | | |
| Comprehension exercises of unseen passages along with the lessons prescribed. | | |
| Vocabulary enrichment and grammar exercises based on the selected readings | | |
| 2 | Conversation Practice | | |
|
| 3 | Chapter-1.3 Comprehension Passages | | |
|
| 4 | Chapter 1.4 Comprehension Passages | | |
|
| 5 | Chapter 1.5 Comprehension Passages | | |
|
| 6 | Reading aloud Newspaper headlines and important articles | | |
|
| 7 | Introducing oneself, others and leave- taking(talking about yourself) | | |
|
| 8 | Just a minute (JAM) sessions: Speaking extempore for one minute on given topics | | |
|
| 9 | Just a minute (JAM) sessions: Speaking extempore for one minute on given topics | | |
|
| 10 | Narayan Murthy’s speech at LBSNA | | |
|
| 11 | Offering-Responding to offers | | |
|
| 12 | Apologizing & Forgiving, Complaining; | | |
|
| 13 | Talking about likes and dislikes | | |
|
| 14 | Self-introduction Mock | | |
|  | Situational Conversation | | |
| 15 | Revision | | |
|  | Revision | | |

**PERFORMA OF LESSON PLAN**

**NAME OF THE FACULTY : Mrs. Sharmila Sharma (Lecturer)**

**DISCIPLINE : Auto, Arch, Civil B**

**SEMESTER : 1st**

**SUBJECT : English & communication skill**

**LESSION PLAN DURATION : 15 WEEKS**

**WORK LOAD PER WEEK : Lectures (Theory) = 02 +02+02**

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| **WEEK** |  | | **THEORY** | |
| **LECTURE DAY** | **Coverage Date** | | **TOPIC (WITH ASSIGNMENT & TESTS)** |
| **1** | 1 |  | | Techniques of reading: Skimming and Scanning, Extensive and Intensive Reading: Textual Study |
| 2 |  | | Homecoming – R.N. Tagore |
| **2** | 3 |  | | Life Sketch of Sir Mokshagundam Visvesvarayya, |
| 4 |  | | Nouns |
| **3** | 5 |  | | Pronouns |
| 6 |  | | Significance, essentials and effectiveness of Written Communication |
| **4** | 7 |  | | Revision |
| 8 |  | | Revision |
| **1st sessional test** | | | | |
| **5** | 9 |  | | Life Sketch of Dr. Abdul Kalam |
| 10 |  | | Concept and Process of Communication |
| **6** | 11 |  | | Types of Communication (Verbal Communication) |
| 12 |  | | Barriers to communication |
| **7** | 13 |  | | Articles |
| 14 |  | | Verbs(Main and Auxiliary) |
| **8** | 15 |  | | Speaking Skill: Significance and essentials of Spoken Communication |
| 16 |  | | Listening Skill: Significance and essentials of Listening, Revision |
| **2nd sessional test** | | | | |
| **9** | 17 |  | | Narayan Murthy’s speech at LBSNA |
|  | 18 |  | | Narayan Murthy’s speech at LBSNA |
| **10** | 19 |  | | Tenses |
|  | 20 |  | | Tenses |
| **11** | 21 |  | | Notice Writing |
|  | 22 |  | | Notice Writing |
| **12** | 23 |  | | Official Letters and E-mails |
|  | 24 |  | | Official Letters and E-mails |
| **3rd sessional test** | | | | |
| **13** | 25 |  | | Frequently-used Abbreviations used in Letter-Writing |
|  | 26 |  | | Paragraph Writing |
| **14** | 27 |  | | Paragraph Writing |
|  | 28 |  | | Netiquettes |
| **15** | 29 |  | | Revision |
|  | 30 |  | | Revision |

