# TENTATIVE LESSON PLAN: R201101

| Course Title: MATHEMATICS – 1 | | |
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| **Section : CIVIL** | **Date : 04-01-2021** | **Page No :** 01 of 02 |
| **Revision No :** 00 | **Prepared By : K.BASAVARAJU** | **Approved By : HOD** |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: SEQUENCES, SERIES AND MEAN VALUE THEOREMS**<br>**CO1:utilize mean value theorems to real life problems**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| **1** | SEQUENCES AND SERIES:<br>Convergence and Divergence | From:<br>06-01-2021<br><br>To:<br>23-01-2021 | Lecture interspersed with discussions |
| **2** | Ratio test | | |
| **3** | Comparison test | | |
| **4** | Integral test | | |
| **5** | Cauchy 's root test | | |
| **6** | Alternating series | | |
| **7** | Leibnitz 's rule | | |
| **8** | Mean Value Theorems:<br>Rolle 's Theorem | | |
| **9** | Lagrange 's mean value theorem | | |
| **10** | Cauchy 's mean value theorem | | |
| **11** | Taylor 's and Maclaurin 's theorems with remainders | | |
| **UNIT-II DIFFERENTIAL EQUATIONS OF FIRST ORDER AND FIRST DEEGREE**<br>**CO2: Solve the differential equations related to various engineering fields**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 12 | Introduction: Differential Equations of First order first degree | From:<br>25-01-2021<br><br>To:<br><br>06-02-2021 | Lecture interspersed with discussions |
| 13 | Exact Equations – Conditions of Exactness | | |
| 14 | Equations reducible to Exact | | |
| 15 | Non Exact Differential Equations | | |
| 16 | Linear Differential Equations of first order | | |
| 17 | Bernouli Equation | | |
| 18 | Equations reducible to linear | | |
| 19 | Orthogonal Trajectories - Cartesian | | |
| 20 | Orthogonal Trajectories - Polar | | |
| 21 | Newton's law of cooling | | |
| 22 | Natural growth or decay | | |
| 23 | Electrical Circuits | | |
| **UNIT-III : LINEAR DIFFERENTIAL EQUATIONS OF HIGHER ORDER** | | | |

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| **UNIT-III: LINEAR DIFFERENTIAL EQUATIONS OF HIGHER ORDER** | | | |
| **CO3:Solve the differential equations related to various engineering fields** | | | |
| **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 24 | Linear DE of constant coefficients | From: 08-02-2021 To: 13-02-2021 & From: 22-02-2021 To: 06-03-2021 | Lecture interspersed with discussions |
| 25 | Solutions of $f(D) = Q(x), Q(x) = e^{ax}$ | | |
| 26 | $Q(x) = \sin ax \ or \ \cos ax$ | | |
| 27 | $Q(x) = x^n$ | | |
| 28 | $Q(x) = e^{ax}V(x)$ | | |
| 29 | $Q(x) = xV(x)$ | | |
| 30 | $Q(x) = x^n \sin ax \ or \ \cos ax$ | | |
| 31 | Method of variation of parameters | | |
| 32 | Applications: LCR Circuit | | |
| **UNIT-IVPARTIAL DIFFERENTIATION** | | | |
| **CO4:Familirize with functions of several variables which is useful in optimization** | | | |
| **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 33 | Homogeneous function; Euler's Theorem | From: 08-03-2021 To: 27-03-2021 | Lecture interspersed with discussions |
| 34 | Total Derivative; Chain rule | | |
| 35 | Taylor's mean value theorems | | |
| 36 | Maclaurin's series | | |
| 37 | Jacobians, formulae | | |
| 38 | Functional dependence | | |
| 39 | Maxima minima of two variables | | |
| 40 | Langranges method | | |
| **UNIT-V:MULTIPLE INTEGRALS** | | | |
| **CO5:Apply double integration techniques in evaluating areas bounded by region** | | | |
| **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 41 | Introduction | From: 29-03-2021 To:17-03-2021 | Lecture interspersed with discussions |
| 42 | Double integrals | | |
| 43 | Triple integrals | | |
| 44 | Change of order of integration | | |
| 45 | Change of variable | | |
| 46 | Applications: Finding areas | | |
| 47 | Finding volumes | | |

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# TENTATIVE LESSON PLAN: R201102

| Course Title: COMMUNICATIVE ENGLISH | | |
|---|---|---|
| Section : CE | Date : 08-01-2021 | Page No : 01 of 03 |
| Revision No : 00 | Prepared By: N. Gayathri | Approved By : HOD |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: A Drawer full of happiness, Deliverance by Premchand**<br>**CO1: Facilitate effective listening skills for better comprehension of academic lectures and English spoken by native speakers**<br>**TB: —Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| **1** | **A Drawer full of happiness** | 08-01-21 | Lecture interspersed with discussions |
| **2** | **Listening : Short Audio Texts** | 08-01-21 | |
| **3** | **Speaking :** Asking and answering questions | 08-01-21 | |
| **4** | **Reading : Skimming and Scanning** | 19-01-21 | |
| **5** | **Reading for Writing :** Paragraph writing | 19-01-21 | |
| **6** | **Vocabulary :** Technical Vocabulary | 20-01-21 | |
| **7** | **Grammar :** Content words and function words | 20-01-21 | |
| **8** | The Deliverance : Munshi Prem Chand | 21-01-21 | |
| **9** | Long Answers | 25-01-21 | |
| **10** | Short Answers | 27-01-21 | |
| **UNIT-II Nehru's letter to his daughter Indira on her birthday, Bosom Friend by Hira Bansode**<br>**CO2: Focus on appropriate reading strategies for comprehension of various academic texts and authentic materials**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 12 | **Nehru's letter to his daughter Indira on her birthday** | | Lecture interspersed |
| 13 | **Listening:** Answering a series of questions | 28-01-21 | |
| 14 | **Speaking:** Discussion in pairs | 01-02-21 | |
| 15 | **Reading**: Identifying sequence of ideas | 02-02-21 | |

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| 16 | **Reading for Writing**: Summarizing | 03-02-21 | with discussions |
| 17 | **Vocabulary**: Technical vocabulary | 04-02-21 | |
| 18 | **Grammar**: Use of articles | 05-02-21 | |
| 19 | Bosom Friend Hira Bansode | 08-02-21 | |
| 20 | Long Answers | 10-02-21 | |
| 21 | Short Answers | 10-02-21 | |
| **UNIT-III: Stephen Hawking-Positivity "Benchmark", Shakespeare's Sister by Virginia Woolf**<br>**CO3: Help improve speaking skills through participation in activities such as role plays, discussions and structured talks/oral presentations**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 24 | **Stephen Hawking-Positivity 'Benchmark** | 11-02-21 | Lecture interspersed with discussions |
| 25 | **Listening:** Listening for global comprehension | 15-02-21 | |
| 26 | **Speaking:** Discussing specific topics in pairs | 16-02-21 | |
| 27 | **Reading**: Reading a text in detail | 17-02-21 | |
| 28 | **Reading for Writing**: Summarizing | 19-02-21 | |
| 29 | **Vocabulary**: Technical vocabulary | 22-02-21 | |
| 30 | **Grammar**: Verbs - tenses; subject-verb agreement | 22-02-21 | |
| 31 | **Shakespeare's Sister by Virginia Woolf** | 24-02-21 | |
| 32 | Long Answers | 26-02-21 | |
| **UNIT IV Liking a Tree, Unbowed: Wangari Maathai, Telephone Conversation-Wole Soyinka**<br>**CO4: Impart effective strategies for good writing and demonstrate the same in summarizing, writing well organized essays, record and report useful information.**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 33 | **Like a Tree, Unbowed: Wangari Maathai-biography** | | Lecture interspersed with |
| 34 | **Listening:** Making predictions while listening | 03-03-21 | |
| 35 | **Speaking:** Role plays for practice of conversational | 04-03-21 | |

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| | English | | discussions |
| 36 | **Reading**: Studying the use of graphic elements | 08-03-21 | |
| 37 | **Reading for Writing**: Information transfer | 10-03-21 | |
| 38 | **Vocabulary**: Technical vocabulary | 22-03-21 | |
| 39 | **Grammar**: Quantifying expressions | 24-03-21 | |
| 40 | Telephone Conversation: Wole Soyinka | 26-03-21 | |
| **UNIT-V: Stay Hungry-Stay foolish, Still I Rise by Maya Angelou**<br>**CO5: Provide knowledge of grammatical structures and vocabulary and encourage their appropriate use in speech and writing**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 41 | **Stay Hungry-Stay foolish** | 30-03-21 | Lecture interspersed with discussions |
| 42 | **Listening** Identifying key terms | 01-04-21 | |
| 43 | **Speaking:** Formal oral presentations | 05-04-21 | |
| 44 | **Reading**: Reading for comprehension | 08-04-21 | |
| 45 | **Reading for Writing**: Writing academic proposals | 09-04-21 | |
| 46 | **Vocabulary**: Technical vocabulary | 10-04-21 | |
| 47 | **Grammar**: Editing short texts | 12-04-21 | |

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# TENTATIVE LESSON PLAN: R201103

| Course Title: Engineering Physics | | | |
|---|---|---|---|
| Section :CE | Date :08.01.2021 | | Page No :00 |
| Revision No :00 | Prepared By:B.NAGA JYOTHIRMAI | | Approved By : HOD |
| Tools: | | | |

| No. of Periods | TOPIC | DATE | Mode of Delivery |
|---|---|---|---|
| UNIT-I | **WAVE OPTICS**<br>**CEO1:**To identify the importance of the optical phenomenon i.e. interference, diffraction and polarization related to its Engineering applications. | | Lecture interspersed with discussions |
| 1 | **INTERFERENCE:**Introduction | **From:** | |
| 2 | Principle of Superposition | **08/01/2021** | |
| 3 | Coherent Sources-Types | | |
| 4 | Interference- Types | | |
| 5 | Interference in Thin Films | **To:** | |
| 6 | Colours in Thin Film | | |
| 7 | Newton's Rings | **30/01/2021** | |
| 8 | Applications of Interference | | |
| 9 | Problems | | |
| 10 | **Diffraction:** Introduction | | |
| 11 | Fresnel and Fraunhoffer Diffraction | | Lecture interspersed with discussions |
| 12 | Fraunhoffer diffraction at single slit | | |
| 13 | Fraunhoffer diffraction at single slit | | |
| 14 | Fraunhoffer diffraction at Double Slit | | |
| 15 | Fraunhoffer diffraction at N-Slits | | |
| 16 | Grating Equation | | |
| 17 | Dispersive Power of Grating | | |
| 18 | Resolving Power of Grating | | |
| 19 | Problems | | |
| 20 | **Polarization :**Introduction | | |
| 21 | Types of Polarization | | |
| 22 | Polarization by Reflection, Refraction | | |
| 23 | Polarization by Duoble Refraction | | Lecture interspersed with discussions |
| 24 | Nicol Prism | | |
| 25 | Quarter Wave & Half Wave Plates | | |
| 26 | Problems | | |
| UNIT-II | **LASERS AND FIBER OPTICS**<br>**CEO2:**Understand the mechanism of stimulated emission of light, utilization of lasers as coherent light sources for low and high energy applications, study of propagation of light through optical fibers and their implications in optical communications. | | Lecture interspersed with discussions |
| 27 | **Lasers :** Introduction | **From:** | |
| 28 | Characteristics of Laser | | |
| 29 | Spontaneous and Stimulated emission | | |
| 30 | Einstein's Coefficients | | |
| 31 | Population Inversion, Lasing action | **01-02-2021** | |

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| 32 | Pumping Mechanism-Pumping method | **To:**<br><br>**13-02-2021** | |
| 33 | Ruby Laser | | |
| 34 | Helium Neon Laser | | |
| 35 | Applications of Lasers | | |
| 36 | **Fiber Optics:** Introduction | | |
| 37 | Principle of Optical Fiber | | |
| 38 | Acceptance angle | | |
| 39 | Numerical Aperture | | |
| 40 | Classifications optical fibers based on refractive index profile and modes | | |
| 41 | Propagation of electromagnetic wave through optical fibers. | | |
| 42 | Applications,Problems | | |
| **UNIT-III** | **ENGINEERING MATERIALS**<br><br>**CEO3:**To explain the significant concepts of dielectric and magnetic materials that leads to potential applications in the emerging micro devices. | | Lecture interspersed with discussions |
| 43 | **Dielectric Materials:** Introduction, | **From:**<br>**22-02-2021**<br>**To**<br>**10-03-2021** | |
| 44 | Dielectric polarization | | |
| 45 | Types of polarizations- Electronic polarization | | |
| 46 | Ionic polarisation, Orientation polarizations | | |
| 47 | Lorentz internal field | | |
| 48 | Clausius-Mossotti equation | | |
| 49 | Piezoelectricity,Problems | | |
| 50 | **Magnetic Materials:** Introduction | | Lecture interspersed with discussions |
| 51 | Magnetic dipole moment, Magnetization, Magnetic susceptibility and permeability | | |
| 52 | Origin of permanent magnetic moment | | |
| 53 | Classification of magnetic materials:Dia,Para,Ferro | | |
| 54 | COMM: Antiferro and Ferri magnetic materials | | |
| 55 | Domain concept for Ferromagnetism, Domainwalls | | |
| 56 | Hysteresis ,soft and hard magnetic materials | | |
| 57 | Eddy currents and Applications | | |
| **UNIT-IV** | **ACOUSTICS AND ULTRASONICS**<br><br>**CEO4:**To study ultrasonics productions methods ,detection and applications in various mechanical fields of engineering. Also,study of acoustics mainly Sabine's formula gives awareness about reverberation ,echo and gives requirements of acoustically good hall.This study of Acoustics is useful in civil Engineering. | | |
| 58 | **Acoustics**: Introduction, | **From** | Lecture interspersed |
| 59 | Requirements of acoustically good hall | | |
| 60 | Reverberation, Reverberation time | | |
| 61 | Sabine's formula (Derivation using growth and decay method) - | | |

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| | Absorption coefficient--- first part | **12-03-2021** | with discussions |
| 62 | Sabine's formula (Derivation using growth and decay method) - Absorption coefficient--- second part | **To** | |
| 63 | Sabine's formula (Derivation using growth and decay method) - Absorption coefficient--- Review | **25-03-2021** | |
| 64 | Absorption coefficient and its determination | | |
| 65 | Factors affecting acoustics of buildings and their remedial measures. | | |
| 66 | **Ultrasonics:** Introduction, Properties | | |
| 67 | Production by magnetostriction and piezoelectric methods,Detection | | Lecture interspersed with discussions |
| 68 | Acoustic grating | | |
| 69 | Non Destructive Testing – pulse echo system through transmission mode. | | |
| 70 | Non Destructive Testing – pulse echo system through reflection modes, Applications | | |
| **UNIT-IV** | **CRYSTALLOGRAPHY AND X-RAY DIFFRACTION**<br><br>**CEO5:**To Understand crystallography and X-ray diffraction used to know the crystal systems and for the determination of crystal structures,Packing fraction and Coordination number.Also,Bragg's law gives interplanar separation and bragg's angle in crystal structure. | | |
| 71 | **Crystallography**: Space lattice, Basis, Unit Cell | **From** | Lecture interspersed with discussions |
| 72 | lattice parameters ,Bravais Lattice ,crystal systems (3D) | **26-03-2021** | |
| 73 | coordination number , Packing fraction of SC | **To** | |
| 74 | Packing fraction of BCC& FCC | **03-04-2021** | |
| 75 | Miller indices – separation between successive (hkl) planes. | | |
| 76 | **X- ray diffraction:** Bragg's law | | Lecture interspersed with discussions |
| 77 | X-ray Diffractometer | | |
| 78 | Crystal structure determination by Laue's | | |
| 79 | Crystal structure determination by powder methods | | |

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# TENTATIVE LESSON PLAN: R201104
# ENGINEERING DRAWING

| Course Title: ENGINEERING DRAWING | | Course Code: R201104 |
|---|---|---|
| Section : Sec I | Date : 06/01/2021 | Page No : 01 of 02 |
| Revision No : 00 | Prepared By: R. KIRAN KUMAR | Approved By : HOD |

**Tools: Black board, PPTs**

| S.NO | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-I INTRODUCTION TO DRAWING**<br>**CO1:Able to draw the polygons, curves, scales**<br>**TB:"Engineering Drawing", by N.D. Butt &V.M. Panchal, Chariot Publishing House, Anand. 49th Edition – 2006.** | | | |
| 1 | Introduction | From: 11/01/2021 To: 30/01/2021 | Lecture interspersed with discussions |
| 2 | Lettering and Dimensioning | | |
| 3 | Geometrical constructions, Polygons | | |
| 4 | Ellipse | | |
| 5 | Parabola and Hyperbola | | |
| 6 | Cycloids | | |
| 7 | Involutes | | |
| 8 | Vernier scales | | |
| 9 | Plain scales, diagonal scale | | |
| **UNIT-IIPROJECTIONS OF STRAIGHT LINES**<br>**CO2:Able to draw the projections of points and lines parallel to one plane and to other plan and inclined to both the planes and its traces.**<br>**TB:"Engineering Drawing", by Agarwal & Agarwal, Tata McGraw Hill Publishers, 2nd Edition – 2015.** | | | Lecture interspersed with discussions |
| 10 | Projections of points in various quadrants | From: 01/02/2021 To: 06/02/2021 | |
| 11 | Projections of lines, lines parallel either of the reference planes and inclined to both planes | | |
| 12 | True length determination and true angle of inclination | | |
| 13 | Traces (inclined to both planes) | | |
| **UNIT-IIIPROJECTIONS OF PLANES**<br>**CO3:Able to identify the different plans and draw the projections of the plane inclined to both the planes.**<br>**TB:"Engineering Drawing", by Agarwal & Agarwal, Tata McGraw Hill Publishers, 2nd Edition – 2015.** | | | |
| 14 | Projection of plane (parallel to one plane and perpendicular to other plane) | From: 08/02/2021 To: 13/03/2021 | Lecture interspersed with discussions |
| 15 | Projection of plane (parallel to one plane and inclined to other plane) | | |
| 16 | Projection of plane (inclined to both plane) | | |
| 17 | Projection of plane (inclined to both plane) | | |
| **UNIT-IV PROJECTIONS OF SOLIDS**<br>**CO4:Able to identify the basic solids and draw the projections of the solids inclined to one of the planes.**<br>**TB:"Engineering Drawing", by Agarwal & Agarwal, Tata McGraw Hill Publishers, 2nd Edition – 2015.** | | | |

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| 18 | Projection of solids (Prisms, Cylinder) | From: 15/03/2021 To: 03/04/2021 | Lecture interspersed with discussions |
| 19 | Projection of solids (Prisms, Cylinder) | | |
| 20 | Projection of solids (Pyramids, cone) | | |
| 21 | Projection of solids (Pyramids, cone) | | |
| **UNIT-V ISOMETRIC PROJECTIONS**<br>**CO5:Able to represent and convert the isometric view to orthographic view and orthographic view to isometric view.**<br>**TB:"Engineering Drawing", by Agarwal & Agarwal, Tata McGraw Hill Publishers, 2nd Edition – 2015.** | | | |
| 22 | Conversion of isometric views to orthographic views | From: 10/04/2021 To: 24/04/2021 | Lecture interspersed with discussions |
| 23 | Conversion of isometric views to orthographic views | | |
| 24 | Conversion of orthographic views to isometric views | | |
| 25 | Computer Aided Design, Drawing practice using Auto CAD | | |

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# TENTATIVE LESSON PLAN: CE R201105

| Course Title: ENGINEERING GEOLOGY | | |
|---|---|---|
| Section : Sec A | Date : 8-1-2021 | Page No : 01 of 03 |
| Revision No : 00 | Prepared By :Dr.T.Satyanaryana | Approved By : HOD |

Tools: Black board, PPTs

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| | **UNIT –I Introduction:**<br>CO1 The student will be able to understand the basic concepts of Identify and classify the geological minerals<br>**T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,**<br>**T2. Engineering Geology, Subinoy Gangopadhay, Oxford University press** | | |
| 1 | Introduction | 8-1-21 | |
| 2 | Definition of geology and various Branches of Geology | 11-1-21 | |
| 3 | Allied Branches of geology | 12-1-21 | |
| 4 | Importance of Geology in Civil Engineering with case studies | 20-1-21 | |
| 5 | Weathering | 22-1-21 | |
| 6 | Weathering of rocks- physical weathering | 23-1-21 | |
| 7 | Weathering of rocks- chemical weathering | 25-1-21 | |
| 8 | Geological agents | 27-1-21 | |
| 9 | River process-erosion | 28-1-21 | |
| 10 | River process-Transportation | 29-1-21 | |
| 11 | weathering process of Rock and their development | 1-2-21 | |
| 12 | River valley development | 2-2-21 | |
| | **UNIT –II Mineralogy And Petrology**<br>CO2 The student will be able to understand the basic concepts Measure the rock strengths of various rocks .Classify and measure the earthquake prone areas to practice the hazard zonation<br>**T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,**<br>**T2. Engineering Geology, Subinoy Gangopadhay, Oxford University press** | | Lecture interspersed with discussion |
| 13 | Mineralogy And Petrology | 3-2-21 | |
| 14 | Definitions of mineral | 4-2-21 | |
| 15 | Structures of silicates and rock, | 6-2-21 | |
| 16 | Different methods of study of mineral and rock, | 8-2-21 | |
| 17 | The study of physical properties of minerals and rocks for megascopic study for the following minerals and rocks, | 9-2-21 | |
| 18 | Common rock forming minerals are Feldspar | 10-2-21 | |
| 19 | Quartz Group, Olivine, Augite, | 11-2-21 | |
| 20 | Hornblende, Mica Group, Asbestos, | 12-2-21 | |
| 21 | Talc, Chlorite, Kyanite, | 13-2-21 | |
| 22 | Garnet, Calcite, other ore forming minerals are Pyrite, Hematite | 15-2-21 | |
| 23 | Magnetite, Chlorite, Galena, | 16-2-21 | |
| 24 | Pyrolusite, Graphite, Chromite, Magnetite And Bauxite. Classification, | 17-2-21 | |