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| **PERFORMA OF LESSON PLAN** | | |
| **NAME OF THE FACULTY : Ms. Sharmila (Lecturer)**  **DISCIPLINE : Civil-A, Auto, SCA** | | |
| **SEMESTER : First** | | |
| **SUBJECT : English and communication skill (Practical)** | | |
| **LESSION PLAN DURATION : 15 WEEKS** | | |
| **WORK LOAD PER WEEK : Practicals = 4+4+6(SCA)** | | |
| **WEEK** | | **Practical** | |
| 1 | Reading Practice of lessons in the Lab Activity classes. | | |
| Comprehension exercises of unseen passages along with the lessons prescribed. | | |
| Vocabulary enrichment and grammar exercises based on the selected readings | | |
| 2 | Conversation Practice | | |
|
| 3 | Chapter-1.3 Comprehension Passages | | |
|
| 4 | Chapter 1.4 Comprehension Passages | | |
|
| 5 | Chapter 1.5 Comprehension Passages | | |
|
| 6 | Reading aloud Newspaper headlines and important articles | | |
|
| 7 | Introducing oneself, others and leave- taking(talking about yourself) | | |
|
| 8 | Just a minute (JAM) sessions: Speaking extempore for one minute on given topics | | |
|
| 9 | Just a minute (JAM) sessions: Speaking extempore for one minute on given topics | | |
|
| 10 | Narayan Murthy’s speech at LBSNA | | |
|
| 11 | Offering-Responding to offers | | |
|
| 12 | Apologizing & Forgiving, Complaining; | | |
|
| 13 | Talking about likes and dislikes | | |
|
| 14 | Self-introduction Mock | | |
|  | Situational Conversation | | |
| 15 | Revision | | |
|  | Revision | | |

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|  | **PERFORMA OF LESSON PLAN** | | | | | | |
|  | **NAME OF THE FACULTY : SARITA MANN (Lecturer)** | | | | | | |
|  | **DISCIPLINE : Elect., Mech A, Auto,** | | | | | | |
|  | **SEMESTER :FIRST** | | | | | | |
|  | **SUBJECT : APPLIED PHYSICS** | | | | | | |
|  | **LESSION PLAN DURATION : 15 WEEKS** | | | | | | |
|  | **WORK LOAD PER WEEK : Lectures = 2+2+2 Practicals = 4+4 +4** | | | | | | |
| **WEEK** | |  | | **THEORY** | | **PRACTICAL** | |
| **LECTURE DAY** |  | | **TOPIC (WITH ASSIGNMENT & TESTS)** |  | **TOPIC** |
| **1** | | 1 |  | | Definition of physics and physical quantities | 1 | Familiarization of measuring instruments-Vernier caliper, screw gauge spherometer |
| 2 |  | | Units-fundamental and derived units |
| **2** | | 3 |  | | System of units-FPS, CGS, MKS, SI | 2 | To find the diameter of a solid cylinder using Vernier caliper |
| 4 |  | | Dimensions and dimensional formulae |
| **3** | | 5 |  | | SI unit and dimensions of some physical quantities | 3 | To find the internal diameter and depth of a beaker using Vernier calliper |
| 6 |  | | Dimensional equations and principle of homogeneity |
| **4** | | 7 |  | | scalar and vector quantities with examples, Vector addition-triangle and parallelogram law and multiplication | 4 | Checking of files and viva voce |
| 8 |  | | Force, its units and resolution of force, Newton’s laws of motion with examples |
| **1st Sessional test** | | | | | | | |
| **5** | | 9 |  | | Discussion of sessional | 5 | To find the diameter of wire using screw gauge |
| 10 |  | | Linear momentum, impulse and law of conservation of momentum |
| **6** | | 11 |  | | Angular displacement, velocity, acceleration, time period, frequency | 6 | To find thickness of paper using screw gauge. |
| 12 |  | | Relation between linear and angular velocity |
| **7** | | 13 |  | | Centripetal and centrifugal force and banking of roads | 7 | Checking of files & viva-voce |
| 14 |  | | Work-definition, formula and unit and types of work, Friction-definition and daily life examples |
| **8** | | 15 |  | | Energy-definition, units and transformation of energy, Kinetic energy and potential energy | 8 | To determine the thickness of glass strip using a spherometer |
| 16 |  | | Law of conservation of energy with derivation, Power-definition, formula and units |
| **2nd Sessional test** | | | | | | | |
| **9** | | 17 |  | | Discussion of sessional | 9 | To determine the radius of curvature of a given spherical surface using spherometer |
|  | | 18 |  | | Elasticity and plasticity, deforming and restoring force |
| **10** | | 19 |  | | Definition of stress and strain, Hooke’s law | **10** | To verify parallelogram law of forces |
|  | | 20 |  | | Types of modulus of elasticity |
| **11** | | 21 |  | | Pressure-atmospheric pressure, gauge pressure,Pascal’s law | 11 | To determine atmospheric pressure using Fortin’s barometer |
|  | | 22 |  | | Surface tension and applications |
| **12** | | 23 |  | | Viscosity-definition, examples and effect of temperature | 12 | To determine force constant of a spring using Hooke’s law |
|  | | 24 |  | | Definition of heat and temperature, Difference between heat and temperature |
| **13** | | 25 |  | | Principle and working of mercury thermometer | 13 | Checking of files & viva-voce |
|  | | 26 |  | | Modes of transfer of heat-conduction, convection, radiation , Different scales of temperature and their relationship |
| **3rd Sessional test** | | | | | | | |
| **14** | | 27 |  | | Revision of Unit 1 and Unit 2 | 14 | To measure room temperature with the help of thermometer and convert to different scales |
|  | | 28 |  | | Revision of Unit 3 and Unit 4 |
| **15** | | 29 |  | | Revision of Unit 5 and numerical problem | 15 | Revision of Practicals |
|  | | 30 |  | | Discussion of previous year Q. Papers |

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|  | **PERFORMA OF LESSON PLAN** | | | | | | |
|  | **NAME OF THE FACULTY : Mayur Rohilla (Guest Lecturer)** | | | | | | |
|  | **DISCIPLINE : Mech B, Civil A, ECE, Plastic** | | | | | | |
|  | **SEMESTER :FIRST** | | | | | | |
|  | **SUBJECT : APPLIED PHYSICS** | | | | | | |
|  | **LESSION PLAN DURATION : 15 WEEKS** | | | | | | |
|  | **WORK LOAD PER WEEK : Lectures = 2+2+2+2 Practicals = 4+4+4** | | | | | | |
| **WEEK** | |  | | **THEORY** | | **PRACTICAL** | |
| **LECTURE DAY** |  | | **TOPIC (WITH ASSIGNMENT & TESTS)** |  | **TOPIC** |
| **1** | | 1 |  | | Definition of physics and physical quantities | 1 | Familiarization of measuring instruments-Vernier caliper, screw gauge spherometer |
| 2 |  | | Units-fundamental and derived units |
| **2** | | 3 |  | | System of units-FPS, CGS, MKS, SI | 2 | To find the diameter of a solid cylinder using Vernier caliper |
| 4 |  | | Dimensions and dimensional formulae |
| **3** | | 5 |  | | SI unit and dimensions of some physical quantities | 3 | To find the internal diameter and depth of a beaker using Vernier calliper |
| 6 |  | | Dimensional equations and principle of homogeneity |
| **4** | | 7 |  | | scalar and vector quantities with examples, Vector addition-triangle and parallelogram law and multiplication | 4 | Checking of files and viva voce |
| 8 |  | | Force, its units and resolution of force, Newton’s laws of motion with examples |
| **1st Sessional test** | | | | | | | |
| **5** | | 9 |  | | Discussion of sessional | 5 | To find the diameter of wire using screw gauge |
| 10 |  | | Linear momentum, impulse and law of conservation of momentum |
| **6** | | 11 |  | | Angular displacement, velocity, acceleration, time period, frequency | 6 | To find thickness of paper using screw gauge. |
| 12 |  | | Relation between linear and angular velocity |
| **7** | | 13 |  | | Centripetal and centrifugal force and banking of roads | 7 | Checking of files & viva-voce |
| 14 |  | | Work-definition, formula and unit and types of work, Friction-definition and daily life examples |
| **8** | | 15 |  | | Energy-definition, units and transformation of energy, Kinetic energy and potential energy | 8 | To determine the thickness of glass strip using a spherometer |
| 16 |  | | Law of conservation of energy with derivation, Power-definition, formula and units |
| **2nd Sessional test** | | | | | | | |
| **9** | | 17 |  | | Discussion of sessional | 9 | To determine the radius of curvature of a given spherical surface using spherometer |
|  | | 18 |  | | Elasticity and plasticity, deforming and restoring force |
| **10** | | 19 |  | | Definition of stress and strain, Hooke’s law | **10** | To verify parallelogram law of forces |
|  | | 20 |  | | Types of modulus of elasticity |
| **11** | | 21 |  | | Pressure-atmospheric pressure, gauge pressure,Pascal’s law | 11 | To determine atmospheric pressure using Fortin’s barometer |
|  | | 22 |  | | Surface tension and applications |
| **12** | | 23 |  | | Viscosity-definition, examples and effect of temperature | 12 | To determine force constant of a spring using Hooke’s law |
|  | | 24 |  | | Definition of heat and temperature, Difference between heat and temperature |
| **13** | | 25 |  | | Principle and working of mercury thermometer | 13 | Checking of files & viva-voce |
|  | | 26 |  | | Modes of transfer of heat-conduction, convection, radiation , Different scales of temperature and their relationship |
| **3rd Sessional test** | | | | | | | |
| **14** | | 27 |  | | Revision of Unit 1 and Unit 2 | 14 | To measure room temperature with the help of thermometer and convert to different scales |
|  | | 28 |  | | Revision of Unit 3 and Unit 4 |
| **15** | | 29 |  | | Revision of Unit 5 and numerical problem | 15 | Revision of Practicals |
|  | | 30 |  | | Discussion of previous year Q. Papers |