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| 25 | structures Pyrolusite, Graphite, Chromite, | 18-2-21 |
| 26 | Magnetite And Bauxite | 20-2-21 |
| 27 | Classification, structures textures and forms of Igneous rocks | 22-2-21 |
| 28 | Metamorphic rocks, and their megascopic study of granite varieties, (pink, gray, green). | 23-2-21 |
| 29 | Pegmatite | 24-2-21 |
| 30 | ,Dolerite, Basalt etc., | 25-2-21 |
| 31 | Shale, Sand Stone, Lime Stone, | 26-2-21 |
| 32 | Laterite, Quartzite, Gneiss, | 27-2-21 |
| 33 | Schist, Marble, Khondalite | 1-3-21 |
| 34 | and Slate and their importance in Civil Engineering | 2-3-21 |

**UNIT –III Structural Geology:-**

CO3 The student will be able to understand the basic Classify, monitor and measure the Landslides and subsidence .Prepares, analyses and interpret the Engineering Geologic maps

**T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,**
**T2. Engineering Geology, Subinoy Gangopadhay, Oxford University press**

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| 35 | Strike, Dip and Outcrop study of common geological structures | 3-3-21 |
| 36 | associating with the rocks such as Folds | 4-3-21 |
| 37 | Faults | 6-3-21 |
| 38 | Joints | 8-3-21 |
| 39 | Unconformities- parts | 9-3-21 |
| 40 | types mechanism | 10-3-21 |
| 41 | their importance in Civil Engineering | 12-3-21 |

**UNIT IV Ground Water, Earth quakes ,Landslides, Geophysics:-**

CO4 The student will be able to understand the basic Analyses the ground conditions through geophysical surveys, the Test the geological material and ground to check the suitability of civil engineering project construction

**T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,**
**T2. Engineering Geology, Subinoy Gangopadhay, Oxford University press**

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| 42 | Water table, Cone of depression | 13-3-21 | Lecture interspersed with discussions |
| 43 | Geological controls of Ground Water Movement | 22-3-21 | |
| 44 | Ground Water Exploration Techniques | 23-3-21 | |
| 45 | Earthquakes And Land Slides: Terminology | 24-3-21 | |
| 46 | Classification, causes and effects | 25-3-21 | |
| 47 | Shield areas and Seismic bells, Richter scale intensity,. | 27-3-21 | |
| 48 | Precautions of building constructions in seismic areas | 30-3-21 | |
| 49 | Classification of Landslides, Causes and Effects, | 31-3-21 | |
| 50 | measures to be taken prevent their occurrence at Landslides Case studies | 1-4-21 | |
| 51 | Importance of Geophysical methods, | 2-4-21 | |
| 52 | Classification, Principles of Geophysical study by Gravity method | 3-4-21 | |
| 53 | Magnetic method, Electrical methods | 5-4-21 | |

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| 54 | Seismic methods, | 6-4-21 | |
| 55 | Radiometric method and Electrical resistivity, | 8-4-21 | |
| 56 | Seismic refraction methods | 9-4-21 | |
| 57 | Engineering properties of rocks | 10-4-21 | |
| **UNIT –V : Geology of Dams, Reservoirs And Tunnels:**<br>CO6 The student will be able to understand Investigate the project site for mega/mini civil engineering projects.Site selection for mega engineering projects like Dams, Tunnels, disposal sites etc…<br>**T1 Engineering Geology, N. Chenn Kesavulu, Laxmi Publications,**<br>**T2. Engineering Geology, Subinoy Gangopadhay, Oxford University press** | | | |
| 58 | Types and purpose of Dams, | 12-4-21 | |
| 59 | Geological considerations in the selection of a Dam site.. | 15-4-21 | |
| 60 | Life of Reservoirs Purpose of Tunnelling, | 16-4-21 | |
| 61 | effects, Lining of Tunnels | 17-4-21&19-4-21 | |
| 62 | . Influence of Geology for successful Tunnelling | 20-4-21&22-4-21 | |
| 63 | Pervious question paper discuss | 23-4-21 | |

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# TENTATIVE LESSON PLAN: R201101

| Course Title: MATHEMATICS – 1 | | |
|---|---|---|
| **Section : EEE** | **Date : 04-01-2021** | **Page No :** 01 of 02 |
| **Revision No :** 00 | **Prepared By : B.V.RAMAKRISHNA RAO** | **Approved By : HOD** |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: SEQUENCES, SERIES AND MEAN VALUE THEOREMS**<br>**CO1:utilize mean value theorems to real life problems**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| **1** | SEQUENCES AND SERIES:<br>Convergence and Divergence | From:<br>06-01-2021<br><br>To:<br>23-01-2021 | Lecture interspersed with discussions |
| **2** | Ratio test | | |
| **3** | Comparison test | | |
| **4** | Integral test | | |
| **5** | Cauchy 's root test | | |
| **6** | Alternating series | | |
| **7** | Leibnitz 's rule | | |
| **8** | Mean Value Theorems:<br>Rolle 's Theorem | | |
| **9** | Lagrange 's mean value theorem | | |
| **10** | Cauchy 's mean value theorem | | |
| **11** | Taylor 's and Maclaurin 's theorems with remainders | | |
| **UNIT-II DIFFERENTIAL EQUATIONS OF FIRST ORDER AND FIRST DEEGREE**<br>**CO2: Solve the differential equations related to various engineering fields**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 12 | Introduction: Differential Equations of First order first degree | From:<br>25-01-2021<br><br>To:<br><br>06-02-2021 | Lecture interspersed with discussions |
| 13 | Exact Equations – Conditions of Exactness | | |
| 14 | Equations reducible to Exact | | |
| 15 | Non Exact Differential Equations | | |
| 16 | Linear Differential Equations of first order | | |
| 17 | Bernouli Equation | | |
| 18 | Equations reducible to linear | | |
| 19 | Orthogonal Trajectories - Cartesian | | |
| 20 | Orthogonal Trajectories - Polar | | |
| 21 | Newton's law of cooling | | |
| 22 | Natural growth or decay | | |
| 23 | Electrical Circuits | | |
| **UNIT-III : LINEAR DIFFERENTIAL EQUATIONS OF HIGHER ORDER** | | | |

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|---|---|---|---|
| **UNIT-III: LINEAR DIFFERENTIAL EQUATIONS OF HIGHER ORDER**<br>**CO3:Solve the differential equations related to various engineering fields**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 24 | Linear DE of constant coefficients | From: 08-02-2021 To: 13-02-2021 & From: 22-02-2021 To: 06-03-2021 | Lecture interspersed with discussions |
| 25 | Solutions of $f(D) = Q(x), Q(x) = e^{ax}$ | | |
| 26 | $Q(x) = \sin ax \ or \ \cos ax$ | | |
| 27 | $Q(x) = x^n$ | | |
| 28 | $Q(x) = e^{ax}V(x)$ | | |
| 29 | $Q(x) = xV(x)$ | | |
| 30 | $Q(x) = x^n \sin ax \ or \ \cos ax$ | | |
| 31 | Method of variation of parameters | | |
| 32 | Applications: LCR Circuit | | |
| **UNIT-IVPARTIAL DIFFERENTIATION**<br>**CO4:Familirize with functions of several variables which is useful in optimization**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 33 | Homogeneous function; Euler's Theorem | From: 08-03-2021 To: 27-03-2021 | Lecture interspersed with discussions |
| 34 | Total Derivative; Chain rule | | |
| 35 | Taylor's mean value theorems | | |
| 36 | Maclaurin's series | | |
| 37 | Jacobians, formulae | | |
| 38 | Functional dependence | | |
| 39 | Maxima minima of two variables | | |
| 40 | Langranges method | | |
| **UNIT-V:MULTIPLE INTEGRALS**<br>**CO5: Apply double integration techniques in evaluating areas bounded by region**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 41 | Introduction | From: 29-03-2021 To: 17-03-2021 | Lecture interspersed with discussions |
| 42 | Double integrals | | |
| 43 | Triple integrals | | |
| 44 | Change of order of integration | | |
| 45 | Change of variable | | |
| 46 | Applications: Finding areas | | |
| 47 | Finding volumes | | |

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# TENTATIVE LESSON PLAN: R201102

| Course Title: COMMUNICATIVE ENGLISH | | |
|---|---|---|
| Section : EEE | Date : 08-01-2021 | Page No : 01 of 03 |
| Revision No : 00 | Prepared By: Yellamanda Vusa | Approved By : HOD |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: A Drawer full of happiness, Deliverance by Premchand**<br>**CO1: Facilitate effective listening skills for better comprehension of academic lectures and English spoken by native speakers**<br>**TB: —Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| **1** | **A Drawer full of happiness** | 08-01-21 | Lecture interspersed with discussions |
| **2** | **Listening : Short Audio Texts** | 08-01-21 | |
| **3** | **Speaking :** Asking and answering questions | 08-01-21 | |
| **4** | **Reading : Skimming and Scanning** | 19-01-21 | |
| **5** | **Reading for Writing :** Paragraph writing | 19-01-21 | |
| **6** | **Vocabulary :** Technical Vocabulary | 20-01-21 | |
| **7** | **Grammar :** Content words and function words | 20-01-21 | |
| **8** | The Deliverance : Munshi Prem Chand | 21-01-21 | |
| **9** | Long Answers | 25-01-21 | |
| **10** | Short Answers | 27-01-21 | |
| **UNIT-II Nehru's letter to his daughter Indira on her birthday, Bosom Friend by Hira Bansode**<br>**CO2: Focus on appropriate reading strategies for comprehension of various academic texts and authentic materials**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 12 | **Nehru's letter to his daughter Indira on her birthday** | | Lecture interspersed |
| 13 | **Listening:** Answering a series of questions | 28-01-21 | |
| 14 | **Speaking:** Discussion in pairs | 01-02-21 | |
| 15 | **Reading**: Identifying sequence of ideas | 02-02-21 | |

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|---|---|---|---|
| 16 | **Reading for Writing**: Summarizing | 03-02-21 | with discussions |
| 17 | **Vocabulary**: Technical vocabulary | 04-02-21 | |
| 18 | **Grammar**: Use of articles | 05-02-21 | |
| 19 | Bosom Friend Hira Bansode | 08-02-21 | |
| 20 | Long Answers | 10-02-21 | |
| 21 | Short Answers | 10-02-21 | |
| **UNIT-III: Stephen Hawking-Positivity "Benchmark", Shakespeare's Sister by Virginia Woolf**<br>**CO3: Help improve speaking skills through participation in activities such as role plays, discussions and structured talks/oral presentations**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 24 | **Stephen Hawking-Positivity 'Benchmark** | 11-02-21 | Lecture interspersed with discussions |
| 25 | **Listening:** Listening for global comprehension | 15-02-21 | |
| 26 | **Speaking:** Discussing specific topics in pairs | 16-02-21 | |
| 27 | **Reading**: Reading a text in detail | 17-02-21 | |
| 28 | **Reading for Writing**: Summarizing | 19-02-21 | |
| 29 | **Vocabulary**: Technical vocabulary | 22-02-21 | |
| 30 | **Grammar**: Verbs - tenses; subject-verb agreement | 22-02-21 | |
| 31 | **Shakespeare's Sister by Virginia Woolf** | 24-02-21 | |
| 32 | Long Answers | 26-02-21 | |
| **UNIT IV Liking a Tree, Unbowed: Wangari Maathai, Telephone Conversation-Wole Soyinka**<br>**CO4: Impart effective strategies for good writing and demonstrate the same in summarizing, writing well organized essays, record and report useful information.**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 33 | **Like a Tree, Unbowed: Wangari Maathai-biography** | | Lecture interspersed with |
| 34 | **Listening:** Making predictions while listening | 03-03-21 | |
| 35 | **Speaking:** Role plays for practice of conversational | 04-03-21 | |

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| | English | | discussions |
| 36 | **Reading**: Studying the use of graphic elements | 08-03-21 | |
| 37 | **Reading for Writing**: Information transfer | 10-03-21 | |
| 38 | **Vocabulary**: Technical vocabulary | 22-03-21 | |
| 39 | **Grammar**: Quantifying expressions | 24-03-21 | |
| 40 | Telephone Conversation: Wole Soyinka | 26-03-21 | |
| **UNIT-V: Stay Hungry-Stay foolish, Still I Rise by Maya Angelou**<br>**CO5: Provide knowledge of grammatical structures and vocabulary and encourage their appropriate use in speech and writing**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 41 | **Stay Hungry-Stay foolish** | 30-03-21 | Lecture interspersed with discussions |
| 42 | **Listening** Identifying key terms | 01-04-21 | |
| 43 | **Speaking:** Formal oral presentations | 05-04-21 | |
| 44 | **Reading**: Reading for comprehension | 08-04-21 | |
| 45 | **Reading for Writing**: Writing academic proposals | 09-04-21 | |
| 46 | **Vocabulary**: Technical vocabulary | 10-04-21 | |
| 47 | **Grammar**: Editing short texts | 12-04-21 | |

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# TENTATIVE LESSON PLAN
# R201104 ENGINEERING DRAWING

| Course Title: ENGINEERING DRAWING | | Course Code: R201104 |
|---|---|---|
| Section : EEE | Date: 06-01-2021. | Page No: 01 of 02 |
| Revision No : 00 | Prepared By: P. Kishorekumar | Approved By : HOD |

**Tools: Black board, PPTs**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-I INTRODUCTION TO DRAWING**<br>**CO1:Able to draw the polygons, curves.**<br>**TB:"Engineering Drawing", by N.D. Butt &V.M. Panchal, Chariot Publishing House, Anand. 49th Edition – 2006.** | | | |
| 1 | Introduction | 11-01-2021 | Lecture interspersed with discussions |
| 2 | Lettering and Dimensioning | 14-01-2021 | |
| 3 | Geometrical constructions | 18-01-2021 | |
| 4 | Parabola, Ellipse and \|Hyperbola | 21-01-2021 | |
| 5 | Polygons | 25-01-2021 | |
| 6 | Cycloids | 28-01-2021 | |
| 7 | Involutes | 01-02-2021 | |
| 8 | Vernier scales | 04-02-2021 | |
| 9 | Plain scales, diagonal scale | 08-02-2021 | |
| **UNIT-II INTRODUCTION TO ORTHOGRAPHIC PROJECTIONS**<br>**CO2:Able to draw the scales, projections of points and lines parallel to one plane and to other plan.**<br>**TB: "Engineering Drawing", by Agarwal & Agarwal, Tata McGraw Hill Publishers, 2nd Edition – 2015.** | | | |
| 10 | Projections of points in various quadrants | 11-02-2021 | Lecture interspersed with discussions |
| 11 | Projections of lines, lines parallel either of the reference planes | 15-02-2021 | |
| 12 | Determination of true lengths, | 18-02-2021 | |
| 13 | Angle of inclination and traces. | 22-02-2021 | |
| **UNIT-III PROJECTIONS OF PLANES**<br>**CO3:Able to draw the projections of lines inclined to both the planes and its traces.**<br>**TB:"Engineering Drawing", by Agarwal & Agarwal, Tata McGraw Hill Publishers, 2nd Edition – 2015.** | | | |
| 14 | Projection of plane (parallel to one plane and perpendicular to other plane) | 25-02-2021 | Lecture interspersed with discussions |
| 15 | Projection of plane (parallel to one plane and inclined to other plane) | 01-03-2021 | |
| 16 | Projection of plane (inclined to both plane) | 04-03-2021 | |
| 17 | Projection of plane (inclined to both plane) | 08-03-2021 | |
| **UNIT-IV PROJECTIONS OF SOLIDS**<br>**CO4:Able to identify the different plans and draw the projections of the plane inclined to both the planes.**<br>**TB:"Engineering Drawing", by Agarwal & Agarwal, Tata McGraw Hill Publishers, 2nd Edition – 2015.** | | | |
| 18 | Projections of Solids | 11-03-2021 | Lecture interspersed |
| 19 | Prisms, Pyramids | 15-03-2021 | |

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|---|---|---|---|
| 20 | Cones with the axis inclined to both the planes | 22-03-2021 | with discussions |
| 21 | Cylinders with the axis inclined to both the planes | 25-03-2021 | |
| **UNIT-V Conversion of isometric views to orthographic views**<br>**CO5:Able to identify the basic solids and draw the projections of the solids inclined to one of the planes.**<br>**TB:"Engineering Drawing", by Agarwal & Agarwal, Tata McGraw Hill Publishers, 2nd Edition – 2015.** | | | |
| 22 | Isometric views to orthographic views | 29-03-2021 | Lecture interspersed with discussions |
| 23 | Orthographic views to isometric views. | 01-04-2021 | |
| 24 | Computer Aided Design | 05-04-2021 | |
| 25 | Drawing practice using Auto CAD | 08-04-2021 | |
| 26 | Creating 2D&3D drawings | 12-04-2021 | |

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# TENTATIVE LESSON PLAN: R201109

| Course Title: MATHEMATICS - II | | |
|---|---|---|
| Section : EEE | Date : 04-01-2021 | Page No : 01 of 02 |
| Revision No : 00 | Prepared By : S.KALPANA | Approved By : HOD |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: SOLVING SYSTEM OF LINEAR EQUATIONS, EIGEN VALUES AND EIGEN VECTORS**<br>**CO1: solve system of linear algebraic equations using Gauss elimination, Gauss Jordan, Gauss Seidel (L3)**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 1 | Introduction to matrices | From 06-01-2021 To 23-01-2021 | Lecture interspersed with discussions |
| 2 | Rank of matrix- definition, properties | | |
| 3 | Problems on rank by Echelon form | | |
| 4 | Rank by normal form | | |
| 5 | PAQ form problems | | |
| 6 | Homogeneous system AX=0 | | |
| 7 | Non Homogeneous system AX=B | | |
| 8 | Problems on rank method | | |
| 9 | Gauss Elimination method | | |
| 10 | Eigen values – definition | | |
| 11 | Properties of Eigen values | | |
| 12 | Properties of Eigen values | | |
| 13 | Problems on finding eigen values, vectors | | |
| 14 | Problems on finding eigen values, vectors | | |
| **UNIT – II:, CALEY-HAMILTON THEOREM, QUADRATIC FORMS**<br>**CO2: Develop the use of matrix algebra techniques that is needed by engineers for practical applications (L6)**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 15 | Caley Hamilton theorem, verification, problems | | |

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|---|---|---|---|
| 16 | Finding inverse and power of a matrix by caley Hamilton theorem | From: 25-01-2021 To: 06-02-2021 | Lecture interspersed with discussions |
| 17 | Diagonalization – problems | | |
| 18 | Quadratic forms – definition, examples | | |
| 19 | Matrix form of a quadratic form | | |
| 20 | Canonical form of a quadratic form | | |
| 21 | Methods of reducing a QF in to canonical form | | |
| 22 | Orthogonal reduction method | | |
| 23 | Congruent operations method | | |
| 24 | Lagrange's method | | |
| 25 | Problems on finding nature of a QF | | |
| **UNIT-III : UNIT – III: ITERATIVE METHODS:**<br>**CO3: Avaluate approximating the roots of polynomial and transcendental equations by different algorithms (L5)**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 26 | Introduction | From: 08-02-2021 To: 13-02-2021 & From: 22-02-2021 To: 06-03-2021 | Lecture interspersed with discussions |
| 27 | Method – 1: Bisection method | | |
| 28 | Problems | | |
| 30 | Method – 2: Regula falsi method | | |
| 31 | Problems | | |
| 33 | Method – 3: Iteration method | | |
| 34 | Problems | | |
| 35 | Method – 4: Newton Raphson method | | |
| 36 | Problems | | |
| 37 | Newton Raphson method simultaneous equations | | |
| 38 | Gauss Jacobi Method | | |
| 39 | Gauss Seidal Method | | |
| 40 | problems | | |
| **UNIT – IV: INTERPOLATION**<br>**CO4: Apply Newton's forward & backward interpolation and Lagrange's formulae for equal and unequal intervals (L3)**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 41 | Introduction: Forward and Backward Differences | | |