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| **PERFORMA OF LESSON PLAN** | | | | | | |
| **NAME OF THE FACULTY : Lavaney (Guest Lecturer)** | | | | | | |
| **DISCIPLINE : Comp, Civil B, Arch, Plastic(Only Practical)** | | | | | | |
| **SEMESTER :FIRST** | | | | | | |
| **SUBJECT : APPLIED PHYSICS** | | | | | | |
| **LESSION PLAN DURATION : 15 WEEKS** | | | | | | |
| **WORK LOAD PER WEEK : Lectures = 2+2+2 Practicals = 4+4+4+2** | | | | | | |
| **WEEK** |  | | **THEORY** | | **PRACTICAL** | | |
| **LECTURE DAY** |  | | **TOPIC (WITH ASSIGNMENT & TESTS)** |  | **TOPIC** | |
| **1** | 1 |  | | Definition of physics and physical quantities | 1 | Familiarization of measuring instruments-Vernier caliper, screw gauge spherometer | |
| 2 |  | | Units-fundamental and derived units |
| **2** | 3 |  | | System of units-FPS, CGS, MKS, SI | 2 | To find the diameter of a solid cylinder using Vernier caliper | |
| 4 |  | | Dimensions and dimensional formulae |
| **3** | 5 |  | | SI unit and dimensions of some physical quantities | 3 | To find the internal diameter and depth of a beaker using Vernier calliper | |
| 6 |  | | Dimensional equations and principle of homogeneity |
| **4** | 7 |  | | scalar and vector quantities with examples, Vector addition-triangle and parallelogram law and multiplication | 4 | Checking of files and viva voce | |
| 8 |  | | Force, its units and resolution of force, Newton’s laws of motion with examples |
| **1st Sessional test** | | | | | | | |
| **5** | 9 |  | | Discussion of sessional | 5 | To find the diameter of wire using screw gauge | |
| 10 |  | | Linear momentum, impulse and law of conservation of momentum |
| **6** | 11 |  | | Angular displacement, velocity, acceleration, time period, frequency | 6 | To find thickness of paper using screw gauge. | |
| 12 |  | | Relation between linear and angular velocity |
| **7** | 13 |  | | Centripetal and centrifugal force and banking of roads | 7 | Checking of files & viva-voce | |
| 14 |  | | Work-definition, formula and unit and types of work, Friction-definition and daily life examples |
| **8** | 15 |  | | Energy-definition, units and transformation of energy, Kinetic energy and potential energy | 8 | To determine the thickness of glass strip using a spherometer | |
| 16 |  | | Law of conservation of energy with derivation, Power-definition, formula and units |
| **2nd Sessional test** | | | | | | | |
| **9** | 17 |  | | Discussion of sessional | 9 | To determine the radius of curvature of a given spherical surface using spherometer | |
|  | 18 |  | | Elasticity and plasticity, deforming and restoring force |
| **10** | 19 |  | | Definition of stress and strain, Hooke’s law | **10** | To verify parallelogram law of forces | |
|  | 20 |  | | Types of modulus of elasticity |
| **11** | 21 |  | | Pressure-atmospheric pressure, gauge pressure,Pascal’s law | 11 | To determine atmospheric pressure using Fortin’s barometer | |
|  | 22 |  | | Surface tension and applications |
| **12** | 23 |  | | Viscosity-definition, examples and effect of temperature | 12 | To determine force constant of a spring using Hooke’s law | |
|  | 24 |  | | Definition of heat and temperature, Difference between heat and temperature |
| **13** | 25 |  | | Principle and working of mercury thermometer | 13 | Checking of files & viva-voce | |
|  | 26 |  | | Modes of transfer of heat-conduction, convection, radiation , Different scales of temperature and their relationship |
| **3rd Sessional test** | | | | | | | |
| **14** | 27 |  | | Revision of Unit 1 and Unit 2 | 14 | To measure room temperature with the help of thermometer and convert to different scales | |
|  | 28 |  | | Revision of Unit 3 and Unit 4 |
| **15** | 29 |  | | Revision of Unit 5 and numerical problem | 15 | Revision of Practicals | |