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|---|---|---|---|
| 42 | Newton's Forward interpolation formula | From: 08-03-2021 To: 27-03-2021 | Lecture interspersed with discussions |
| 43 | Problems | | |
| 44 | Newton's Backward interpolation formula | | |
| 45 | Problems | | |
| 46 | Gauss Forward interpolation formula – Problems | | |
| 47 | Problems | | |
| 48 | Gauss Backward interpolation formula – Problems | | |
| 49 | Problems | | |
| 50 | Lagranges interpolation formula – Problems | | |
| 51 | Problems | | |
| 52 | Operators | | |
| **UNIT – V: NUMERICAL INTEGRATION AND SOLUTION OF ORDINARY DIFFERENTIAL EQUATION**<br>**CO5: Apply different algorithms for approximating the solutions of ordinary differential equations to its analytical computations (L3)**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 53 | Trapezoidal rule | From 29-03-2021 To 17-04-2021 | Lecture interspersed with discussions |
| 54 | Simpson's 1/3 rule | | |
| 55 | Problems | | |
| 56 | Simpson's 3/8 rule | | |
| 57 | Taylor's series method | | |
| 58 | Problems | | |
| 59 | Picard's method of successive approximation | | |
| 60 | Euler's method | | |
| 61 | Euler's modified method | | |
| 62 | Problems | | |
| 63 | Runge kutta method | | |
| 64 | Problems | | |

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## TENTATIVE LESSON PLAN: 1R201110

| Course Title: PROGRAMMING FOR PROBLEM SOLVING USING C (1R201110) | | |
|---|---|---|
| **Section : EEE** | **Date :** 08-01-2021 | **Page No :** 01 of 03 |
| **Revision No** : 00 | **Prepared By : B.S.S.TEJESH** | **Approved By : HOD** |

**Tools: Black board, PPTs, Moodle**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-I** | **Introduction to C language**<br>**CO1: To learn about the computer systems, computing environments, developing of a computer program and Structure of a C Program.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | |
| 1 | Creating and running Programs | 8/1/21 | Lecture Interspersed With discussions |
| 2 | Computer Numbering System | 9/1/21 | |
| 3 | Storing Integers | 11/1/21 | |
| 4 | Storing Real Numbers | 18/1/21 | |
| 5 | C Programs, Identifiers | 19/1/21 | |
| 6 | Types, Variable | 20/1/21 | |
| 7 | Constants, Input/output | 21/1/21 | |
| 8 | Programming Examples | 22/1/21 | |
| 9 | Scope | 23/1/21 | |
| 10 | Storage Classes | 25/1/21 | |
| 11 | Type Qualifiers | 27/1/21 | |
| 12 | Expressions Precedence | 28/1/21 | |
| 13 | Associativity | 29/1/21 | |
| 14 | Side Effects, Evaluating Expressions | 30/1/21 | |
| 15 | Type Conversion Statements | 1/2/21 | |
| 16 | Simple Programs | 2/2/21 | |
| 17 | Command Line Arguments | 3/2/21 | |
| 18 | **Tutorial** | 4/2/21 | |
| **UNIT-II** | **Operators, Selection and Repetition**<br>**CO2: To gain knowledge of the operators, selection, control statements and repetition in C.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | |
| 19 | Exact Size Integer Types | 5/2/21 | Lecture interspersed with |
| 20 | Logical Bitwise Operators | 6/2/21 | |
| 21 | Shift Operators | 8/2/21 | |
| 22 | Logical Data and Operators | 9/2/21 | |
| 23 | Two Way Selection | 10-12/2/21 | |
| 24 | Multiway Selection | 13/2/21 | |
| 25 | More Standard Functions | 15/2/21 | |

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| 26 | Concept of Loop | 16/2/21 | discussions |
| 27 | Pretest and Post-test Loops | 17/2/21 | |
| 28 | Initialization and Updating | 18/2/21 | |
| 29 | Event and Counter Controlled Loops | 19/2/21 | |
| 30 | Loops in C | 20/2/21 | |
| 31 | Other Statements Related to Looping | 22/2/21 | |
| 32 | Looping Applications | 23-25/2/21 | |
| 33 | Programming Example | | |
| 35 | **Tutorial** | 26/2/21 | |
| **No. of Periods** | **TOPIC** | **Date** | **Mode of Delivery** |
| **UNIT-III Arrays, String, Enum, Structure, Unions** | | | |
| **CO3: To learn about the design concepts of arrays, strings, enumerated structure and union types. To learn about their usage.** | | | |
| **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 36 | Concepts, Using Array in C | 27/2/21 | Lecture interspersed with discussions |
| 37 | Array Application | 1/3/21 | |
| 38 | Two Dimensional Arrays | 2/3/21 | |
| 39 | Multidimensional Arrays | 3/3/21 | |
| 40 | Programming Example – Calculate Averages | 4/3/21 | |
| 41 | String Concepts, C String | 5/3/21 | |
| 42 | String Input / Output Functions | 6-9/3/21 | |
| 43 | Arrays of Strings | 10/3/21 | |
| 44 | String Manipulation Functions | 11/3/21 | |
| 45 | String/ Data Conversion | 12/3/21 | |
| 46 | A Programming Example | 13-15/3/21 | |
| 47 | The Type Definition (Type def) | 16/3/21 | |
| 48 | Enumerated Types | 17/3/21 | |
| 49 | Structure | 18-20/3/21 | |
| 50 | Unions | 22-25/3/21 | |
| 51 | Programming Application | 26-31/3/21 | |
| 52 | **Tutorial** | | |
| **UNIT-IV Pointers** | | | |
| **CO4: To assimilate about pointers, dynamic memory allocation and know the significance of Preprocessor.** | | | |
| **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| **No. of Periods** | **TOPIC** | **Date** | **Mode of Delivery** |
| 53 | Introduction | 1/4/21 | Lecture interspersed |
| 54 | Pointers to pointers | 2/4/21 | |
| 55 | Compatibility, L value and R value | 3/4/21 | |
| 56 | Arrays, and Pointers | 5/4/21 | |
| 57 | Pointer Arithmetic and Arrays | 6/4/21 | |
| 58 | Memory Allocation Function | 7/4/21 | |

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|---|---|---|---|
| 59 | Array of Pointers | 8/4/21 | with discussions |
| 60 | Programming Application | 9/4/21 | |
| 61 | Processor Commands | 10/4/21 | |
| 62 | **Tutorial** | | |
| **UNIT-V Files and Functions**<br>**CO5: To assimilate about File I/O and significance of functions.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 63 | Designing, Structured Programs | 12/4/21 | Lecture interspersed with discussions |
| 64 | Function in C | 13/4/21 | |
| 65 | User Defined Functions | 14/4/21 | |
| 66 | Inter-Function Communication | 15/4/21 | |
| 67 | Standard Functions | 16/4/21 | |
| 68 | Passing Array to Functions | 17/4/21 | |
| 69 | Passing Pointers to Functions | | |
| 70 | Recursion | | |
| 71 | Passing an Array to Function | 19/4/21 | |
| 72 | Files, Streams | | |
| 73 | Standard Library Input / Output Functions | 20/4/21 | |
| 74 | Formatting Input / Output Functions | 21/4/21 | |
| 75 | Character Input / Output Functions | 22/4/21 | |
| 76 | Text versus Binary Streams | | |
| 77 | Functions for Files | 23/4/21 | |
| 78 | Converting File Type | | |
| 79 | **Tutorial** | 24/4/21 | |

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# TENTATIVE LESSON PLAN: R201101

| Course Title: MATHEMATICS – 1 | | |
|---|---|---|
| **Section : MECH** | **Date : 04-01-2021** | **Page No :** 01 of 02 |
| **Revision No :** 00 | **Prepared By : K.BASAVARAJU** | **Approved By : HOD** |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: SEQUENCES, SERIES AND MEAN VALUE THEOREMS**<br>**CO1:utilize mean value theorems to real life problems**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| **1** | SEQUENCES AND SERIES:<br>Convergence and Divergence | From:<br>06-01-2021<br><br>To:<br>23-01-2021 | Lecture interspersed with discussions |
| **2** | Ratio test | | |
| **3** | Comparison test | | |
| **4** | Integral test | | |
| **5** | Cauchy 's root test | | |
| **6** | Alternating series | | |
| **7** | Leibnitz 's rule | | |
| **8** | Mean Value Theorems:<br>Rolle 's Theorem | | |
| **9** | Lagrange 's mean value theorem | | |
| **10** | Cauchy 's mean value theorem | | |
| **11** | Taylor 's and Maclaurin 's theorems with remainders | | |
| **UNIT-II DIFFERENTIAL EQUATIONS OF FIRST ORDER AND FIRST DEEGREE**<br>**CO2: Solve the differential equations related to various engineering fields**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 12 | Introduction: Differential Equations of First order first degree | From:<br>25-01-2021<br><br>To:<br><br>06-02-2021 | Lecture interspersed with discussions |
| 13 | Exact Equations – Conditions of Exactness | | |
| 14 | Equations reducible to Exact | | |
| 15 | Non Exact Differential Equations | | |
| 16 | Linear Differential Equations of first order | | |
| 17 | Bernouli Equation | | |
| 18 | Equations reducible to linear | | |
| 19 | Orthogonal Trajectories - Cartesian | | |
| 20 | Orthogonal Trajectories - Polar | | |
| 21 | Newton's law of cooling | | |
| 22 | Natural growth or decay | | |
| 23 | Electrical Circuits | | |
| **UNIT-III : LINEAR DIFFERENTIAL EQUATIONS OF HIGHER ORDER** | | | |

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| **UNIT-III: LINEAR DIFFERENTIAL EQUATIONS OF HIGHER ORDER**<br>**CO3:Solve the differential equations related to various engineering fields**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 24 | Linear DE of constant coefficients | From: 08-02-2021 To: 13-02-2021 & From: 22-02-2021 To: 06-03-2021 | Lecture interspersed with discussions |
| 25 | Solutions of $f(D) = Q(x), Q(x) = e^{ax}$ | | |
| 26 | $Q(x) = \sin ax \ or \ \cos ax$ | | |
| 27 | $Q(x) = x^n$ | | |
| 28 | $Q(x) = e^{ax}V(x)$ | | |
| 29 | $Q(x) = xV(x)$ | | |
| 30 | $Q(x) = x^n \sin ax \ or \ \cos ax$ | | |
| 31 | Method of variation of parameters | | |
| 32 | Applications: LCR Circuit | | |
| **UNIT-IVPARTIAL DIFFERENTIATION**<br>**CO4:Familirize with functions of several variables which is useful in optimization**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 33 | Homogeneous function; Euler's Theorem | From: 08-03-2021 To: 27-03-2021 | Lecture interspersed with discussions |
| 34 | Total Derivative; Chain rule | | |
| 35 | Taylor's mean value theorems | | |
| 36 | Maclaurin's series | | |
| 37 | Jacobians, formulae | | |
| 38 | Functional dependence | | |
| 39 | Maxima minima of two variables | | |
| 40 | Langranges method | | |
| **UNIT-V:MULTIPLE INTEGRALS**<br>**CO5: Apply double integration techniques in evaluating areas bounded by region**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 41 | Introduction | From: 29-03-2021 To: 17-03-2021 | Lecture interspersed with discussions |
| 42 | Double integrals | | |
| 43 | Triple integrals | | |
| 44 | Change of order of integration | | |
| 45 | Change of variable | | |
| 46 | Applications: Finding areas | | |
| 47 | Finding volumes | | |

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# TENTATIVE LESSON PLAN: R201102

| Course Title: COMMUNICATIVE ENGLISH | | |
|---|---|---|
| Section : MECH | Date : 08-01-2021 | Page No : 01 of 03 |
| Revision No : 00 | Prepared By: N. Gayathri | Approved By : HOD |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: A Drawer full of happiness, Deliverance by Premchand**<br>**CO1: Facilitate effective listening skills for better comprehension of academic lectures and English spoken by native speakers**<br>**TB: —Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| **1** | **A Drawer full of happiness** | 08-01-21 | Lecture interspersed with discussions |
| **2** | **Listening : Short Audio Texts** | 08-01-21 | |
| **3** | **Speaking :** Asking and answering questions | 08-01-21 | |
| **4** | **Reading : Skimming and Scanning** | 19-01-21 | |
| **5** | **Reading for Writing :** Paragraph writing | 19-01-21 | |
| **6** | **Vocabulary :** Technical Vocabulary | 20-01-21 | |
| **7** | **Grammar :** Content words and function words | 20-01-21 | |
| **8** | The Deliverance : Munshi Prem Chand | 21-01-21 | |
| **9** | Long Answers | 25-01-21 | |
| **10** | Short Answers | 27-01-21 | |
| **UNIT-II Nehru's letter to his daughter Indira on her birthday, Bosom Friend by Hira Bansode**<br>**CO2: Focus on appropriate reading strategies for comprehension of various academic texts and authentic materials**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 12 | **Nehru's letter to his daughter Indira on her birthday** | | Lecture interspersed |
| 13 | **Listening:** Answering a series of questions | 28-01-21 | |
| 14 | **Speaking:** Discussion in pairs | 01-02-21 | |
| 15 | **Reading**: Identifying sequence of ideas | 02-02-21 | |

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| 16 | **Reading for Writing**: Summarizing | 03-02-21 | with discussions |
| 17 | **Vocabulary**: Technical vocabulary | 04-02-21 | |
| 18 | **Grammar**: Use of articles | 05-02-21 | |
| 19 | Bosom Friend Hira Bansode | 08-02-21 | |
| 20 | Long Answers | 10-02-21 | |
| 21 | Short Answers | 10-02-21 | |
| **UNIT-III: Stephen Hawking-Positivity "Benchmark", Shakespeare's Sister by Virginia Woolf**<br>**CO3: Help improve speaking skills through participation in activities such as role plays, discussions and structured talks/oral presentations**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 24 | **Stephen Hawking-Positivity 'Benchmark** | 11-02-21 | Lecture interspersed with discussions |
| 25 | **Listening:** Listening for global comprehension | 15-02-21 | |
| 26 | **Speaking:** Discussing specific topics in pairs | 16-02-21 | |
| 27 | **Reading**: Reading a text in detail | 17-02-21 | |
| 28 | **Reading for Writing**: Summarizing | 19-02-21 | |
| 29 | **Vocabulary**: Technical vocabulary | 22-02-21 | |
| 30 | **Grammar**: Verbs - tenses; subject-verb agreement | 22-02-21 | |
| 31 | **Shakespeare's Sister by Virginia Woolf** | 24-02-21 | |
| 32 | Long Answers | 26-02-21 | |
| **UNIT IV Liking a Tree, Unbowed: Wangari Maathai, Telephone Conversation-Wole Soyinka**<br>**CO4: Impart effective strategies for good writing and demonstrate the same in summarizing, writing well organized essays, record and report useful information.**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 33 | **Like a Tree, Unbowed: Wangari Maathai-biography** | | Lecture interspersed with |
| 34 | **Listening:** Making predictions while listening | 03-03-21 | |
| 35 | **Speaking:** Role plays for practice of conversational | 04-03-21 | |

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| | English | | discussions |
| 36 | **Reading**: Studying the use of graphic elements | 08-03-21 | |
| 37 | **Reading for Writing**: Information transfer | 10-03-21 | |
| 38 | **Vocabulary**: Technical vocabulary | 22-03-21 | |
| 39 | **Grammar**: Quantifying expressions | 24-03-21 | |
| 40 | Telephone Conversation: Wole Soyinka | 26-03-21 | |
| **UNIT-V: Stay Hungry-Stay foolish, Still I Rise by Maya Angelou**<br>**CO5: Provide knowledge of grammatical structures and vocabulary and encourage their appropriate use in speech and writing**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 41 | **Stay Hungry-Stay foolish** | 30-03-21 | Lecture interspersed with discussions |
| 42 | **Listening** Identifying key terms | 01-04-21 | |
| 43 | **Speaking:** Formal oral presentations | 05-04-21 | |
| 44 | **Reading**: Reading for comprehension | 08-04-21 | |
| 45 | **Reading for Writing**: Writing academic proposals | 09-04-21 | |
| 46 | **Vocabulary**: Technical vocabulary | 10-04-21 | |
| 47 | **Grammar**: Editing short texts | 12-04-21 | |

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# TENTATIVE LESSON PLAN: R201103

| Course Title: Engineering Physics | | |
|---|---|---|
| Section :ME | Date :08.01.2021 | Page No :00 |
| Revision No :00 | Prepared By:B.NAGA JYOTHIRMAI | Approved By : HOD |
| Tools: | | |

| No. of Periods | TOPIC | DATE | Mode of Delivery |
|---|---|---|---|
| UNIT-I | **WAVE OPTICS**<br>**CEO1:**To identify the importance of the optical phenomenon i.e. interference, diffraction and polarization related to its Engineering applications. | | Lecture interspersed with discussions |
| 1 | **INTERFERENCE:**Introduction | **From:** | |
| 2 | Principle of Superposition | **08/01/2021** | |
| 3 | Coherent Sources-Types | | |
| 4 | Interference- Types | | |
| 5 | Interference in Thin Films | **To:** | |
| 6 | Colours in Thin Film | | |
| 7 | Newton's Rings | **30/01/2021** | |
| 8 | Applications of Interference | | |
| 9 | Problems | | |
| 10 | **Diffraction:** Introduction | | Lecture interspersed with discussions |
| 11 | Fresnel and Fraunhoffer Diffraction | | |
| 12 | Fraunhoffer diffraction at single slit | | |
| 13 | Fraunhoffer diffraction at single slit | | |
| 14 | Fraunhoffer diffraction at Double Slit | | |
| 15 | Fraunhoffer diffraction at N-Slits | | |
| 16 | Grating Equation | | |
| 17 | Dispersive Power of Grating | | |
| 18 | Resolving Power of Grating | | |
| 19 | Problems | | |
| 20 | **Polarization :**Introduction | | Lecture interspersed with discussions |
| 21 | Types of Polarization | | |
| 22 | Polarization by Reflection, Refraction | | |
| 23 | Polarization by Duoble Refraction | | |
| 24 | Nicol Prism | | |
| 25 | Quarter Wave & Half Wave Plates | | |
| 26 | Problems | | |
| UNIT-II | **LASERS AND FIBER OPTICS**<br>**CEO2:**Understand the mechanism of stimulated emission of light, utilization of lasers as coherent light sources for low and high energy applications, study of propagation of light through optical fibers and their implications in optical communications. | | Lecture interspersed with discussions |
| 27 | **Lasers :** Introduction | **From:** | |
| 28 | Characteristics of Laser | | |
| 29 | Spontaneous and Stimulated emission | | |
| 30 | Einstein's Coefficients | | |
| 31 | Population Inversion, Lasing action | **01-02-2021** | |

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| 32 | Pumping Mechanism-Pumping method | **To:**<br><br>**13-02-2021** | |
| 33 | Ruby Laser | | |
| 34 | Helium Neon Laser | | |
| 35 | Applications of Lasers | | |
| 36 | **Fiber Optics:** Introduction | | |
| 37 | Principle of Optical Fiber | | |
| 38 | Acceptance angle | | |
| 39 | Numerical Aperture | | |
| 40 | Classifications optical fibers based on refractive index profile and modes | | |
| 41 | Propagation of electromagnetic wave through optical fibers. | | |
| 42 | Applications,Problems | | |
| **UNIT-III** | **ENGINEERING MATERIALS**<br><br>**CEO3:**To explain the significant concepts of dielectric and magnetic materials that leads to potential applications in the emerging micro devices. | | Lecture interspersed with discussions |
| 43 | **Dielectric Materials:** Introduction, | **From:**<br>**22-02-2021**<br>**To**<br>**10-03-2021** | |
| 44 | Dielectric polarization | | |
| 45 | Types of polarizations- Electronic polarization | | |
| 46 | Ionic polarisation, Orientation polarizations | | |
| 47 | Lorentz internal field | | |
| 48 | Clausius-Mossotti equation | | |
| 49 | Piezoelectricity,Problems | | |
| 50 | **Magnetic Materials:** Introduction | | Lecture interspersed with discussions |
| 51 | Magnetic dipole moment, Magnetization, Magnetic susceptibility and permeability | | |
| 52 | Origin of permanent magnetic moment | | |
| 53 | Classification of magnetic materials:Dia,Para,Ferro | | |
| 54 | COMM: Antiferro and Ferri magnetic materials | | |
| 55 | Domain concept for Ferromagnetism, Domainwalls | | |
| 56 | Hysteresis ,soft and hard magnetic materials | | |
| 57 | Eddy currents and Applications | | |
| **UNIT-IV** | **ACOUSTICS AND ULTRASONICS**<br><br>**CEO4:**To study ultrasonics productions methods ,detection and applications in various mechanical fields of engineering. Also,study of acoustics mainly Sabine's formula gives awareness about reverberation ,echo and gives requirements of acoustically good hall. | | |
| 58 | **Acoustics**: Introduction, | **From**<br><br>**12-03-2021** | Lecture interspersed with |
| 59 | Requirements of acoustically good hall | | |
| 60 | Reverberation, Reverberation time | | |
| 61 | Sabine's formula (Derivation using growth and decay method) - Absorption coefficient--- first part | | |

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| 62 | Sabine's formula (Derivation using growth and decay method) - Absorption coefficient--- second part | **To** **25-03-2021** | discussions |
| 63 | Sabine's formula (Derivation using growth and decay method) - Absorption coefficient--- Review | | |
| 64 | Absorption coefficient and its determination | | |
| 65 | Factors affecting acoustics of buildings and their remedial measures. | | |
| 66 | **Ultrasonics:** Introduction, Properties | | Lecture interspersed with discussions |
| 67 | Production by magnetostriction and piezoelectric methods,Detection | | |
| 68 | Acoustic grating | | |
| 69 | Non Destructive Testing – pulse echo system through transmission mode. | | |
| 70 | Non Destructive Testing – pulse echo system through reflection modes, Applications | | |
| **UNIT-IV** | **CRYSTALLOGRAPHY AND X-RAY DIFFRACTION**<br><br>**CEO5:**To Understand crystallography and X-ray diffraction used to know the crystal systems and for the determination of crystal structures,Packing fraction and Coordination number.Also,Bragg's law gives interplanar separation and bragg's angle in crystal structure. | | |
| 71 | **Crystallography**: Space lattice, Basis, Unit Cell | **From** **26-03-2021** **To** **03-04-2021** | Lecture interspersed with discussions |
| 72 | lattice parameters ,Bravais Lattice ,crystal systems (3D) | | |
| 73 | coordination number , Packing fraction of SC | | |
| 74 | Packing fraction of BCC& FCC | | |
| 75 | Miller indices – separation between successive (hkl) planes. | | |
| 76 | **X- ray diffraction:** Bragg's law | | Lecture interspersed with discussions |
| 77 | X-ray Diffractometer | | |
| 78 | Crystal structure determination by Laue's | | |
| 79 | Crystal structure determination by powder methods | | |

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# TENTATIVE LESSON PLAN : R201104
# ENGINEERING DRAWING

| Course Title: ENGINEERING DRAWING | | Course Code: R201104 |
|---|---|---|
| Section : Sec I | Date : 06/01/2021 | Page No : 01 of 02 |
| Revision No : 00 | Prepared By: R. KIRAN KUMAR | Approved By : HOD |

**Tools: Black board, PPTs**

| S.NO | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-I** | **INTRODUCTION TO DRAWING** | | |
| **CO1:Able to draw the polygons, curves, scales** | | | |
| **TB:"Engineering Drawing", by N.D. Butt &V.M. Panchal, Chariot Publishing House, Anand. 49th Edition – 2006.** | | | |
| 1 | Introduction | From: 11/01/2021 To: 30/01/2021 | Lecture interspersed with discussions |
| 2 | Lettering and Dimensioning | | |
| 3 | Geometrical constructions, Polygons | | |
| 4 | Ellipse | | |
| 5 | Parabola and Hyperbola | | |
| 6 | Cycloids | | |
| 7 | Involutes | | |
| 8 | Vernier scales | | |
| 9 | Plain scales, diagonal scale | | |
| **UNIT-IIPROJECTIONS OF STRAIGHT LINES** | | | |
| **CO2:Able to draw the projections of points and lines parallel to one plane and to other plan and inclined to both the planes and its traces.** | | | |
| **T TB:"Engineering Drawing", by Agarwal & Agarwal, Tata McGraw Hill Publishers, 2nd Edition – 2015.** | | | |
| 10 | Projections of points in various quadrants | From: 01/02/2021 To: 06/02/2021 | Lecture interspersed with discussions |
| 11 | Projections of lines, lines parallel either of the reference planes and inclined to both planes | | |
| 12 | True length determination and true angle of inclination | | |
| 13 | Traces (inclined to both planes) | | |
| **UNIT-IIIPROJECTIONS OF PLANES** | | | |
| **CO3:Able to identify the different plans and draw the projections of the plane inclined to both the planes.** | | | |
| **TB:"Engineering Drawing", by Agarwal & Agarwal, Tata McGraw Hill Publishers, 2nd Edition – 2015.** | | | |
| 14 | Projection of plane (parallel to one plane and perpendicular to other plane) | From: 08/02/2021 To: 13/03/2021 | Lecture interspersed with discussions |
| 15 | Projection of plane (parallel to one plane and inclined to other plane) | | |
| 16 | Projection of plane (inclined to both plane) | | |
| 17 | Projection of plane (inclined to both plane) | | |
| **UNIT-IV** | **PROJECTIONS OF SOLIDS** | | |
| **CO4:Able to identify the basic solids and draw the projections of the solids inclined to one of the planes.** | | | |
| **TB:"Engineering Drawing", by Agarwal & Agarwal, Tata McGraw Hill Publishers, 2nd Edition – 2015.** | | | |

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|---|---|---|---|
| 18 | Projection of solids (Prisms, Cylinder) | From: 15/03/2021 To: 03/04/2021 | Lecture interspersed with discussions |
| 19 | Projection of solids (Prisms, Cylinder) | | |
| 20 | Projection of solids (Pyramids, cone) | | |
| 21 | Projection of solids (Pyramids, cone) | | |
| **UNIT-V ISOMETRIC PROJECTIONS**<br>**CO5:Able to represent and convert the isometric view to orthographic view and orthographic view to isometric view.**<br>**TB:"Engineering Drawing", by Agarwal & Agarwal, Tata McGraw Hill Publishers, 2nd Edition – 2015.** | | | |
| 22 | Conversion of isometric views to orthographic views | From: 10/04/2021 To: 24/04/2021 | Lecture interspersed with discussions |
| 23 | Conversion of isometric views to orthographic views | | |
| 24 | Conversion of orthographic views to isometric views | | |
| 25 | Computer Aided Design, Drawing practice using Auto CAD | | |

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## TENTATIVE LESSON PLAN: 1R201110

| Course Title: PROGRAMMING FOR PROBLEM SOLVING USING C (1R201110) | | |
|---|---|---|
| Section : MECH | Date : 08/01/21 | A.Y:2020-21 |
| Revision No : 00 | Prepared By : M.SURESH BABU | Approved By : HOD |

**Tools: Black board, PPTs, Moodle**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-I Introduction to C language**<br>**CO1: To learn about the computer systems, computing environments, developing of a computer program and Structure of a C Program.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 1 | Creating and running Programs | 08/1/21 | Lecture Interspersed With discussions |
| 2 | Computer Numbering System | 09/1/21 | |
| 3 | Storing Integers | 11/1/21 | |
| 4 | Storing Real Numbers | 18/1/21 | |
| 5 | C Programs, Identifiers | 19/1/21 | |
| 6 | Types, Variable | 20/1/21 | |
| 7 | Constants, Input/output | 21/1/21 | |
| 8 | Programming Examples | 22/1/21 | |
| 9 | Scope | 23/1/21 | |
| 10 | Storage Classes | 25/1/21 | |
| 11 | Type Qualifiers | 27/1/21 | |
| 12 | Expressions Precedence | 28/1/21 | |
| 13 | Associativity | 29/1/21 | |
| 14 | Side Effects, Evaluating Expressions | 30/1/21 | |
| 15 | Type Conversion Statements | 1/2/21 | |
| 16 | Simple Programs | 2/2/21 | |
| 17 | Command Line Arguments | 3/2/21 | |
| 18 | Tutorial | 4/2/21 | |
| **UNIT-II Operators, Selection and Repetition**<br>**CO2: To gain knowledge of the operators, selection, control statements and repetition in C.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 19 | Exact Size Integer Types | 5/2/21 | Lecture interspersed with discussions |
| 20 | Logical Bitwise Operators | 6/2/21 | |
| 21 | Shift Operators | 8/2/21 | |
| 22 | Logical Data and Operators | 9/2/21 | |
| 23 | Two Way Selection | 12/2/21 | |
| 24 | Multiway Selection | 13/2/21 | |
| 25 | More Standard Functions | 15/2/21 | |
| 26 | Concept of Loop | 16/2/21 | |
| 27 | Pretest and Post-test Loops | 17/2/21 | |

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|---|---|---|---|
| 28 | Initialization and Updating | 18/2/21 | |
| 29 | Event and Counter Controlled Loops | 19/2/21 | |
| 30 | Loops in C | 20/2/21 | |
| 31 | Other Statements Related to Looping | 22/2/21 | |
| 32 | Looping Applications | 25/2/21 | |
| 33 | Programming Example | | |
| 35 | Tutorial | 26/2/21 | |
| **No. of Periods** | **TOPIC** | **Date** | **Mode of Delivery** |

**UNIT-III Arrays, String, Enum, Structure, Unions**

**CO3: To learn about the design concepts of arrays, strings, enumerated structure and union types. To learn about their usage.**

**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE**

| | | | |
|---|---|---|---|
| 36 | Concepts, Using Array in C | 27/2/21 | |
| 37 | Array Application | 1/3/21 | |
| 38 | Two Dimensional Arrays | 2/3/21 | |
| 39 | Multidimensional Arrays | 3/3/21 | |
| 40 | Programming Example – Calculate Averages | 4/3/21 | |
| 41 | String Concepts, C String | 5/3/21 | |
| 42 | String Input / Output Functions | 6/3/21 | |
| 43 | Arrays of Strings | 10/3/21 | |
| 44 | String Manipulation Functions | 11/3/21 | |
| 45 | String/ Data Conversion | 12/3/21 | |
| 46 | A Programming Example | 13/3/21 | Lecture interspersed with discussions |
| 47 | The Type Definition (Type def) | 16/3/21 | |
| 48 | Enumerated Types | 17/3/21 | |
| 49 | Structure | 18/3/21 | |
| 50 | Unions | 22/3/21 | |
| 51 | Programming Application | 26/3/21 | |
| 52 | Tutorial | | |

**UNIT-IV Pointers**

**CO4: To assimilate about pointers, dynamic memory allocation and know the significance of Preprocessor.**

**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE**

| **No. of Periods** | **TOPIC** | **Date** | **Mode of Delivery** |
|---|---|---|---|
| 53 | Introduction | 1/4/21 | |
| 54 | Pointers to pointers | 2/4/21 | |
| 55 | Compatibility, L value and R value | 3/4/21 | |
| 56 | Arrays, and Pointers | 5/4/21 | |
| 57 | Pointer Arithmetic and Arrays | 6/4/21 | Lecture interspersed with discussions |
| 58 | Memory Allocation Function | 7/4/21 | |
| 59 | Array of Pointers | 8/4/21 | |
| 60 | Programming Application | 9/4/21 | |
| 61 | Processor Commands | 10/4/21 | |
| 62 | Tutorial | | |

| UNIT-V Files and Functions<br>CO5: To assimilate about File I/O and significance of functions.<br>TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE | | | |
|---|---|---|---|
| 63 | Designing, Structured Programs | 12/4/21 | Lecture interspersed with discussions |
| 64 | Function in C | 13/4/21 | |
| 65 | User Defined Functions | 14/4/21 | |
| 66 | Inter-Function Communication | 15/4/21 | |
| 67 | Standard Functions | 16/4/21 | |
| 68 | Passing Array to Functions | 17/4/21 | |
| 69 | Passing Pointers to Functions | | |
| 70 | Recursion | | |
| 71 | Passing an Array to Function | 19/4/21 | |
| 72 | Files, Streams | | |
| 73 | Standard Library Input / Output Functions | 20/4/21 | |
| 74 | Formatting Input / Output Functions | 21/4/21 | |
| 75 | Character Input / Output Functions | 22/4/21 | |
| 76 | Text versus Binary Streams | | |
| 77 | Functions for Files | 23/4/21 | |
| 78 | Converting File Type | | |
| 79 | Tutorial | 24/4/21 | |

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# TENTATIVE LESSON PLAN: R201101

| Course Title: MATHEMATICS – 1 | | |
|---|---|---|
| Section : ECE-A | Date : 04-01-2021 | Page No : 01 of 02 |
| Revision No : 00 | Prepared By : S.KALPANA | Approved By : HOD |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: SEQUENCES, SERIES AND MEAN VALUE THEOREMS**<br>**CO1:utilize mean value theorems to real life problems**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| **1** | SEQUENCES AND SERIES:<br>Convergence and Divergence | From:<br>06-01-2021<br><br>To:<br>23-01-2021 | Lecture interspersed with discussions |
| **2** | Ratio test | | |
| **3** | Comparison test | | |
| **4** | Integral test | | |
| **5** | Cauchy 's root test | | |
| **6** | Alternating series | | |
| **7** | Leibnitz 's rule | | |
| **8** | Mean Value Theorems:<br>Rolle 's Theorem | | |
| **9** | Lagrange 's mean value theorem | | |
| **10** | Cauchy 's mean value theorem | | |
| **11** | Taylor 's and Maclaurin 's theorems with remainders | | |
| **UNIT-II DIFFERENTIAL EQUATIONS OF FIRST ORDER AND FIRST DEEGREE**<br>**CO2: Solve the differential equations related to various engineering fields**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 12 | Introduction: Differential Equations of First order first degree | From:<br>25-01-2021<br><br>To:<br><br>06-02-2021 | Lecture interspersed with discussions |
| 13 | Exact Equations – Conditions of Exactness | | |
| 14 | Equations reducible to Exact | | |
| 15 | Non Exact Differential Equations | | |
| 16 | Linear Differential Equations of first order | | |
| 17 | Bernouli Equation | | |
| 18 | Equations reducible to linear | | |
| 19 | Orthogonal Trajectories - Cartesian | | |
| 20 | Orthogonal Trajectories - Polar | | |
| 21 | Newton's law of cooling | | |
| 22 | Natural growth or decay | | |
| 23 | Electrical Circuits | | |
| **UNIT-III : LINEAR DIFFERENTIAL EQUATIONS OF HIGHER ORDER** | | | |

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| **CO3: Solve the differential equations related to various engineering fields**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 24 | Linear DE of constant coefficients | From: 08-02-2021 To: 13-02-2021 & From: 22-02-2021 To: 06-03-2021 | Lecture interspersed with discussions |
| 25 | Solutions of $f(D) = Q(x), Q(x) = e^{ax}$ | | |
| 26 | $Q(x) = \sin ax \ or \ \cos ax$ | | |
| 27 | $Q(x) = x^n$ | | |
| 28 | $Q(x) = e^{ax}V(x)$ | | |
| 29 | $Q(x) = xV(x)$ | | |
| 30 | $Q(x) = x^n \sin ax \ or \ \cos ax$ | | |
| 31 | Method of variation of parameters | | |
| 32 | Applications: LCR Circuit | | |
| 33 | Simple Harmonic Motion | | |
| **UNIT-IV PARTIAL DIFFERENTIATION**<br>**CO4: Familirize with functions of several variables which is useful in optimization**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 34 | Homogeneous function; Euler's Theorem | From: 08-03-2021 To: 27-03-2021 | Lecture interspersed with discussions |
| 35 | Total Derivative; Chain rule | | |
| 36 | Taylor's mean value theorems | | |
| 37 | Maclaurin's series | | |
| 38 | Jacobians, formulae | | |
| 39 | Functional dependence | | |
| 40 | Maxima minima of two variables | | |
| 41 | Langranges method | | |
| **UNIT-V: MULTIPLE INTEGRALS**<br>**CO5: Apply double integration techniques in evaluating areas bounded by region**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 42 | Introduction | From: 29-03-2021. To: 12-04-2021 | Lecture interspersed with discussions |
| 43 | Double integrals | | |
| 44 | Triple integrals | | |
| 45 | Change of order of integration | | |
| 46 | Change of variable | | |
| 47 | Applications: Finding areas | | |
| 48 | Finding volumes | | |

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# TENTATIVE LESSON PLAN: R201101

| Course Title: MATHEMATICS – 1 | | |
|---|---|---|
| **Section : ECE-B** | **Date : 04-01-2021** | **Page No :** 01 of 02 |
| **Revision No :** 00 | **Prepared By : B.V.RAMAKRISHNA RAO** | **Approved By : HOD** |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: SEQUENCES, SERIES AND MEAN VALUE THEOREMS**<br>**CO1:utilize mean value theorems to real life problems**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| **1** | SEQUENCES AND SERIES:<br>Convergence and Divergence | From:<br>06-01-2021<br><br>To:<br>23-01-2021 | Lecture interspersed with discussions |
| **2** | Ratio test | | |
| **3** | Comparison test | | |
| **4** | Integral test | | |
| **5** | Cauchy 's root test | | |
| **6** | Alternating series | | |
| **7** | Leibnitz 's rule | | |
| **8** | Mean Value Theorems:<br>Rolle 's Theorem | | |
| **9** | Lagrange 's mean value theorem | | |
| **10** | Cauchy 's mean value theorem | | |
| **11** | Taylor 's and Maclaurin 's theorems with remainders | | |
| **UNIT-II DIFFERENTIAL EQUATIONS OF FIRST ORDER AND FIRST DEEGREE**<br>**CO2: Solve the differential equations related to various engineering fields**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 12 | Introduction: Differential Equations of First order first degree | From:<br>25-01-2021<br><br>To:<br><br>06-02-2021 | Lecture interspersed with discussions |
| 13 | Exact Equations – Conditions of Exactness | | |
| 14 | Equations reducible to Exact | | |
| 15 | Non Exact Differential Equations | | |
| 16 | Linear Differential Equations of first order | | |
| 17 | Bernouli Equation | | |
| 18 | Equations reducible to linear | | |
| 19 | Orthogonal Trajectories - Cartesian | | |
| 20 | Orthogonal Trajectories - Polar | | |
| 21 | Newton's law of cooling | | |
| 22 | Natural growth or decay | | |
| 23 | Electrical Circuits | | |
| **UNIT-III : LINEAR DIFFERENTIAL EQUATIONS OF HIGHER ORDER** | | | |

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|---|---|---|---|
| **UNIT-III: LINEAR DIFFERENTIAL EQUATIONS OF HIGHER ORDER**<br>**CO3:Solve the differential equations related to various engineering fields**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 24 | Linear DE of constant coefficients | From: 08-02-2021 To: 13-02-2021 & From: 22-02-2021 To: 06-03-2021 | Lecture interspersed with discussions |
| 25 | Solutions of $f(D) = Q(x), Q(x) = e^{ax}$ | | |
| 26 | $Q(x) = \sin ax \ or \ \cos ax$ | | |
| 27 | $Q(x) = x^n$ | | |
| 28 | $Q(x) = e^{ax}V(x)$ | | |
| 29 | $Q(x) = xV(x)$ | | |
| 30 | $Q(x) = x^n \sin ax \ or \ \cos ax$ | | |
| 31 | Method of variation of parameters | | |
| 32 | Applications: LCR Circuit | | |
| **UNIT-IVPARTIAL DIFFERENTIATION**<br>**CO4:Familirize with functions of several variables which is useful in optimization**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 33 | Homogeneous function; Euler's Theorem | From: 08-03-2021 To: 27-03-2021 | Lecture interspersed with discussions |
| 34 | Total Derivative; Chain rule | | |
| 35 | Taylor's mean value theorems | | |
| 36 | Maclaurin's series | | |
| 37 | Jacobians, formulae | | |
| 38 | Functional dependence | | |
| 39 | Maxima minima of two variables | | |
| 40 | Langranges method | | |
| **UNIT-V:MULTIPLE INTEGRALS**<br>**CO5: Apply double integration techniques in evaluating areas bounded by region**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 41 | Introduction | From: 29-03-2021 To: 17-03-2021 | Lecture interspersed with discussions |
| 42 | Double integrals | | |
| 43 | Triple integrals | | |
| 44 | Change of order of integration | | |
| 45 | Change of variable | | |
| 46 | Applications: Finding areas | | |
| 47 | Finding volumes | | |

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# TENTATIVE LESSON PLAN: R201102

| Course Title: COMMUNICATIVE ENGLISH | | |
|---|---|---|
| **Section : ECE-A** | **Date : 08-01-2021** | **Page No :** 01 of 03 |
| **Revision No :** 00 | **Prepared By: Yellamanda Vusa** | **Approved By : HOD** |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: A Drawer full of happiness, Deliverance by Premchand**<br>**CO1: Facilitate effective listening skills for better comprehension of academic lectures and English spoken by native speakers**<br>**TB: —Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| **1** | **A Drawer full of happiness** | 08-01-21 | Lecture interspersed with discussions |
| **2** | **Listening : Short Audio Texts** | 08-01-21 | |
| **3** | **Speaking :** Asking and answering questions | 08-01-21 | |
| **4** | **Reading : Skimming and Scanning** | 19-01-21 | |
| **5** | **Reading for Writing :** Paragraph writing | 19-01-21 | |
| **6** | **Vocabulary :** Technical Vocabulary | 20-01-21 | |
| **7** | **Grammar :** Content words and function words | 20-01-21 | |
| **8** | The Deliverance : Munshi Prem Chand | 21-01-21 | |
| **9** | Long Answers | 25-01-21 | |
| **10** | Short Answers | 27-01-21 | |
| **UNIT-II Nehru's letter to his daughter Indira on her birthday, Bosom Friend by Hira Bansode**<br>**CO2: Focus on appropriate reading strategies for comprehension of various academic texts and authentic materials**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 12 | **Nehru's letter to his daughter Indira on her birthday** | | Lecture interspersed |
| 13 | **Listening:** Answering a series of questions | 28-01-21 | |
| 14 | **Speaking:** Discussion in pairs | 01-02-21 | |
| 15 | **Reading**: Identifying sequence of ideas | 02-02-21 | |