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| **PERFORMA OF LESSON PLAN** | | | | |
| **Subject: Applied Maths** | | | | |
| **Name of Faculty: Mr. Pushpendra Pratap (HOD App.)** | | | | |
| **Discipline: Civil B, Mech A, Elect** | | | | |
| **Work Load Per week: 4+4+4** | | | | |
|  | | | | |
| **Week** | **DAY** | **Theory (Topics)** | **Coverage Date** | |
| 1 | 1 | Definition of complex number, real and imaginary parts |  | |
| 2 | Polar and Cartesian Form and their inter conversion |  | |
| 3 | Conjugate of a complex number |  | |
| 4 | Modulus/argument of complex No |  | |
| 2 | 1 | Addition subtraction, multiplication and division of complex number. |  | |
| 2 | Numericals complex number And Assignment-I |  | |
| 3 | Fundamental Rules of Logarithms |  | |
| 4 | Logarithm Conversation Log to exp and vice versa |  | |
| 3 | 1 | Numericals Logarithms |  | |
| 2 | Numericals And Assignment-II |  | |
| 3 | Factorial |  | |
| 4 | Permutation, combination |  | |
| 4 | 1 | Binomial theorem expansion |  | |
| 2 | General Term, Middle Term/ Co- eff of xn |  | |
| 3 | Binomial theorem for any index And Assignment-III |  | |
| 4 | Revision |  | |
| **1st Sessional test** | | |  | |
| 5 | 1 | Matrics: Define/Types |  | |
| 2 | Addition subtraction of Matrices |  | |
| 3 | Multiplication of Matrices |  | |
| 4 | Determinants (up to 2 order) by laplace method |  | |
| 6 | 1 | Solution of equation by Cramer’s Rule And Assignment-IV |  | |
| 2 | Trigonometry: Concept of angle: measurement of angle |  | |
| 3 | Conversion of angles |  | |
| 4 | Fundamental Identities, Allied angles |  | |
| 7 | 1 | Addition and subtraction formula |  | |
| 2 | Addition and subtraction formula Numericals |  | |
| 3 | Transformation formula |  | |
| 4 | Numericals |  | |
| 8 | 1 | Numericals |  | |
| 2 | Application: Angle of elevation/height/distance |  | |
| 3 | Numericals And Assignment-V |  | |
| 4 | Revision |  | |
| **2nd Sessional test** | | |  | |
| 9 | 1 | Point: Distance Formula |  | |
| 2 | Mid Point Formula |  | |
| 3 | Area of Triangle |  | |
| 4 | Straight line: Slope of a line |  | |
| 10 | 1 | Equation of straight line in various standards forms |  | |
| 2 | Equation of straight line in various standards forms |  | |
| 3 | Intersection of two straight lines, concurrency of lines |  | |
| 4 | Angle between two straight lines, parallel and perpendicular lines |  | |
| 11 | 1 | Perpendicular distance formula, | | |
| 2 | Conversion of general form of equation to the various forms And Assignment-VI | |  |
| 3 | Circle: General equation of a circle | |  |
| 4 | Centre and radius of circle | |  |
| 12 | 1 | Find Standard equation of circle and centre and radius | |  |
| 2 | Find general equation of circle and centre and radius | |  |
| 3 | To find the equation of a circle, given three points lying on it | |  |
| 4 | To find the equation of a circle given coordinates of end points of a diameter, Assignment-VII | |  |
| 13 | 1 | Theoretical Introduction of MATLAB | |  |
| 2 | Addition and subtraction of values Trigonometric functions | |  |
| 3 | Addition and subtraction of values Inverse Trigonometric functions | |  |
| 4 | General Practice And Assignment-VIII | |  |
|  |  | **3rd Sessional test** | |  |
| 14 | 1 | Practice of Previous Question Papers | |  |
| 2 | Practice of Previous Question Papers | |  |
| 3 | Practice of Previous Question Papers | |  |
| 4 | Practice of Previous Question Papers | |  |
| 15 | 1 | Revision | |  |
| 2 | Revision | |  |
| 3 | Revision | |  |
| 4 | Revision | |  |