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|---|---|---|---|
| 16 | **Reading for Writing**: Summarizing | 03-02-21 | with discussions |
| 17 | **Vocabulary**: Technical vocabulary | 04-02-21 | |
| 18 | **Grammar**: Use of articles | 05-02-21 | |
| 19 | Bosom Friend Hira Bansode | 08-02-21 | |
| 20 | Long Answers | 10-02-21 | |
| 21 | Short Answers | 10-02-21 | |
| **UNIT-III: Stephen Hawking-Positivity "Benchmark", Shakespeare's Sister by Virginia Woolf**<br>**CO3: Help improve speaking skills through participation in activities such as role plays, discussions and structured talks/oral presentations**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 24 | **Stephen Hawking-Positivity 'Benchmark** | 11-02-21 | |
| 25 | **Listening:** Listening for global comprehension | 15-02-21 | Lecture interspersed with discussions |
| 26 | **Speaking:** Discussing specific topics in pairs | 16-02-21 | |
| 27 | **Reading**: Reading a text in detail | 17-02-21 | |
| 28 | **Reading for Writing**: Summarizing | 19-02-21 | |
| 29 | **Vocabulary**: Technical vocabulary | 22-02-21 | |
| 30 | **Grammar**: Verbs - tenses; subject-verb agreement | 22-02-21 | |
| 31 | **Shakespeare's Sister by Virginia Woolf** | 24-02-21 | |
| 32 | Long Answers | 26-02-21 | |
| **UNIT IV Liking a Tree, Unbowed: Wangari Maathai, Telephone Conversation-Wole Soyinka**<br>**CO4: Impart effective strategies for good writing and demonstrate the same in summarizing, writing well organized essays, record and report useful information.**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 33 | **Like a Tree, Unbowed: Wangari Maathai-biography** | | |
| 34 | **Listening:** Making predictions while listening | 03-03-21 | Lecture interspersed with |
| 35 | **Speaking:** Role plays for practice of conversational | 04-03-21 | |

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|---|---|---|---|
| | English | | discussions |
| 36 | **Reading**: Studying the use of graphic elements | 08-03-21 | |
| 37 | **Reading for Writing**: Information transfer | 10-03-21 | |
| 38 | **Vocabulary**: Technical vocabulary | 22-03-21 | |
| 39 | **Grammar**: Quantifying expressions | 24-03-21 | |
| 40 | Telephone Conversation: Wole Soyinka | 26-03-21 | |
| **UNIT-V: Stay Hungry-Stay foolish, Still I Rise by Maya Angelou**<br>**CO5: Provide knowledge of grammatical structures and vocabulary and encourage their appropriate use in speech and writing**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 41 | **Stay Hungry-Stay foolish** | 30-03-21 | Lecture interspersed with discussions |
| 42 | **Listening** Identifying key terms | 01-04-21 | |
| 43 | **Speaking:** Formal oral presentations | 05-04-21 | |
| 44 | **Reading**: Reading for comprehension | 08-04-21 | |
| 45 | **Reading for Writing**: Writing academic proposals | 09-04-21 | |
| 46 | **Vocabulary**: Technical vocabulary | 10-04-21 | |
| 47 | **Grammar**: Editing short texts | 12-04-21 | |

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# TENTATIVE LESSON PLAN: R201102

| Course Title: COMMUNICATIVE ENGLISH | | |
|---|---|---|
| Section : ECE-B | Date : 08-01-2021 | Page No : 01 of 03 |
| Revision No : 00 | Prepared By: Yellamanda Vusa | Approved By : HOD |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: A Drawer full of happiness, Deliverance by Premchand**<br>**CO1: Facilitate effective listening skills for better comprehension of academic lectures and English spoken by native speakers**<br>**TB: —Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 1 | **A Drawer full of happiness** | 08-01-21 | Lecture interspersed with discussions |
| 2 | **Listening : Short Audio Texts** | 08-01-21 | |
| 3 | **Speaking :** Asking and answering questions | 08-01-21 | |
| 4 | **Reading : Skimming and Scanning** | 19-01-21 | |
| 5 | **Reading for Writing :** Paragraph writing | 19-01-21 | |
| 6 | **Vocabulary :** Technical Vocabulary | 20-01-21 | |
| 7 | **Grammar :** Content words and function words | 20-01-21 | |
| 8 | The Deliverance : Munshi Prem Chand | 21-01-21 | |
| 9 | Long Answers | 25-01-21 | |
| 10 | Short Answers | 27-01-21 | |
| **UNIT-II Nehru's letter to his daughter Indira on her birthday, Bosom Friend by Hira Bansode**<br>**CO2: Focus on appropriate reading strategies for comprehension of various academic texts and authentic materials**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 12 | **Nehru's letter to his daughter Indira on her birthday** | | Lecture interspersed |
| 13 | **Listening:** Answering a series of questions | 28-01-21 | |
| 14 | **Speaking:** Discussion in pairs | 01-02-21 | |
| 15 | **Reading**: Identifying sequence of ideas | 02-02-21 | |

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|---|---|---|---|
| 16 | **Reading for Writing**: Summarizing | 03-02-21 | with discussions |
| 17 | **Vocabulary**: Technical vocabulary | 04-02-21 | |
| 18 | **Grammar**: Use of articles | 05-02-21 | |
| 19 | Bosom Friend Hira Bansode | 08-02-21 | |
| 20 | Long Answers | 10-02-21 | |
| 21 | Short Answers | 10-02-21 | |
| **UNIT-III: Stephen Hawking-Positivity "Benchmark", Shakespeare's Sister by Virginia Woolf**<br>**CO3: Help improve speaking skills through participation in activities such as role plays, discussions and structured talks/oral presentations**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 24 | **Stephen Hawking-Positivity 'Benchmark** | 11-02-21 | Lecture interspersed with discussions |
| 25 | **Listening:** Listening for global comprehension | 15-02-21 | |
| 26 | **Speaking:** Discussing specific topics in pairs | 16-02-21 | |
| 27 | **Reading**: Reading a text in detail | 17-02-21 | |
| 28 | **Reading for Writing**: Summarizing | 19-02-21 | |
| 29 | **Vocabulary**: Technical vocabulary | 22-02-21 | |
| 30 | **Grammar**: Verbs - tenses; subject-verb agreement | 22-02-21 | |
| 31 | **Shakespeare's Sister by Virginia Woolf** | 24-02-21 | |
| 32 | Long Answers | 26-02-21 | |
| **UNIT IV Liking a Tree, Unbowed: Wangari Maathai, Telephone Conversation-Wole Soyinka**<br>**CO4: Impart effective strategies for good writing and demonstrate the same in summarizing, writing well organized essays, record and report useful information.**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 33 | **Like a Tree, Unbowed: Wangari Maathai-biography** | | |
| 34 | **Listening:** Making predictions while listening | 03-03-21 | Lecture interspersed with |
| 35 | **Speaking:** Role plays for practice of conversational | 04-03-21 | |

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|---|---|---|---|
| | English | | discussions |
| 36 | **Reading**: Studying the use of graphic elements | 08-03-21 | |
| 37 | **Reading for Writing**: Information transfer | 10-03-21 | |
| 38 | **Vocabulary**: Technical vocabulary | 22-03-21 | |
| 39 | **Grammar**: Quantifying expressions | 24-03-21 | |
| 40 | Telephone Conversation: Wole Soyinka | 26-03-21 | |
| **UNIT-V: Stay Hungry-Stay foolish, Still I Rise by Maya Angelou**<br>**CO5: Provide knowledge of grammatical structures and vocabulary and encourage their appropriate use in speech and writing**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 41 | **Stay Hungry-Stay foolish** | 30-03-21 | Lecture interspersed with discussions |
| 42 | **Listening** Identifying key terms | 01-04-21 | |
| 43 | **Speaking:** Formal oral presentations | 05-04-21 | |
| 44 | **Reading**: Reading for comprehension | 08-04-21 | |
| 45 | **Reading for Writing**: Writing academic proposals | 09-04-21 | |
| 46 | **Vocabulary**: Technical vocabulary | 10-04-21 | |
| 47 | **Grammar**: Editing short texts | 12-04-21 | |

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# TENTATIVE LESSON PLAN: R201104
# ENGINEERING DRAWING

| Course Title: ENGINEERING DRAWING | | Course Code:R201104 |
|---|---|---|
| Section : ECE-A | Date:06-01-2021. | Page No: 01 of 02 |
| Revision No : 00 | Prepared By: G. Durga Prasad | Approved By : HOD |

**Tools: Black board, PPTs**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-I** | **INTRODUCTION TO DRAWING** | | |
| **CO1:Able to draw the polygons, curves.** | | | |
| **TB:"Engineering Drawing", by N.D. Butt &V.M. Panchal, Chariot Publishing House, Anand. 49th Edition – 2006.** | | | |
| 1 | Introduction | 12-01-2021 | Lecture interspersed with discussions |
| 2 | Lettering and Dimensioning | 19-01-2021 | |
| 3 | Geometrical constructions | 21-01-2021 | |
| 4 | Parabola, Ellipse and \|Hyperbola | 28-01-2021 | |
| 5 | Polygons | 02-02-2021 | |
| 6 | Cycloids | 04-02-2021 | |
| 7 | Involutes | 09-02-2021 | |
| 8 | Vernier scales | 11-02-2021 | |
| 9 | Plain scales, diagonal scale | 16-02-2021 | |
| **UNIT-II** | **INTRODUCTION TO ORTHOGRAPHIC PROJECTIONS** | | |
| **CO2:Able to draw the scales, projections of points and lines parallel to one plane and to other plan.** | | | |
| **TB: "Engineering Drawing", by Agarwal & Agarwal, Tata McGraw Hill Publishers, 2nd Edition – 2015.** | | | |
| 10 | Projections of points in various quadrants | 18-02-2021 | Lecture interspersed with discussions |
| 11 | Projections of lines, lines parallel either of the reference planes | 23-02-2021 | |
| 12 | Determination of true lengths, | 25-02-2021 | |
| 13 | Angle of inclination and traces. | 02-03-2021 | |
| **UNIT-III** | **PROJECTIONS OF PLANES** | | |
| **CO3:Able to draw the projections of lines inclined to both the planes and its traces.** | | | |
| **TB:"Engineering Drawing", by Agarwal & Agarwal, Tata McGraw Hill Publishers, 2nd Edition – 2015.** | | | |
| 14 | Projection of plane (parallel to one plane and perpendicular to other plane) | 04-03-2021 | Lecture interspersed with discussions |
| 15 | Projection of plane (parallel to one plane and inclined to other plane) | 09-03-2021 | |
| 16 | Projection of plane (inclined to both plane) | 16-03-2021 | |
| 17 | Projection of plane (inclined to both plane) | 18-03-2021 | |
| **UNIT-IV** | **PROJECTIONS OF SOLIDS** | | |
| **CO4:Able to identify the different plans and draw the projections of the plane inclined to both the planes.** | | | |
| **TB:"Engineering Drawing", by Agarwal & Agarwal, Tata McGraw Hill Publishers, 2nd Edition – 2015.** | | | |
| 18 | Projections of Solids | 23-03-2021 | Lecture interspersed |
| 19 | Prisms, Pyramids | 25-03-2021 | |

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|---|---|---|---|
| 20 | Cones with the axis inclined to both the planes | 30-03-2021 | with discussions |
| 21 | Cylinders with the axis inclined to both the planes | 01-04-2021 | |
| **UNIT-V Conversion of isometric views to orthographic views**<br>**CO5:Able to identify the basic solids and draw the projections of the solids inclined to one of the planes.**<br>**TB:"Engineering Drawing", by Agarwal & Agarwal, Tata McGraw Hill Publishers, 2nd Edition – 2015.** | | | |
| 22 | Isometric views to orthographic views | 06-04-2021 | Lecture interspersed with discussions |
| 23 | Orthographic views to isometric views. | 08-04-2021 | |
| 24 | Computer Aided Design | 20-04-2021 | |
| 25 | Drawing practice using Auto CAD | 20-04-2021 | |
| 26 | Creating 2D&3D drawings | 22-04-2021 | |

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**Date:** 06/1/21

**Signature of HOD**

**Date:** 6/1/21

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# TENTATIVE LESSON PLAN
# R201104 ENGINEERING DRAWING

| Course Title: ENGINEERING DRAWING | | Course Code: R201104 |
|---|---|---|
| Section : ECE-B | Date: 06-01-2021. | Page No: 01 of 02 |
| Revision No : 00 | Prepared By: P. Kishorekumar | Approved By : HOD |

**Tools: Black board, PPTs**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-I** | **INTRODUCTION TO DRAWING** | | |
| **CO1:Able to draw the polygons, curves.** | | | |
| **TB:"Engineering Drawing", by N.D. Butt &V.M. Panchal, Chariot Publishing House, Anand. 49th Edition – 2006.** | | | |
| 1 | Introduction | 11-01-2021 | Lecture interspersed with discussions |
| 2 | Lettering and Dimensioning | 14-01-2021 | |
| 3 | Geometrical constructions | 18-01-2021 | |
| 4 | Parabola, Ellipse and \|Hyperbola | 21-01-2021 | |
| 5 | Polygons | 25-01-2021 | |
| 6 | Cycloids | 28-01-2021 | |
| 7 | Involutes | 01-02-2021 | |
| 8 | Vernier scales | 04-02-2021 | |
| 9 | Plain scales, diagonal scale | 08-02-2021 | |
| **UNIT-II** | **INTRODUCTION TO ORTHOGRAPHIC PROJECTIONS** | | |
| **CO2:Able to draw the scales, projections of points and lines parallel to one plane and to other plan.** | | | |
| **TB: "Engineering Drawing", by Agarwal & Agarwal, Tata McGraw Hill Publishers, 2nd Edition – 2015.** | | | |
| 10 | Projections of points in various quadrants | 11-02-2021 | Lecture interspersed with discussions |
| 11 | Projections of lines, lines parallel either of the reference planes | 15-02-2021 | |
| 12 | Determination of true lengths, | 18-02-2021 | |
| 13 | Angle of inclination and traces. | 22-02-2021 | |
| **UNIT-III** | **PROJECTIONS OF PLANES** | | |
| **CO3:Able to draw the projections of lines inclined to both the planes and its traces.** | | | |
| **TB:"Engineering Drawing", by Agarwal & Agarwal, Tata McGraw Hill Publishers, 2nd Edition – 2015.** | | | |
| 14 | Projection of plane (parallel to one plane and perpendicular to other plane) | 25-02-2021 | Lecture interspersed with discussions |
| 15 | Projection of plane (parallel to one plane and inclined to other plane) | 01-03-2021 | |
| 16 | Projection of plane (inclined to both plane) | 04-03-2021 | |
| 17 | Projection of plane (inclined to both plane) | 08-03-2021 | |
| **UNIT-IV** | **PROJECTIONS OF SOLIDS** | | |
| **CO4:Able to identify the different plans and draw the projections of the plane inclined to both the planes.** | | | |
| **TB:"Engineering Drawing", by Agarwal & Agarwal, Tata McGraw Hill Publishers, 2nd Edition – 2015.** | | | |
| 18 | Projections of Solids | 11-03-2021 | Lecture interspersed |
| 19 | Prisms, Pyramids | 15-03-2021 | |

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|---|---|---|---|
| 20 | Cones with the axis inclined to both the planes | 22-03-2021 | with discussions |
| 21 | Cylinders with the axis inclined to both the planes | 25-03-2021 | |
| **UNIT-V Conversion of isometric views to orthographic views**<br>**CO5:Able to identify the basic solids and draw the projections of the solids inclined to one of the planes.**<br>**TB:"Engineering Drawing", by Agarwal & Agarwal, Tata McGraw Hill Publishers, 2nd Edition – 2015.** | | | |
| 22 | Isometric views to orthographic views | 29-03-2021 | Lecture interspersed with discussions |
| 23 | Orthographic views to isometric views. | 01-04-2021 | |
| 24 | Computer Aided Design | 05-04-2021 | |
| 25 | Drawing practice using Auto CAD | 08-04-2021 | |
| 26 | Creating 2D&3D drawings | 12-04-2021 | |

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**Signature of HOD**

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## TENTATIVE LESSON PLAN: R20111O

| Course Title: PROGRAMMING FOR PROBLEM SOLVING USING C | | |
|---|---|---|
| Section : Sec A | Date : 08-01-2021 | Page No : 01 of 03 |
| Revision No : 00 | Prepared By : CH SIVA RAJESH | Approved By : HOD |

**Tools: Black board, PPTs, Moodle**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-I** | **Introduction to C language** | | |
| **CO1: To learn about the computer systems, computing environments, developing of a computer program and Structure of a C Program.** | | | |
| **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 1 | Computer Systems | 8-01-2021 | Lecture Interspersed With discussions |
| 2 | Computing Environments | 8-01-2021 | |
| 3 | Computer languages | 9-01-2021 | |
| 4 | Creating and running Programs | 9-01-2021 | |
| 5 | Computer Numbering System | 10-01-2021 | |
| 6 | Storing Integers | 12-01-2021 | |
| 7 | Storing Real Numbers | 18-01-2021 | |
| 8 | C Programs, Identifiers | 20-01-2021 | |
| 9 | Types, Variable | 21,23-01-2021 | |
| 10 | Constants, Input/output | 24,27-01-2021 | |
| 11 | Programming Examples | 27-01-2021 | |
| 12 | Scope, Storage Classes and Type Qualifiers | 29-01-2021 | |
| 13 | Expressions Precedence and Associativity | 1-02-2021 | |
| 14 | Side Effects, Evaluating Expressions | 2-02-2021 | |
| 15 | Type Conversion Statements | 3-02-2021 | |
| 16 | Simple Programs | 4-02-2021 | |
| 17 | Command Line Arguments | 5-02-2021 | |
| 18 | **Tutorial** | 6-2-2021 | |
| **UNIT-II** | **Operators, Selection and Repetition** | | |
| **CO2: To gain knowledge of the operators, selection, control statements and repetition in C.** | | | |
| **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 19 | Exact Size Integer Types | 6-02-2021 | Lecture interspersed |
| 20 | Logical Bitwise Operators | 8-02-2021 | |
| 21 | Shift Operators | 9-02-2021 | |
| 22 | Logical Data and Operators | 10-02-2021 | |
| 23 | Two Way Selection | 11-02-2021 | |
| 24 | Multiway Selection | 12-02-2021 | |

| | | | |
|---|---|---|---|
| 25 | More Standard Functions | 13-02-2021 | with discussions |
| 26 | Concept of Loop | 15-02-2021 | |
| 27 | Pretest and Post-test Loops | 16-02-2021 | |
| 28 | Initialization and Updating | 17-02-2021 | |
| 29 | Event and Counter Controlled Loops | 18-02-2021 | |
| 30 | Loops in C | 19-02-2021 | |
| 31 | Other Statements Related to Looping | 20-02-2021 | |
| 32 | Looping Applications | 22-02-2021 | |
| 33 | Programming Example The Calculator Program | 23-02-2021 | |
| 35 | **Tutorial** | 24-2-2021 | |
| **No. of Periods** | **TOPIC** | **Date** | **Mode of Delivery** |
| **UNIT-III** | **Arrays, String, Enum, Structure, Unions** | | |
| **CO3: To learn about the design concepts of arrays, strings, enumerated structure and union types. To learn about their usage.** | | | |
| **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 36 | Concepts, Using Array in C | 25,26-02-2021 | Lecture interspersed with discussions |
| 37 | Array Application | 27-02-2021 | |
| 38 | Two Dimensional Arrays | 27-02-2021 | |
| 39 | Multidimensional Arrays | 1-03-2021 | |
| 40 | Programming Example – Calculate Averages | 2-03-2021 | |
| 41 | String Concepts, C String | 4-03-2021 | |
| 42 | String Input / Output Functions | 6-03-2021 | |
| 43 | Arrays of Strings | 8-03-2021 | |
| 44 | String Manipulation Functions | 9-03-2021 | |
| 45 | String/ Data Conversion | 10-03-2021 | |
| 46 | A Programming Example – Morse Code | 11-03-2021 | |
| 47 | The Type Definition (Type def) | 12-03-2021 | |
| 48 | Enumerated Types | 12-03-2021 | |
| 49 | Structure | 13-03-2021 | |
| 50 | Unions | 13-03-2021 | |
| 51 | Programming Application | 13-03-2021 | |
| 52 | **Tutorial** | 14-03-2021 | |
| **UNIT-IV** | **Pointers** | | |
| **CO4: To assimilate about pointers, dynamic memory allocation and know the significance of Preprocessor.** | | | |
| **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| **No. of Periods** | **TOPIC** | **Date** | **Mode of Delivery** |
| 53 | Introduction | 22-03-2021 | |
| 54 | Pointers to pointers | 22-03-2021 | |
| 55 | Compatibility, L value and R value | 24-03-2021 | |
| 56 | Arrays, and Pointers | 26-03-2021 | |