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| **PERFORMA OF LESSON PLAN** | | | | |
| **Subject: Applied Maths** | | | | |
| **Name of Faculty: Mr. Roshan Lal ( T.P.O)** | | | | |
| **Discipline: ECE, Comp** | | | | |
| **Work Load Per week: 4+4** | | | | |
|  | | | | |
| **Week** | **DAY** | **Theory (Topics)** | **Coverage Date** | |
| 1 | 1 | Definition of complex number, real and imaginary parts |  | |
| 2 | Polar and Cartesian Form and their inter conversion |  | |
| 3 | Conjugate of a complex number |  | |
| 4 | Modulus/argument of complex No |  | |
| 2 | 1 | Addition subtraction, multiplication and division of complex number. |  | |
| 2 | Numericals complex number And Assignment-I |  | |
| 3 | Fundamental Rules of Logarithms |  | |
| 4 | Logarithm Conversation Log to exp and vice versa |  | |
| 3 | 1 | Numericals Logarithms |  | |
| 2 | Numericals And Assignment-II |  | |
| 3 | Factorial |  | |
| 4 | Permutation, combination |  | |
| 4 | 1 | Binomial theorem expansion |  | |
| 2 | General Term, Middle Term/ Co- eff of xn |  | |
| 3 | Binomial theorem for any index And Assignment-III |  | |
| 4 | Revision |  | |
| **1st Sessional test** | | |  | |
| 5 | 1 | Matrics: Define/Types |  | |
| 2 | Addition subtraction of Matrices |  | |
| 3 | Multiplication of Matrices |  | |
| 4 | Determinants (up to 2 order) by laplace method |  | |
| 6 | 1 | Solution of equation by Cramer’s Rule And Assignment-IV |  | |
| 2 | Trigonometry: Concept of angle: measurement of angle |  | |
| 3 | Conversion of angles |  | |
| 4 | Fundamental Identities, Allied angles |  | |
| 7 | 1 | Addition and subtraction formula |  | |
| 2 | Addition and subtraction formula Numericals |  | |
| 3 | Transformation formula |  | |
| 4 | Numericals |  | |
| 8 | 1 | Numericals |  | |
| 2 | Application: Angle of elevation/height/distance |  | |
| 3 | Numericals And Assignment-V |  | |
| 4 | Revision |  | |
| **2nd Sessional test** | | |  | |
| 9 | 1 | Point: Distance Formula |  | |
| 2 | Mid Point Formula |  | |
| 3 | Area of Triangle |  | |
| 4 | Straight line: Slope of a line |  | |
| 10 | 1 | Equation of straight line in various standards forms |  | |
| 2 | Equation of straight line in various standards forms |  | |
| 3 | Intersection of two straight lines, concurrency of lines |  | |
| 4 | Angle between two straight lines, parallel and perpendicular lines |  | |
| 11 | 1 | Perpendicular distance formula, | | |
| 2 | Conversion of general form of equation to the various forms And Assignment-VI | |  |
| 3 | Circle: General equation of a circle | |  |
| 4 | Centre and radius of circle | |  |
| 12 | 1 | Find Standard equation of circle and centre and radius | |  |
| 2 | Find general equation of circle and centre and radius | |  |
| 3 | To find the equation of a circle, given three points lying on it | |  |
| 4 | To find the equation of a circle given coordinates of end points of a diameter, Assignment-VII | |  |
| 13 | 1 | Theoretical Introduction of MATLAB | |  |
| 2 | Addition and subtraction of values Trigonometric functions | |  |
| 3 | Addition and subtraction of values Inverse Trigonometric functions | |  |
| 4 | General Practice And Assignment-VIII | |  |
|  |  | **3rd Sessional test** | |  |
| 14 | 1 | Practice of Previous Question Papers | |  |
| 2 | Practice of Previous Question Papers | |  |
| 3 | Practice of Previous Question Papers | |  |
| 4 | Practice of Previous Question Papers | |  |
| 15 | 1 | Revision | |  |
| 2 | Revision | |  |
| 3 | Revision | |  |
| 4 | Revision | |  |

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| **PERFORMA OF LESSON PLAN** | | | | |
| **Subject: Applied Maths** | | | | |
| **Name of Faculty: Ms. Kanupriya (Lecturer)** | | | | |
| **Discipline: Auto, Arch, Civil A, Mech B, Plastic** | | | | |
| **Work Load Per week: 4+4+4+4+4** | | | | |
|  | | | | |
| **Week** | **DAY** | **Theory (Topics)** | **Coverage Date** | |
| 1 | 1 | Definition of complex number, real and imaginary parts |  | |
| 2 | Polar and Cartesian Form and their inter conversion |  | |
| 3 | Conjugate of a complex number |  | |
| 4 | Modulus/argument of complex No |  | |
| 2 | 1 | Addition subtraction, multiplication and division of complex number. |  | |
| 2 | Numericals complex number And Assignment-I |  | |
| 3 | Fundamental Rules of Logarithms |  | |
| 4 | Logarithm Conversation Log to exp and vice versa |  | |
| 3 | 1 | Numericals Logarithms |  | |
| 2 | Numericals And Assignment-II |  | |
| 3 | Factorial |  | |
| 4 | Permutation, combination |  | |
| 4 | 1 | Binomial theorem expansion |  | |
| 2 | General Term, Middle Term/ Co- eff of xn |  | |
| 3 | Binomial theorem for any index And Assignment-III |  | |
| 4 | Revision |  | |
| **1st Sessional test** | | |  | |
| 5 | 1 | Matrics: Define/Types |  | |
| 2 | Addition subtraction of Matrices |  | |
| 3 | Multiplication of Matrices |  | |
| 4 | Determinants (up to 2 order) by laplace method |  | |
| 6 | 1 | Solution of equation by Cramer’s Rule And Assignment-IV |  | |
| 2 | Trigonometry: Concept of angle: measurement of angle |  | |
| 3 | Conversion of angles |  | |
| 4 | Fundamental Identities, Allied angles |  | |
| 7 | 1 | Addition and subtraction formula |  | |
| 2 | Addition and subtraction formula Numericals |  | |
| 3 | Transformation formula |  | |
| 4 | Numericals |  | |
| 8 | 1 | Numericals |  | |
| 2 | Application: Angle of elevation/height/distance |  | |
| 3 | Numericals And Assignment-V |  | |
| 4 | Revision |  | |
| **2nd Sessional test** | | |  | |
| 9 | 1 | Point: Distance Formula |  | |
| 2 | Mid Point Formula |  | |
| 3 | Area of Triangle |  | |
| 4 | Straight line: Slope of a line |  | |
| 10 | 1 | Equation of straight line in various standards forms |  | |
| 2 | Equation of straight line in various standards forms |  | |
| 3 | Intersection of two straight lines, concurrency of lines |  | |
| 4 | Angle between two straight lines, parallel and perpendicular lines |  | |
| 11 | 1 | Perpendicular distance formula, | | |
| 2 | Conversion of general form of equation to the various forms And Assignment-VI | |  |
| 3 | Circle: General equation of a circle | |  |
| 4 | Centre and radius of circle | |  |
| 12 | 1 | Find Standard equation of circle and centre and radius | |  |
| 2 | Find general equation of circle and centre and radius | |  |
| 3 | To find the equation of a circle, given three points lying on it | |  |
| 4 | To find the equation of a circle given coordinates of end points of a diameter, Assignment-VII | |  |
| 13 | 1 | Theoretical Introduction of MATLAB | |  |
| 2 | Addition and subtraction of values Trigonometric functions | |  |
| 3 | Addition and subtraction of values Inverse Trigonometric functions | |  |
| 4 | General Practice And Assignment-VIII | |  |
|  |  | **3rd Sessional test** | |  |
| 14 | 1 | Practice of Previous Question Papers | |  |
| 2 | Practice of Previous Question Papers | |  |
| 3 | Practice of Previous Question Papers | |  |
| 4 | Practice of Previous Question Papers | |  |
| 15 | 1 | Revision | |  |
| 2 | Revision | |  |
| 3 | Revision | |  |
| 4 | Revision | |  |