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|---|---|---|---|
| 57 | Pointer Arithmetic and Arrays | 27-03-2021 | Lecture interspersed with discussions |
| 58 | Memory Allocation Function | 30-03-2021 | |
| 59 | Array of Pointers | 31-03-2021 | |
| 60 | Programming Application | 31-03-2021 | |
| 61 | Processor Commands | 1-04-2024 | |
| 62 | **Tutorial** | 1-04-2021 | |
| **UNIT-V** | **Files and Functions** | | |
| **CO5: To assimilate about File I/O and significance of functions.** | | | |
| **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 63 | Files, Streams | 15-04-2024 | Lecture interspersed with discussions |
| 64 | Standard Library Input / Output Functions | 16-04-2024 | |
| 65 | Formatting Input / Output Functions | 16-04-2024 | |
| 66 | Character Input / Output Functions | 16-04-2024 | |
| 67 | Text versus Binary Streams | 17-04-2024 | |
| 68 | Functions for Files | 19-04-2024 | |
| 69 | Converting File Type | 20-04-2024 | |
| 70 | Designing, Structured Programs | 3-04-2024 | |
| 71 | Function in C | 5-04-2024 | |
| 72 | User Defined Functions | 6-04-2024 | |
| 73 | Inter-Function Communication | 7-04-2024 | |
| 74 | Standard Functions | 8-04-2024 | |
| 75 | Passing Array to Functions | 10-04-2024 | |
| 76 | Passing Pointers to Functions | 13-04-2024 | |
| 77 | Recursion | 13-04-2024 | |
| 78 | **Tutorial** | 15-04-2024 | |

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## TENTATIVE LESSON PLAN: 1R201110

| Course Title: PROGRAMMING FOR PROBLEM SOLVING USING C (ES1101) | | |
|---|---|---|
| **Section : Sec B** | **Date :** 08-01-2021 | **Page No :** 01 of 03 |
| **Revision No** : 00 | **Prepared By : B.S.S.TEJESH** | **Approved By : HOD** |

**Tools: Black board, PPTs, Moodle**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-I Introduction to C language**<br>**CO1: To learn about the computer systems, computing environments, developing of a computer program and Structure of a C Program.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 1 | Creating and running Programs | 8/1/21 | Lecture Interspersed With discussions |
| 2 | Computer Numbering System | 9/1/21 | |
| 3 | Storing Integers | 11/1/21 | |
| 4 | Storing Real Numbers | 18/1/21 | |
| 5 | C Programs, Identifiers | 19/1/21 | |
| 6 | Types, Variable | 20/1/21 | |
| 7 | Constants, Input/output | 21/1/21 | |
| 8 | Programming Examples | 22/1/21 | |
| 9 | Scope | 23/1/21 | |
| 10 | Storage Classes | 25/1/21 | |
| 11 | Type Qualifiers | 27/1/21 | |
| 12 | Expressions Precedence | 28/1/21 | |
| 13 | Associativity | 29/1/21 | |
| 14 | Side Effects, Evaluating Expressions | 30/1/21 | |
| 15 | Type Conversion Statements | 1/2/21 | |
| 16 | Simple Programs | 2/2/21 | |
| 17 | Command Line Arguments | 3/2/21 | |
| 18 | **Tutorial** | 4/2/21 | |
| **UNIT-II Operators, Selection and Repetition**<br>**CO2: To gain knowledge of the operators, selection, control statements and repetition in C.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 19 | Exact Size Integer Types | 5/2/21 | Lecture interspersed with |
| 20 | Logical Bitwise Operators | 6/2/21 | |
| 21 | Shift Operators | 8/2/21 | |
| 22 | Logical Data and Operators | 9/2/21 | |
| 23 | Two Way Selection | 10-12/2/21 | |
| 24 | Multiway Selection | 13/2/21 | |
| 25 | More Standard Functions | 15/2/21 | |

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|---|---|---|---|
| 26 | Concept of Loop | 16/2/21 | discussions |
| 27 | Pretest and Post-test Loops | 17/2/21 | |
| 28 | Initialization and Updating | 18/2/21 | |
| 29 | Event and Counter Controlled Loops | 19/2/21 | |
| 30 | Loops in C | 20/2/21 | |
| 31 | Other Statements Related to Looping | 22/2/21 | |
| 32 | Looping Applications | 23-25/2/21 | |
| 33 | Programming Example | | |
| 35 | **Tutorial** | 26/2/21 | |
| **No. of Periods** | **TOPIC** | **Date** | **Mode of Delivery** |
| **UNIT-III Arrays, String, Enum, Structure, Unions** | | | |
| **CO3: To learn about the design concepts of arrays, strings, enumerated structure and union types. To learn about their usage.** | | | |
| **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 36 | Concepts, Using Array in C | 27/2/21 | Lecture interspersed with discussions |
| 37 | Array Application | 1/3/21 | |
| 38 | Two Dimensional Arrays | 2/3/21 | |
| 39 | Multidimensional Arrays | 3/3/21 | |
| 40 | Programming Example – Calculate Averages | 4/3/21 | |
| 41 | String Concepts, C String | 5/3/21 | |
| 42 | String Input / Output Functions | 6-9/3/21 | |
| 43 | Arrays of Strings | 10/3/21 | |
| 44 | String Manipulation Functions | 11/3/21 | |
| 45 | String/ Data Conversion | 12/3/21 | |
| 46 | A Programming Example | 13-15/3/21 | |
| 47 | The Type Definition (Type def) | 16/3/21 | |
| 48 | Enumerated Types | 17/3/21 | |
| 49 | Structure | 18-20/3/21 | |
| 50 | Unions | 22-25/3/21 | |
| 51 | Programming Application | 26-31/3/21 | |
| 52 | **Tutorial** | | |
| **UNIT-IV Pointers** | | | |
| **CO4: To assimilate about pointers, dynamic memory allocation and know the significance of Preprocessor.** | | | |
| **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| **No. of Periods** | **TOPIC** | **Date** | **Mode of Delivery** |
| 53 | Introduction | 1/4/21 | Lecture interspersed |
| 54 | Pointers to pointers | 2/4/21 | |
| 55 | Compatibility, L value and R value | 3/4/21 | |
| 56 | Arrays, and Pointers | 5/4/21 | |
| 57 | Pointer Arithmetic and Arrays | 6/4/21 | |
| 58 | Memory Allocation Function | 7/4/21 | |

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|---|---|---|---|
| 59 | Array of Pointers | 8/4/21 | with discussions |
| 60 | Programming Application | 9/4/21 | |
| 61 | Processor Commands | 10/4/21 | |
| 62 | **Tutorial** | | |
| **UNIT-V Files and Functions**<br>**CO5: To assimilate about File I/O and significance of functions.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 63 | Designing, Structured Programs | 12/4/21 | Lecture interspersed with discussions |
| 64 | Function in C | 13/4/21 | |
| 65 | User Defined Functions | 14/4/21 | |
| 66 | Inter-Function Communication | 15/4/21 | |
| 67 | Standard Functions | 16/4/21 | |
| 68 | Passing Array to Functions | 17/4/21 | |
| 69 | Passing Pointers to Functions | | |
| 70 | Recursion | | |
| 71 | Passing an Array to Function | 19/4/21 | |
| 72 | Files, Streams | | |
| 73 | Standard Library Input / Output Functions | 20/4/21 | |
| 74 | Formatting Input / Output Functions | 21/4/21 | |
| 75 | Character Input / Output Functions | 22/4/21 | |
| 76 | Text versus Binary Streams | | |
| 77 | Functions for Files | 23/4/21 | |
| 78 | Converting File Type | | |
| 79 | **Tutorial** | 24/4/21 | |

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**Signature of HOD** 21/1/21

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# TENTATIVE LESSON PLAN: R201115

| Course Title: APPLIED CHEMISTRY | | | |
|---|---|---|---|
| Section :ECE-A | Date : 8-1-2021 | Page No : 1-3 | |
| Revision No :00 | Prepared By : B.SOWJANYA | Approved By : HOD | |
| Tools: | | | |
| No. of Periods:73 | TOPIC | Date | Mode of Delivery |
| **Unit – I: POLYMER TECHNOLOGY**<br>**(Engineering Chemistry by Jain and Jain; Dhanpat Rai Publicating Co.)**<br>**CO1:** Importance of usage of plastics in household appliances and composites(FRP) in aerospace and automotive industries. | | | |
| 1 | Polymerisation:- Introduction-methods of polymerization | 8-1-2021 | Lecture interspersed with discussions |
| 2 | physical and mechanical properties. | 9-1-2021 | |
| 3 | Plastics: Compounding-fabrication | 12-1-2021 | |
| 4 | preparation, properties and applications of PVC, | 21-1-2021 | |
| 5 | polycarbonates and Bakelite-mention some examples of plastic. | 21-1-2021 | |
| 6 | Materials used in electronic gadgets, recycling of e-plastic waste | 22-1-2021 | |
| 7 | Elastomers:- Natural rubber-drawbacks-vulcanization | 23-1-2021 | |
| 8 | preparation, properties and applications of synthetic rubbers | 25-1-2021 | |
| 9 | (Buna S, thiokol and polyurethanes | 27-1-2021 | |
| 10 | Composite materials: Fiber reinforced plastics-. | 28-1-2021 | |
| 11 | conductingpolymers- | 30-1-2021 | |
| 13 | Biodegradable polymersbiopolymers | 30-1-2021 | |
| **Unit -II :ELECTROCHEMICAL CELLS AND CORROSION**<br>**(Engineering Chemistry by Jain and Jain; Dhanpat Rai Publicating Co.)**<br>**CO2:** Outline the basics for the construction of electrochemicalcells, batteries and fuelcells. Understand the mechanism of corrosion and how it can be prevented. | | | |
| **1** | **Unit -II :ELECTROCHEMICAL CELLS** | 3-2-2021 | Lecture interspersed with discussions |
| 2 | Single electrode potentia. | 4-2-2021 | |
| 3 | Electrochemical series and uses of series | 5-2-2021 | |
| 4 | standard hydrogen electrode, calomel electrode | 6-2-2021 | |
| 5 | concentration cell- | 6-2-2021 | |
| 6 | construction of glass electrode | 8-2-2021 | |
| 7 | Batteries: Dry cell, Ni-Cd cells, | 9-2-2021 | |
| 8 | N-iMetal hydride cells, Li ion battery, zinc air cells | 10-2-2021 | |
| 9 | Fuel cells: H2-O2, CH3OH-O2, | 11-2-2021 | |
| 10 | phosphoric acid, molten carbonate | 12-2-2021 | |
| 11 | **Corrosion:**-Definition-theories of corrosion | 13-2-2021 | |

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|---|---|---|---|
| 12 | galvanic corrosion, differential aeration corrosion, stress corrosion, | 15-2-2021 | |
| 13 | waterline corrosion-passivity of metals-galvanicseries | 16-2-2021 | |
| 14 | Factors influencing rate of corrosion-corrosion control | 17-2-2021 | |
| 15 | Protective coatings: Surface preparation, cathodic | 19-2-2021 | |
| 16 | Anodic coatings, electroplating, electroless plating (nickel). | 20-2-2021 | |
| 17 | Paints (constituents, functions, special paints). | 22-2-2021 | |

## Unit – III: UNIT III: MATERIAL CHEMISTRY

**(Engineering Chemistry by Jain and Jain; Dhanpat Rai Publicating Co.)**

**CO3:** Explain the preparation of semiconductors and nanomaterials, engineering applications of nanomaterials, superconductors and liquidcrystals.

| | | | |
|---|---|---|---|
| 1 | **Part I : Non-elemental semiconducting materials** | 23-2-2021 | Lecture interspersed with discussions |
| 2 | Semiconductor devices (p-n junction diode as rectifier, junction transistor | 4-3-2021 | |
| 3 | Insulators & magnetic materials: electrical insulators | 8-3-2021 | |
| 4 | Ferro and ferri magnetism-Hall effect and its applications. | 10-3-2021 | |
| 5 | **Part II: Nano materials**:- Introduction-sol-gel method- | 22-3-2021 | |
| 6 | characterization by BET, SEM and TEM methods | 23-2021 | |
| 7 | Applications of graphene-carbon nanotubes and fullerenes: | 24-3-2021 | |
| 8 | Types, preparation and applications Liquid crystals | 27-3-2021 | |
| 9 | Introduction-types-applications. Super conductors:-Type –I, Type II-characteristics and applications. | 30-3-2021 | |

## UNIT IV: SPECTROSCOPIC TECHNIQUES & NON CONVENTIONAL ENERGY SOURCES

**(Engineering Chemistry by Jain and Jain; Dhanpat Rai Publicating Co.)**

**CO4:** Recall the increase in demand for power and hence alternative sources of power are studied due to depleting sources of fossil fuels. Advanced instrumental techniques are introduced.

| | | | |
|---|---|---|---|
| 1. | **Part A: SPECTROSCOPIC TECHNIQUES** Electromagnetic spectrum-UV | 1-4-2021 | Lecture interspersed with discussions |
| 2. | laws of absorption, instrumentation, | 2-4-2021 | |
| 3 | Theory of electronic spectroscopy, Frank-condon principle | 3-4-2021 | |
| 4. | chromophores and auxochromes, intensity shifts, applications | 5-4-2021 | |
| 5. | FT-IR (instrumentation and IR of some organic compounds, applications). | 6-4-2021 | |
| 6. | Magnetic resonance imaging and CT scan (procedure | 6-4-2021 | |

| | | | |
|---|---|---|---|
| | & applications). | | |
| 7. | **Part B: NON CONVENTIONAL ENERGY SOURCES** | 7-4-2021 | |
| 8. | Design, working, schematic diagram, advantages and disadvantages of photovoltaic cell, | 9-4-2021 | |
| 9. | Hydropower, geothermal power, | 10-4-2021 | |
| 10. | Tidal and wave power | 10-4-2021 | |
| **UNIT V: ADVANCED CONCEPTS/TOPICS IN CHEMISTRY**<br>**Applied Chemistry"** by, Dr. Bharathi kumara Yallamanchili, VGS.<br>**C05:** Outline the basics of computational chemistry and molecular switches. | | | |
| 1 | Computational chemistry: Introduction, Ab Initio studies Molecular switches | 11-4-2021 | Lecture interspersed with discussions |
| 2. | characteristics of molecular motors and machines, Rotaxanes | 12-4-2021 | |
| 3. | Catenanes as artificial molecular machines, prototypes | 15-4-2021 | |
| 4. | linear motions in rotaxanes, an acid-base controlled molecular shuttle | 16-4-2021 | |
| 5. | a molecular elevator, | 16-4-2021 | |
| 6. | an autonomous light-powered molecular motor | 17-4-2021 | |
| 7. | Computational chemistry: Introduction, Ab Initio studies Molecular switches | 17-4-2021 | |
| 8. | characteristics of molecular motors and machines, | 17-4-2021 | |

B. Sowjanya
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HOD SIGNATURE

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|---|---|---|
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# TENTATIVE LESSON PLAN: R201115

| **Course Title: APPLIED CHEMISTRY** | | | |
|---|---|---|---|
| **Section : ECE-B** | **Date :** 06-01- 2021 | **Page No :** 1-3 | |
| **Revision No :**00 | **Prepared By : Dr.T.V.Nagalakshmi** | **Approved By : HOD** | |
| **Tools:** | | | |
| **No. of Periods** | **TOPIC** | **Date** | **Mode of Delivery** |
| **UNIT – I: POLYMER TECHNOLOGY**<br>**CO:** Analyze the different types of composite plastic materials and interpret the mechanism of conduction in conducting polymers | | | |
| 1 | Polymerisation:- Introduction-methods of polymerization | 07-01-2021 | Lecture Interspersed With Discussions |
| 2 | Physical and mechanical properties. | 08-01-2021 | |
| 3 | Plastics: Compounding-fabrication | 09-01-2021 | |
| 4 | Preparation, properties and applications of PVC, | 11-01-2021 | |
| 5 | Polycarbonates and Bakelite-mention some examples of plastic. | 12-01-2021 | |
| 6 | Materials used in electronic gadgets, recycling of e-plastic waste | 12-01-2021 | |
| 7 | Elastomers:- Natural rubber-drawbacks-vulcanization | 18-01-2021 | |
| 8 | Preparation, properties and applications of synthetic rubbers | 19-01-2021 | |
| 9 | (Buna S, thiokol and polyurethanes | 19-01-2021 | |
| 10 | Composite materials: Fiber reinforced plastics- . | 19-01-2021 | |
| 11 | Conducting polymers- | 21-01-2021 | |
| 12 | Biodegradable polymers biopolymers | 22-01-2021 | |
| 13 | Biomedical polymers | 23-01-2021 | |
| **UNIT-II :ELECTROCHEMICAL CELLS AND CORROSION**<br>**CO:** Utilize the theory of construction of electrodes, batteries and fuel cells in redesigning new engineering products and categorize the reasons for corrosion and study methods to control corrosion | | | |
| **1** | Single electrode potentia. | 23-01-2021 | |
| 2 | Electrochemical series and uses of series | 25-01-2021 | Lecture |

| | | | |
|---|---|---|---|
| 3 | Standard hydrogen electrode, calomel electrode | 28-01-2021 | Interspersed With Discussions |
| 4 | | 29-01-2021 | |
| 5 | Concentration cell- | 30-01-2021 | |
| 6 | Construction of glass electrode | 30-01-2021 | |
| 7 | Batteries: Dry cell, Ni-Cd cells, | 01-02-2021 | |
| 8 | Ni Metal hydride cells, Li ion battery, zinc air cells | 02-02-2021 | |
| 9 | Fuel cells: $H_2$-$O_2$, $CH_3OH$-$O_2$, | 02-02-2021 | |
| 10 | Phosphoric acid, molten carbonate | 05-02-2021 | |
| 11 | **Corrosion:**-Definition-theories of corrosion | 06-02-2021 | Lecture Interspersed With Discussions |
| 12 | Galvanic corrosion, differential aeration corrosion, stress corrosion, | 06-02-2021 | |
| 13 | Waterline corrosion-passivity of metals-galvanic series | 08-02-2021 | |
| 14 | Factors influencing rate of corrosion-corrosion control | 09-02-2021 | |
| 15 | Protective coatings: Surface preparation, cathodic | 09-02-2021 | |
| 16 | Anodic coatings, electroplating, electroless plating (nickel). | 11-02-2021 | |
| 17 | Paints (constituents, functions, special paints). | 11-02-2021 | |
| | | | |

**Unit – III UNIT III: MATERIAL CHEMISTRY**

**COs:**

- Synthesize nanomaterials for modern advances of engineering technology.
- Summarize the preparation of semiconductors; analyze the applications of liquid crystals and superconductors.

| | | | |
|---|---|---|---|
| 1 | **Part I : Non-elemental semiconducting materials** | 12-02-2021 | Lecture Interspersed With Discussions |
| 2 | Semiconductor devices (p-n junction diode as rectifier, junction transistor | 13-02-2021 | |
| 3 | Insulators & magnetic materials: electrical insulators | 13-02-2021 | |
| 4 | Ferro and ferri magnetism-Hall effect and its applications. | 15-02-2021 | |
| 5 | **Part II: Nano materials**:- Introduction-sol-gel method- | 16-02-2021 | |
| 6 | Characterization by BET, SEM and TEM methods | 16-02-2021 | |
| 7 | Applications of graphene-carbon nanotubes and fullerenes: | 18-02-2021 | |
| 8 | Types, preparation and applications Liquid | 19-02-2021 | |

| | | | |
|---|---|---|---|
| | crystals | | |
| 9 | Introduction-types-applications. Super conductors:-Type –I, Type II-characteristics and applications. | 23-02-2021 | |
| **UNIT IV: SPECTROSCOPIC TECHNIQUES & NON CONVENTIONAL ENERGY SOURCES**<br>**Cos:**<br>• ***Analyze*** the principles of different analytical instruments and their applications.<br>• ***Design*** models for energy by different natural sources. | | | |
| 1. | **Part A: SPECTROSCOPIC TECHNIQUES** Electromagnetic spectrum-UV | 01-03-2021 | Lecture Interspersed With Discussions |
| 2. | Laws of absorption, instrumentation, | 02-03-2021 | |
| 3 | Theory of electronic spectroscopy, Frank-Condon principle | 05-03-2021 | |
| 4. | Chromophores and auxochromes, intensity shifts, applications | 06-03-2021 | |
| 5. | FT-IR (instrumentation and IR of some organic compounds, applications). | 08-03-2021 | |
| 6. | Magnetic resonance imaging and CT scan (procedure & applications). | 09-03-2021 | |
| 7. | **Part B: NON CONVENTIONAL ENERGY SOURCES** | 11-03-2021 | |
| 8. | Design, working, schematic diagram, advantages and disadvantages of photovoltaic cell, | 12-03-2021 | |
| 9. | Hydropower, geothermal power, | 13-03-2021 | |
| 10. | Tidal and wave power | 13-03-2021 | |
| **UNIT V: ADVANCED CONCEPTS/TOPICS IN CHEMISTRY**<br>**COs:** Obtain the knowledge of computational chemistry and molecular machines | | | |
| 1 | Computational chemistry: Introduction, Molecular modeling and docking | 20-03-2021 | Lecture Interspersed With Discussions |
| 2. | Characteristics of molecular motors and machines, Rotaxanes | 23-03-2021 | |
| 3. | Catenanes as artificial molecular machines, | 27-03-2021 | |
| 4. | Linear motions in rotaxanes | 30-03-2021 | |
| 5. | A molecular elevator | 02-04-2021 | |
| 6. | An autonomous light-powered molecular motor | 02-03-2021 | |
| 7. | Prototypes and molecular switches | 01-03-2021 | |
| 8. | Acid-base controlled molecular shuttle | 02-03-2021 | |