**PERFORMA OF LESSON PLAN**

**NAME OF THE FACULTY : Mr. Ravinder Kumar (Lecturer)**

**DISCIPLINE : Mech A, Mech B, Auto**

**SEMESTER : 1st**

**SUBJECT : ESDM, SCA**

**LESSION PLAN DURATION : 15 WEEKS**

**WORK LOAD PER WEEK : Lectures = 02 +02+02, Mech-A & Mech-B (SCA-01+01)**

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| **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 |
| **1st sessional test** | | | | |
| **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 Soil and Noise Pollution |
| **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 |
| **2nd sessional test** | | | | |
| **9** | 17 |  | | Impact of Energy Usage on EnvironmentGlobal 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 & Carbon footprint. |
| **11** | 21 |  | | Revision of Impact of Energy Usage on Environment |
|  | 22 |  | | Natural Disaster: such as Flood, Cyclone |
| **12** | 23 |  | | Natural Disaster: Earthquakes and Landslides 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 : Ravinder Kumar (Lecturer)** | | | |
| **DISCIPLINE : Civil B, Plastic** | | | |
| **SEMESTER : First** | | | |
| **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 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 | |

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| **PERFORMA OF LESSON PLAN** | | | | | |
| **NAME OF THE FACULTY : Ravinder Kumar (Lecturer)** | | | | | |
| **DISCIPLINE : Civil B, Plastic** | | | | | |
| **SEMESTER : First** | | | | | |
| **SUBJECT : APPLIED CHEMISTRY (Practical)** | | | | | |
| **LESSION PLAN DURATION : 15 WEEKS** | | | | | |
| **WORK LOAD PER WEEK : Practicals = 2+2** | | | | | |
| **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 | | |

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| **PERFORMA OF LESSON PLAN** | | | |
| **NAME OF THE FACULTY : Sunita Rani (Senior Lecturer)** | | | |
| **DISCIPLINE : Arch, Civil A** | | | |
| **SEMESTER : First** | | | |
| **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 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 | |

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| **PERFORMA OF LESSON PLAN** | | | | | |
| **NAME OF THE FACULTY : Sunita Rani (Senior Lecturer)** | | | | | |
| **DISCIPLINE : Arch, Civil-A, Civil-B** | | | | | |
| **SEMESTER : First** | | | | | |
| **SUBJECT : APPLIED CHEMISTRY (Practical)** | | | | | |
| **LESSION PLAN DURATION : 15 WEEKS** | | | | | |
| **WORK LOAD PER WEEK : Practicals = 4+4+2** | | | | | |
| **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 | | |