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# TENTATIVE LESSON PLAN: R201101

| Course Title: MATHEMATICS – 1 | | |
|---|---|---|
| **Section : CSM** | **Date : 04-01-2021** | **Page No :** 01 of 02 |
| **Revision No :** 00 | **Prepared By : S.SUMAN** | **Approved By : HOD** |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: SEQUENCES, SERIES AND MEAN VALUE THEOREMS**<br>**CO1:utilize mean value theorems to real life problems**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| **1** | SEQUENCES AND SERIES:<br>Convergence and Divergence | From:<br>06-01-2021<br><br>To:<br>23-01-2021 | Lecture interspersed with discussions |
| **2** | Ratio test | | |
| **3** | Comparison test | | |
| **4** | Integral test | | |
| **5** | Cauchy 's root test | | |
| **6** | Alternating series | | |
| **7** | Leibnitz 's rule | | |
| **8** | Mean Value Theorems:<br>Rolle 's Theorem | | |
| **9** | Lagrange 's mean value theorem | | |
| **10** | Cauchy 's mean value theorem | | |
| **11** | Taylor 's and Maclaurin 's theorems with remainders | | |
| **UNIT-II DIFFERENTIAL EQUATIONS OF FIRST ORDER AND FIRST DEEGREE**<br>**CO2: Solve the differential equations related to various engineering fields**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 12 | Introduction: Differential Equations of First order first degree | From:<br>25-01-2021<br><br>To:<br><br>06-02-2021 | Lecture interspersed with discussions |
| 13 | Exact Equations – Conditions of Exactness | | |
| 14 | Equations reducible to Exact | | |
| 15 | Non Exact Differential Equations | | |
| 16 | Linear Differential Equations of first order | | |
| 17 | Bernouli Equation | | |
| 18 | Equations reducible to linear | | |
| 19 | Orthogonal Trajectories - Cartesian | | |
| 20 | Orthogonal Trajectories - Polar | | |
| 21 | Newton's law of cooling | | |
| 22 | Natural growth or decay | | |
| 23 | Electrical Circuits | | |
| **UNIT-III : LINEAR DIFFERENTIAL EQUATIONS OF HIGHER ORDER** | | | |

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|---|---|---|---|
| **CO3: Solve the differential equations related to various engineering fields**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 24 | Linear DE of constant coefficients | From: 08-02-2021 To: 13-02-2021 & From: 22-02-2021 To: 06-03-2021 | Lecture interspersed with discussions |
| 25 | Solutions of $f(D) = Q(x), Q(x) = e^{ax}$ | | |
| 26 | $Q(x) = \sin ax \ or \ \cos ax$ | | |
| 27 | $Q(x) = x^n$ | | |
| 28 | $Q(x) = e^{ax}V(x)$ | | |
| 29 | $Q(x) = xV(x)$ | | |
| 30 | $Q(x) = x^n \sin ax \ or \ \cos ax$ | | |
| 31 | Method of variation of parameters | | |
| 32 | Applications: LCR Circuit | | |
| 33 | Simple Harmonic Motion | | |
| **UNIT-IV PARTIAL DIFFERENTIATION**<br>**CO4: Familirize with functions of several variables which is useful in optimization**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 34 | Homogeneous function; Euler's Theorem | From: 08-03-2021 To: 27-03-2021 | Lecture interspersed with discussions |
| 35 | Total Derivative; Chain rule | | |
| 36 | Taylor's mean value theorems | | |
| 37 | Maclaurin's series | | |
| 38 | Jacobians, formulae | | |
| 39 | Functional dependence | | |
| 40 | Maxima minima of two variables | | |
| 41 | Langranges method | | |
| **UNIT-V: MULTIPLE INTEGRALS**<br>**CO5: Apply double integration techniques in evaluating areas bounded by region**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 42 | Introduction | From: 29-03-2021. To: 12-04-2021 | Lecture interspersed with discussions |
| 43 | Double integrals | | |
| 44 | Triple integrals | | |
| 45 | Change of order of integration | | |
| 46 | Change of variable | | |
| 47 | Applications: Finding areas | | |
| 48 | Finding volumes | | |

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# TENTATIVE LESSON PLAN: R201102

| Course Title: COMMUNICATIVE ENGLISH | | |
|---|---|---|
| **Section : CSM** | **Date : 08-01-2021** | **Page No :** 01 of 03 |
| **Revision No :** 00 | **Prepared By: Dr.A.Padmaja** | **Approved By : HOD** |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: A Drawer full of happiness, Deliverance by Premchand**<br>**CO1: Facilitate effective listening skills for better comprehension of academic lectures and English spoken by native speakers**<br>**TB: —Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| **1** | **A Drawer full of happiness** | 08-01-21 | Lecture interspersed with discussions |
| **2** | **Listening : Short Audio Texts** | 08-01-21 | |
| **3** | **Speaking :** Asking and answering questions | 08-01-21 | |
| **4** | **Reading : Skimming and Scanning** | 19-01-21 | |
| **5** | **Reading for Writing :** Paragraph writing | 19-01-21 | |
| **6** | **Vocabulary :** Technical Vocabulary | 20-01-21 | |
| **7** | **Grammar :** Content words and function words | 20-01-21 | |
| **8** | The Deliverance : Munshi Prem Chand | 21-01-21 | |
| **9** | Long Answers | 25-01-21 | |
| **10** | Short Answers | 27-01-21 | |
| **UNIT-II Nehru's letter to his daughter Indira on her birthday, Bosom Friend by Hira Bansode**<br>**CO2: Focus on appropriate reading strategies for comprehension of various academic texts and authentic materials**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 12 | **Nehru's letter to his daughter Indira on her birthday** | | Lecture interspersed |
| 13 | **Listening:** Answering a series of questions | 28-01-21 | |
| 14 | **Speaking:** Discussion in pairs | 01-02-21 | |
| 15 | **Reading**: Identifying sequence of ideas | 02-02-21 | |

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| 16 | **Reading for Writing**: Summarizing | 03-02-21 | with discussions |
| 17 | **Vocabulary**: Technical vocabulary | 04-02-21 | |
| 18 | **Grammar**: Use of articles | 05-02-21 | |
| 19 | Bosom Friend Hira Bansode | 08-02-21 | |
| 20 | Long Answers | 10-02-21 | |
| 21 | Short Answers | 10-02-21 | |
| **UNIT-III: Stephen Hawking-Positivity "Benchmark", Shakespeare's Sister by Virginia Woolf**<br>**CO3: Help improve speaking skills through participation in activities such as role plays, discussions and structured talks/oral presentations**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 24 | **Stephen Hawking-Positivity 'Benchmark** | 11-02-21 | Lecture interspersed with discussions |
| 25 | **Listening:** Listening for global comprehension | 15-02-21 | |
| 26 | **Speaking:** Discussing specific topics in pairs | 16-02-21 | |
| 27 | **Reading**: Reading a text in detail | 17-02-21 | |
| 28 | **Reading for Writing**: Summarizing | 19-02-21 | |
| 29 | **Vocabulary**: Technical vocabulary | 22-02-21 | |
| 30 | **Grammar**: Verbs - tenses; subject-verb agreement | 22-02-21 | |
| 31 | **Shakespeare's Sister by Virginia Woolf** | 24-02-21 | |
| 32 | Long Answers | 26-02-21 | |
| **UNIT IV Liking a Tree, Unbowed: Wangari Maathai, Telephone Conversation-Wole Soyinka**<br>**CO4: Impart effective strategies for good writing and demonstrate the same in summarizing, writing well organized essays, record and report useful information.**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 33 | **Like a Tree, Unbowed: Wangari Maathai-biography** | | Lecture interspersed with |
| 34 | **Listening:** Making predictions while listening | 03-03-21 | |
| 35 | **Speaking:** Role plays for practice of conversational | 04-03-21 | |

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| | English | | discussions |
| 36 | **Reading**: Studying the use of graphic elements | 08-03-21 | |
| 37 | **Reading for Writing**: Information transfer | 10-03-21 | |
| 38 | **Vocabulary**: Technical vocabulary | 22-03-21 | |
| 39 | **Grammar**: Quantifying expressions | 24-03-21 | |
| 40 | Telephone Conversation: Wole Soyinka | 26-03-21 | |
| **UNIT-V: Stay Hungry-Stay foolish, Still I Rise by Maya Angelou**<br>**CO5: Provide knowledge of grammatical structures and vocabulary and encourage their appropriate use in speech and writing**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 41 | **Stay Hungry-Stay foolish** | 30-03-21 | Lecture interspersed with discussions |
| 42 | **Listening** Identifying key terms | 01-04-21 | |
| 43 | **Speaking:** Formal oral presentations | 05-04-21 | |
| 44 | **Reading**: Reading for comprehension | 08-04-21 | |
| 45 | **Reading for Writing**: Writing academic proposals | 09-04-21 | |
| 46 | **Vocabulary**: Technical vocabulary | 10-04-21 | |
| 47 | **Grammar**: Editing short texts | 12-04-21 | |

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DEPARTMENT OF SCIENCE AND HUMANITIES

# TENTATIVE LESSON PLAN (R201110)

| Course Title: PROGRAMMING FOR PROBLEM SOLVING USING C | | |
|---|---|---|
| Section : Sec CSM | Date : 8/1/2021 | Page No : 01 of 03 |
| Revision No : 00 | Prepared By : Dr.B.Asha Latha | Approved By : HOD |

**Tools: Black board, PPTs, Moodle**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-I** | **Introduction to C language**<br>**CO1: To learn about the computer systems, computing environments, developing of a computer program and Structure of a C Program.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | |
| 1 | Computer Systems | 8-1-21<br>To<br>23-1-21 | Lecture Interspersed With discussions |
| 2 | Computing Environments | | |
| 3 | Computer languages | | |
| 4 | Creating and running Programs | | |
| 5 | Computer Numbering System | | |
| 6 | Storing Integers | | |
| 7 | Storing Real Numbers | | |
| 8 | C Programs, Identifiers | | |
| 9 | Types, Variable | | |
| 10 | Constants, Input/output | | |
| 11 | Programming Examples | | |
| 12 | Scope, Storage Classes and Type Qualifiers | | |
| 13 | Expressions Precedence and Associativity | | |
| 14 | Side Effects, Evaluating Expressions | | |
| 15 | Type Conversion Statements | | |
| 16 | Simple Programs | | |
| 17 | Command Line Arguments | | |
| 18 | **Tutorial** | | |
| **UNIT-II** | **Operators, Selection and Repetition**<br>**CO2: To gain knowledge of the operators, selection, control statements and repetition in C.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | |
| 19 | Exact Size Integer Types | 25-1-21<br>To | |
| 20 | Logical Bitwise Operators | | |
| 21 | Shift Operators | | |

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| 24 | Multiway Selection | | interspersed with discussions |
| 25 | More Standard Functions | | |
| 26 | Concept of Loop | | |
| 27 | Pretest and Post-test Loops | | |
| 28 | Initialization and Updating | | |
| 29 | Event and Counter Controlled Loops | | |
| 30 | Loops in C | | |
| 31 | Other Statements Related to Looping | | |
| 32 | Looping Applications | | |
| 33 | Programming Example The Calculator Program | | |
| 35 | Tutorial | | |
| **No. of Periods** | **TOPIC** | **Date** | **Mode of Delivery** |

**UNIT-III Arrays, String, Enum, Structure, Unions**

**CO3: To learn about the design concepts of arrays, strings, enumerated structure and union types. To learn about their usage.**

**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE**

| | | | |
|---|---|---|---|
| 36 | Concepts, Using Array in C | 15-2-21 To 30-2-21 | Lecture interspersed with discussions |
| 37 | Array Application | | |
| 38 | Two Dimensional Arrays | | |
| 39 | Multidimensional Arrays | | |
| 40 | Programming Example – Calculate Averages | | |
| 41 | String Concepts, C String | | |
| 42 | String Input / Output Functions | | |
| 43 | Arrays of Strings | | |
| 44 | String Manipulation Functions | | |
| 45 | String/ Data Conversion | | |
| 46 | A Programming Example – Morse Code | | |
| 47 | The Type Definition (Type def) | | |
| 48 | Enumerated Types | | |
| 49 | Structure | | |
| 50 | Unions | | |
| 51 | Programming Application | | |
| 52 | Tutorial | | |

**UNIT-IV Pointers**

**CO4: To assimilate about pointers, dynamic memory allocation and know the significance of Preprocessor.**

**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE**

| **No. of Periods** | **TOPIC** | **Date** | **Mode of Delivery** |
|---|---|---|---|
| 53 | Introduction | | |
| 54 | Pointers to pointers | | |
| 55 | Compatibility, L value and R value | | |
| 56 | Arrays, and Pointers | | |

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| 57 | Pointer Arithmetic and Arrays | 1-3-21 To 15-3-21 | Lecture interspersed with discussions |
| 58 | Memory Allocation Function | | |
| 59 | Array of Pointers | | |
| 60 | Programming Application | | |
| 61 | Processor Commands | | |
| 62 | Tutorial | | |
| **UNIT-V Files and Functions**<br>**CO5: To assimilate about File I/O and significance of functions.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 63 | Files, Streams | 16-3-21 To 5-4-21 | Lecture interspersed with discussions |
| 64 | Standard Library Input / Output Functions | | |
| 65 | Formatting Input / Output Functions | | |
| 66 | Character Input / Output Functions | | |
| 67 | Text versus Binary Streams | | |
| 68 | Functions for Files | | |
| 69 | Converting File Type | | |
| 70 | Designing, Structured Programs | | |
| 71 | Function in C | | |
| 72 | User Defined Functions | | |
| 73 | Inter-Function Communication | | |
| 74 | Standard Functions | | |
| 75 | Passing Array to Functions | | |
| 76 | Passing Pointers to Functions | | |
| 77 | Recursion | | |
| 78 | Passing an Array to Function | | |
| 79 | **Tutorial** | | |

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# TENTATIVE LESSON PLAN: R201115

| Course Title: APPLIED CHEMISTRY | | | |
|---|---|---|---|
| Section :CSM | Date : 8-1-2021 | Page No : 1-3 | |
| Revision No :00 | Prepared By : B.SOWJANYA | Approved By : HOD | |
| Tools: | | | |
| No. of Periods:71 | TOPIC | Date | Mode of Delivery |
| **Unit – I: POLYMER TECHNOLOGY**<br>**(Engineering Chemistry by Jain and Jain; Dhanpat Rai Publicating Co.)**<br>**CO1:** Importance of usage of plastics in household appliances and composites(FRP) in aerospace and automotive industries. | | | |
| 1 | Polymerisation:- Introduction-methods of polymerization | 8-1-2021 | Lecture interspersed with discussions |
| 2 | physical and mechanical properties. | 12-1-2021 | |
| 3 | Plastics: Compounding-fabrication | 17-1-2021 | |
| 4 | preparation, properties and applications of PVC, | 19-1-2021 | |
| 5 | polycarbonates and Bakelite-mention some examples of plastic. | 20-1-2021 | |
| 6 | Materials used in electronic gadgets, recycling of e-plastic waste | 21-1-2021 | |
| 7 | Elastomers:- Natural rubber-drawbacks-vulcanization | 23-1-2021 | |
| 8 | preparation, properties and applications of synthetic rubbers | 27-1-2021 | |
| 9 | (Buna S, thiokol and polyurethanes | 28-1-2021 | |
| 10 | Composite materials: Fiber reinforced plastics-. | 30-1-2021 | |
| 11 | conductingpolymers- | 2-2-2021 | |
| 13 | Biodegradable polymersbiopolymers | 3-2-2021 | |
| **Unit -II :ELECTROCHEMICAL CELLS AND CORROSION**<br>**(Engineering Chemistry by Jain and Jain; Dhanpat Rai Publicating Co.)**<br>**CO2:** Outline the basics for the construction of electrochemicalcells, batteries and fuelcells. Understand the mechanism of corrosion and how it can be prevented. | | | |
| **1** | **Unit -II :ELECTROCHEMICAL CELLS** | 6-2-2021 | Lecture interspersed with discussions |
| 2 | Single electrode potentia. | 6-2-2021 | |
| 3 | Electrochemical series and uses of series | 8-2-2021 | |
| 4 | standard hydrogen electrode, calomel electrode | 9-2-2021 | |
| 5 | concentration cell- | 9-2-2021 | |
| 6 | construction of glass electrode | 10-2-2021 | |
| 7 | Batteries: Dry cell, Ni-Cd cells, | 11-2-2021 | |
| 8 | N-iMetal hydride cells, Li ion battery, zinc air cells | 13-2-2021 | |
| 9 | Fuel cells: H2-O2, CH3OH-O2, | 15-2-2021 | |

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| 10 | phosphoric acid, molten carbonate | 18-2-2021 | |
| 11 | **Corrosion:**-Definition-theories of corrosion | 17-2-2021 | |
| 12 | galvanic corrosion, differential aeration corrosion, stress corrosion, | 20-2-2021 | |
| 13 | waterline corrosion-passivity of metals-galvanicseries | 22-2-2021 | |
| 14 | Factors influencing rate of corrosion-corrosion control | 23-2-2021 | |
| 15 | Protective coatings: Surface preparation, cathodic | 24-2-2021 | |
| 16 | Anodic coatings, electroplating, electroless plating (nickel). | 25-2-2021 | |
| 17 | Paints (constituents, functions, special paints). | 25-2-2021 | |

## Unit – III: UNIT III: MATERIAL CHEMISTRY

**(Engineering Chemistry by Jain and Jain; Dhanpat Rai Publicating Co.)**

**CO3:** Explain the preparation of semiconductors and nanomaterials, engineering applications of nanomaterials, superconductors and liquidcrystals.

| | | | |
|---|---|---|---|
| 1 | **Part I : Non-elemental semiconducting materials** | 26-2-2021 | Lecture interspersed with discussions |
| 2 | Semiconductor devices (p-n junction diode as rectifier, junction transistor | 6-3-2021 | |
| 3 | Insulators & magnetic materials: electrical insulators | 9-3-2021 | |
| 4 | Ferro and ferri magnetism-Hall effect and its applications. | 13-3-2021 | |
| 5 | **Part II: Nano materials**:- Introduction-sol-gel method- | 23-3-2021 | |
| 6 | characterization by BET, SEM and TEM methods | 23-2021 | |
| 7 | Applications of graphene-carbon nanotubes and fullerenes: | 24-3-2021 | |
| 8 | Types, preparation and applications Liquid crystals | 25-3-2021 | |
| 9 | Introduction-types-applications. Super conductors:-Type –I, Type II-characteristics and applications. | 27-3-2021 | |

## UNIT IV: SPECTROSCOPIC TECHNIQUES & NON CONVENTIONAL ENERGY SOURCES

**(Engineering Chemistry by Jain and Jain; Dhanpat Rai Publicating Co.)**

**CO4:** Recall the increase in demand for power and hence alternative sources of power are studied due to depleting sources of fossil fuels. Advanced instrumental techniques are introduced.

| | | | |
|---|---|---|---|
| 1. | **Part A: SPECTROSCOPIC TECHNIQUES** Electromagnetic spectrum-UV | 27-3-2021 | Lecture |
| 2. | laws of absorption, instrumentation, | 30-3-2021 | |
| 3 | Theory of electronic spectroscopy, Frank-condon principle | 30-3-2021 | |
| 4. | chromophores and auxochromes, intensity shifts, applications | 30-3-2021 | |

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|---|---|---|---|
| 5. | FT-IR (instrumentation and IR of some organic compounds, applications). | 1-4-2021 | interspersed with discussions |
| 6. | Magnetic resonance imaging and CT scan (procedure & applications). | 1-4-2021 | |
| 7. | **Part B: NON CONVENTIONAL ENERGY SOURCES** | 25-3-2021 | |
| 8. | Design, working, schematic diagram, advantages and disadvantages of photovoltaic cell, | 25-3-2021 | |
| 9. | Hydropower, geothermal power, | 27-3-2021 | |
| 10. | Tidal and wave power | 27-3-2021 | |
| **UNIT V: ADVANCED CONCEPTS/TOPICS IN CHEMISTRY**<br>**Applied Chemistry"** by, Dr. Bharathi kumara Yallamanchili, VGS.<br>**C05:** Outline the basics of computational chemistry and molecular switches. | | | |
| 1 | Computational chemistry: Introduction, Ab Initio studies Molecular switches | 1-4-2021 | Lecture interspersed with discussions |
| 2. | characteristics of molecular motors and machines, Rotaxanes | 1-4-2021 | |
| 3. | Catenanes as artificial molecular machines, prototypes | 3-4-2021 | |
| 4. | linear motions in rotaxanes, an acid-base controlled molecular shuttle | 3-4-2021 | |
| 5. | a molecular elevator, | 5-4-2021 | |
| 6. | an autonomous light-powered molecular motor | 5-4-2021 | |
| 7. | Computational chemistry: Introduction, Ab Initio studies Molecular switches | 5-4-2021 | |
| 8. | characteristics of molecular motors and machines, | 6-4-2021 | |

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# TENTATIVE LESSON PLAN: R201101

| Course Title: MATHEMATICS – 1 | | |
|---|---|---|
| **Section : CS D** | **Date : 04-01-2021** | **Page No :** 01 of 02 |
| **Revision No :** 00 | **Prepared By : S.KALPANA** | **Approved By : HOD** |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: SEQUENCES, SERIES AND MEAN VALUE THEOREMS**<br>**CO1:utilize mean value theorems to real life problems**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| **1** | SEQUENCES AND SERIES:<br>Convergence and Divergence | From:<br>06-01-2021<br><br>To:<br>23-01-2021 | Lecture interspersed with discussions |
| **2** | Ratio test | | |
| **3** | Comparison test | | |
| **4** | Integral test | | |
| **5** | Cauchy 's root test | | |
| **6** | Alternating series | | |
| **7** | Leibnitz 's rule | | |
| **8** | Mean Value Theorems:<br>Rolle 's Theorem | | |
| **9** | Lagrange 's mean value theorem | | |
| **10** | Cauchy 's mean value theorem | | |
| **11** | Taylor 's and Maclaurin 's theorems with remainders | | |
| **UNIT-II DIFFERENTIAL EQUATIONS OF FIRST ORDER AND FIRST DEEGREE**<br>**CO2: Solve the differential equations related to various engineering fields**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 12 | Introduction: Differential Equations of First order first degree | From:<br>25-01-2021<br><br>To:<br><br>06-02-2021 | Lecture interspersed with discussions |
| 13 | Exact Equations – Conditions of Exactness | | |
| 14 | Equations reducible to Exact | | |
| 15 | Non Exact Differential Equations | | |
| 16 | Linear Differential Equations of first order | | |
| 17 | Bernouli Equation | | |
| 18 | Equations reducible to linear | | |
| 19 | Orthogonal Trajectories - Cartesian | | |
| 20 | Orthogonal Trajectories - Polar | | |
| 21 | Newton's law of cooling | | |
| 22 | Natural growth or decay | | |
| 23 | Electrical Circuits | | |
| **UNIT-III : LINEAR DIFFERENTIAL EQUATIONS OF HIGHER ORDER** | | | |

| | | | |
|---|---|---|---|
| **CO3: Solve the differential equations related to various engineering fields**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 24 | Linear DE of constant coefficients | From: 08-02-2021 To: 13-02-2021 & From: 22-02-2021 To: 06-03-2021 | Lecture interspersed with discussions |
| 25 | Solutions of $f(D) = Q(x), Q(x) = e^{ax}$ | | |
| 26 | $Q(x) = \sin ax \ or \ \cos ax$ | | |
| 27 | $Q(x) = x^n$ | | |
| 28 | $Q(x) = e^{ax}V(x)$ | | |
| 29 | $Q(x) = xV(x)$ | | |
| 30 | $Q(x) = x^n \sin ax \ or \ \cos ax$ | | |
| 31 | Method of variation of parameters | | |
| 32 | Applications: LCR Circuit | | |
| 33 | Simple Harmonic Motion | | |
| **UNIT-IV PARTIAL DIFFERENTIATION**<br>**CO4: Familirize with functions of several variables which is useful in optimization**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 34 | Homogeneous function; Euler's Theorem | From: 08-03-2021 To: 27-03-2021 | Lecture interspersed with discussions |
| 35 | Total Derivative; Chain rule | | |
| 36 | Taylor's mean value theorems | | |
| 37 | Maclaurin's series | | |
| 38 | Jacobians, formulae | | |
| 39 | Functional dependence | | |
| 40 | Maxima minima of two variables | | |
| 41 | Langranges method | | |
| **UNIT-V: MULTIPLE INTEGRALS**<br>**CO5: Apply double integration techniques in evaluating areas bounded by region**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 42 | Introduction | From: 29-03-2021. To: 12-04-2021 | Lecture interspersed with discussions |
| 43 | Double integrals | | |
| 44 | Triple integrals | | |
| 45 | Change of order of integration | | |
| 46 | Change of variable | | |
| 47 | Applications: Finding areas | | |
| 48 | Finding volumes | | |

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# TENTATIVE LESSON PLAN: R201102

| Course Title: COMMUNICATIVE ENGLISH | | |
|---|---|---|
| **Section : CSD** | **Date : 08-01-2021** | **Page No :** 01 of 03 |
| **Revision No :** 00 | **Prepared By: Dr.A.Padmaja** | **Approved By : HOD** |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: A Drawer full of happiness, Deliverance by Premchand**<br>**CO1: Facilitate effective listening skills for better comprehension of academic lectures and English spoken by native speakers**<br>**TB: —Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| **1** | **A Drawer full of happiness** | 08-01-21 | Lecture interspersed with discussions |
| **2** | **Listening : Short Audio Texts** | 08-01-21 | |
| **3** | **Speaking :** Asking and answering questions | 08-01-21 | |
| **4** | **Reading : Skimming and Scanning** | 19-01-21 | |
| **5** | **Reading for Writing :** Paragraph writing | 19-01-21 | |
| **6** | **Vocabulary :** Technical Vocabulary | 20-01-21 | |
| **7** | **Grammar :** Content words and function words | 20-01-21 | |
| **8** | The Deliverance : Munshi Prem Chand | 21-01-21 | |
| **9** | Long Answers | 25-01-21 | |
| **10** | Short Answers | 27-01-21 | |
| **UNIT-II Nehru's letter to his daughter Indira on her birthday, Bosom Friend by Hira Bansode**<br>**CO2: Focus on appropriate reading strategies for comprehension of various academic texts and authentic materials**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 12 | **Nehru's letter to his daughter Indira on her birthday** | | Lecture interspersed |
| 13 | **Listening:** Answering a series of questions | 28-01-21 | |
| 14 | **Speaking:** Discussion in pairs | 01-02-21 | |
| 15 | **Reading**: Identifying sequence of ideas | 02-02-21 | |

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| 16 | **Reading for Writing**: Summarizing | 03-02-21 | with discussions |
| 17 | **Vocabulary**: Technical vocabulary | 04-02-21 | |
| 18 | **Grammar**: Use of articles | 05-02-21 | |
| 19 | Bosom Friend Hira Bansode | 08-02-21 | |
| 20 | Long Answers | 10-02-21 | |
| 21 | Short Answers | 10-02-21 | |
| **UNIT-III: Stephen Hawking-Positivity "Benchmark", Shakespeare's Sister by Virginia Woolf**<br>**CO3: Help improve speaking skills through participation in activities such as role plays, discussions and structured talks/oral presentations**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 24 | **Stephen Hawking-Positivity 'Benchmark** | 11-02-21 | Lecture interspersed with discussions |
| 25 | **Listening:** Listening for global comprehension | 15-02-21 | |
| 26 | **Speaking:** Discussing specific topics in pairs | 16-02-21 | |
| 27 | **Reading**: Reading a text in detail | 17-02-21 | |
| 28 | **Reading for Writing**: Summarizing | 19-02-21 | |
| 29 | **Vocabulary**: Technical vocabulary | 22-02-21 | |
| 30 | **Grammar**: Verbs - tenses; subject-verb agreement | 22-02-21 | |
| 31 | **Shakespeare's Sister by Virginia Woolf** | 24-02-21 | |
| 32 | Long Answers | 26-02-21 | |
| **UNIT IV Liking a Tree, Unbowed: Wangari Maathai, Telephone Conversation-Wole Soyinka**<br>**CO4: Impart effective strategies for good writing and demonstrate the same in summarizing, writing well organized essays, record and report useful information.**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 33 | **Like a Tree, Unbowed: Wangari Maathai-biography** | | Lecture interspersed with |
| 34 | **Listening:** Making predictions while listening | 03-03-21 | |
| 35 | **Speaking:** Role plays for practice of conversational | 04-03-21 | |

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|---|---|---|---|
| | English | | discussions |
| 36 | **Reading**: Studying the use of graphic elements | 08-03-21 | |
| 37 | **Reading for Writing**: Information transfer | 10-03-21 | |
| 38 | **Vocabulary**: Technical vocabulary | 22-03-21 | |
| 39 | **Grammar**: Quantifying expressions | 24-03-21 | |
| 40 | Telephone Conversation: Wole Soyinka | 26-03-21 | |
| **UNIT-V: Stay Hungry-Stay foolish, Still I Rise by Maya Angelou**<br>**CO5: Provide knowledge of grammatical structures and vocabulary and encourage their appropriate use in speech and writing**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 41 | **Stay Hungry-Stay foolish** | 30-03-21 | Lecture interspersed with discussions |
| 42 | **Listening** Identifying key terms | 01-04-21 | |
| 43 | **Speaking:** Formal oral presentations | 05-04-21 | |
| 44 | **Reading**: Reading for comprehension | 08-04-21 | |
| 45 | **Reading for Writing**: Writing academic proposals | 09-04-21 | |
| 46 | **Vocabulary**: Technical vocabulary | 10-04-21 | |
| 47 | **Grammar**: Editing short texts | 12-04-21 | |

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**DEPARTMENT OF SCIENCE AND HUMANITIES**

# TENTATIVE LESSON PLAN R20 1110

| **Course Title: PROGRAMMING FOR PROBLEM SOLVING USING C (ES1201)** | | |
|---|---|---|
| **Section : Sec CSD** | **Date : 8/1/2021** | **Page No :** 01 of 03 |
| **Revision No :** 00 | **Prepared By : Dr.N Neelima Priyanka** | **Approved By : HOD** |

**Tools: Black board, PPTs, Moodle**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-I** | **Introduction to C language**<br>**CO1: To learn about the computer systems, computing environments, developing of a computer program and Structure of a C Program.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | |
| 1 | Computer Systems | 8-1-21<br>To<br>23-1-21 | Lecture Interspersed With discussions |
| 2 | Computing Environments | | |
| 3 | Computer languages | | |
| 4 | Creating and running Programs | | |
| 5 | Computer Numbering System | | |
| 6 | Storing Integers | | |
| 7 | Storing Real Numbers | | |
| 8 | C Programs, Identifiers | | |
| 9 | Types, Variable | | |
| 10 | Constants, Input/output | | |
| 11 | Programming Examples | | |
| 12 | Scope, Storage Classes and Type Qualifiers | | |
| 13 | Expressions Precedence and Associativity | | |
| 14 | Side Effects, Evaluating Expressions | | |
| 15 | Type Conversion Statements | | |
| 16 | Simple Programs | | |
| 17 | Command Line Arguments | | |
| 18 | **Tutorial** | | |
| **UNIT-II** | **Operators, Selection and Repetition**<br>**CO2: To gain knowledge of the operators, selection, control statements and repetition in C.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | |
| 19 | Exact Size Integer Types | 25-1-21<br>To | |
| 20 | Logical Bitwise Operators | | |
| 21 | Shift Operators | | |

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| 22 | Logical Data and Operators | 15-2-21 | Lecture interspersed with discussions |
| 23 | Two Way Selection | | |
| 24 | Multiway Selection | | |
| 25 | More Standard Functions | | |
| 26 | Concept of Loop | | |
| 27 | Pretest and Post-test Loops | | |
| 28 | Initialization and Updating | | |
| 29 | Event and Counter Controlled Loops | | |
| 30 | Loops in C | | |
| 31 | Other Statements Related to Looping | | |
| 32 | Looping Applications | | |
| 33 | Programming Example The Calculator Program | | |
| 35 | Tutorial | | |
| **No. of Periods** | **TOPIC** | **Date** | **Mode of Delivery** |
| **UNIT-III Arrays, String, Enum, Structure, Unions** | | | |
| **CO3: To learn about the design concepts of arrays, strings, enumerated structure and union types. To learn about their usage.** | | | |
| **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 36 | Concepts, Using Array in C | 15-2-21 To 30-2-21 | Lecture interspersed with discussions |
| 37 | Array Application | | |
| 38 | Two Dimensional Arrays | | |
| 39 | Multidimensional Arrays | | |
| 40 | Programming Example – Calculate Averages | | |
| 41 | String Concepts, C String | | |
| 42 | String Input / Output Functions | | |
| 43 | Arrays of Strings | | |
| 44 | String Manipulation Functions | | |
| 45 | String/ Data Conversion | | |
| 46 | A Programming Example – Morse Code | | |
| 47 | The Type Definition (Type def) | | |
| 48 | Enumerated Types | | |
| 49 | Structure | | |
| 50 | Unions | | |
| 51 | Programming Application | | |
| 52 | Tutorial | | |
| **UNIT-IV Pointers** | | | |
| **CO4: To assimilate about pointers, dynamic memory allocation and know the significance of** | | | |

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| **Preprocessor.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| **No. of Periods** | **TOPIC** | **Date** | **Mode of Delivery** |
| 53 | Introduction | 1-3-21 To 15-3-21 | Lecture interspersed with discussions |
| 54 | Pointers to pointers | | |
| 55 | Compatibility, L value and R value | | |
| 56 | Arrays, and Pointers | | |
| 57 | Pointer Arithmetic and Arrays | | |
| 58 | Memory Allocation Function | | |
| 59 | Array of Pointers | | |
| 60 | Programming Application | | |
| 61 | Processor Commands | | |
| 62 | Tutorial | | |
| **UNIT-V Files and Functions**<br>**CO5: To assimilate about File I/O and significance of functions.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 63 | Files, Streams | 16-3-21 To 5-4-21 | Lecture interspersed with discussions |
| 64 | Standard Library Input / Output Functions | | |
| 65 | Formatting Input / Output Functions | | |
| 66 | Character Input / Output Functions | | |
| 67 | Text versus Binary Streams | | |
| 68 | Functions for Files | | |
| 69 | Converting File Type | | |
| 70 | Designing, Structured Programs | | |
| 71 | Function in C | | |
| 72 | User Defined Functions | | |
| 73 | Inter-Function Communication | | |
| 74 | Standard Functions | | |
| 75 | Passing Array to Functions | | |
| 76 | Passing Pointers to Functions | | |
| 77 | Recursion | | |
| 78 | Passing an Array to Function | | |
| 79 | **Tutorial** | | |

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# TENTATIVELESSON PLAN: R201115

| Course Title: APPLIED CHEMISTRY | | | |
|---|---|---|---|
| Section : CSD | Date :8-01-2021 | Page No :1-3 | |
| Revision No :00 | Prepared By: G.L.SARVANI | Approved By : HOD | |
| Tools: Black board, PPTS | | | |
| No. of Periods:75 | TOPIC | Date | Mode of Delivery |
| **Unit – I: POLYMER TECHNOLOGY**<br>**(Engineering Chemistry by Jain and Jain; Dhanpat Rai Publicating Co.)**<br>**CO1:** Importance of usage of plastics in household appliances and composites(FRP) in aerospace and automotive industries. | | | |
| 1 | Polymerization:- Introduction-methods of polymerization | 08-1-2021 | Lecture interspersed with discussions |
| 2 | physical and mechanical properties. | 12-1-2021 | |
| 3 | Plastics: Compounding-fabrication | 19-1-2021 | |
| 4 | preparation, properties and applications of PVC, | 21-1-2021 | |
| 5 | polycarbonates and Bakelite-mention some examples of plastic. | 22-1-2021 | |
| 6 | Materials used in electronic gadgets, recycling of e-plastic waste | 23-1-2021 | |
| 7 | Elastomers:- Natural rubber-drawbacks-vulcanization | 25-1-2021 | |
| 8 | preparation, properties and applications of synthetic rubbers | 27-1-2021 | |
| 9 | (Buna S, thiokol and polyurethanes | 27-1-2021 | |
| 10 | Composite materials: Fiber reinforced plastics-. | 28-1-2021 | |
| 11 | conductingpolymers- | 29-1-2021 | |
| 12 | Biodegradable polymers biopolymers | 30-1-2021 | |
| 13 | Biomedical polymers | 30-1-2021 | |
| **Unit -II :ELECTROCHEMICAL CELLS AND CORROSION**<br>**(Engineering Chemistry by Jain and Jain; Dhanpat Rai Publicating Co.)**<br>**CO2:** Outline the basics for the construction of electrochemicalcells, batteries and fuelcells. Understand the mechanism of corrosion and how it can be prevented | | | |
| 1 | **Unit -II :ELECTROCHEMICAL CELLS** | 02-2-2021 | Lecture interspersed with discussions |
| 2 | Single electrode potentia. | 02-2-2021 | |
| 3 | Electrochemical series and uses of series | 02-2-2021 | |
| 4 | standard hydrogen electrode, calomel electrode | 03-2-2021 | |
| 5 | concentration cell- | 03-2-2021 | |
| 6 | construction of glass electrode | 03-2-2021 | |
| 7 | Batteries: Dry cell, Ni-Cd cells, | 04-2-2021 | |
| 8 | NiMetal hydride cells, Li ion battery, zinc air cells | 04-2-2021 | |
| 9 | Fuel cells: H2-O2, CH3OH-O2, | 05-2-2021 | |

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| 10 | phosphoric acid, molten carbonate | 10-2-2021 | |
| 11 | **Corrosion:**-Definition-theories of corrosion | 11-2-2021 | |
| 12 | galvanic corrosion, differential aeration corrosion, stress corrosion, | 16-2-2021 | |
| 13 | waterline corrosion-passivity of metals-galvanicseries | 17-2-2021 | |
| 14 | Factors influencing rate of corrosion-corrosion control | 18-2-2021 | |
| 15 | Protective coatings: Surface preparation, cathodic | 19-2-2021 | |
| 16 | Anodic coatings, electroplating, electroless plating (nickel). | 23-2-2021 | |
| 17 | Paints (constituents, functions, special paints). | 25-2-2021 | |

## UNIT III: MATERIAL CHEMISTRY

**(Engineering Chemistry by Jain and Jain; Dhanpat Rai Publicating Co.)**

**CO3:** Explain the preparation of semiconductors and nanomaterials, engineering applications of nanomaterials, superconductors and liquidcrystals.

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| 1 | **Part I : Non-elemental semiconducting materials** | 02-3-2021 | Lecture interspersed with discussions |
| 2 | Semiconductor devices (p-n junction diode as rectifier, junction transistor | 06-3-2021 | |
| 3 | Insulators & magnetic materials: electrical insulators | 09-3-2021 | |
| 4 | Ferro and ferri magnetism-Hall effect and its applications. | 10-3-2021 | |
| 5 | **Part II: Nano materials**:- Introduction-sol-gel method- | 20-3-2021 | |
| 6 | characterization by BET, SEM and TEM methods | 24-3-2021 | |
| 7 | Applications of graphene-carbon nanotubes and fullerenes: | 25-3-2021 | |
| 8 | Types, preparation and applications Liquid crystals | 05-4-2021 | |
| 9 | Introduction-types-applications. Super conductors:-Type –I, Type II-characteristics and applications. | 01-4-2021 | |

## UNIT IV: SPECTROSCOPIC TECHNIQUES & NON CONVENTIONAL ENERGY SOURCES

**(Engineering Chemistry by Jain and Jain; Dhanpat Rai Publicating Co.)**

**CO4:** Recall the increase in demand for power and hence alternative sources of power are studied due to depleting sources of fossil fuels. Advanced instrumental techniques are introduced.

| | | | |
|---|---|---|---|
| 1 | **Part A: SPECTROSCOPIC TECHNIQUES** Electromagnetic spectrum-UV | 09-4-2021 | |
| 2. | laws of absorption, instrumentation, | 09-4-2021 | |
| 3. | Theory of electronic spectroscopy, Frank-condon | 09-4-2021 | |

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| | principle | | |
| 4. | chromophores and auxochromes, intensity shifts, applications | 09-4-2021 | Lecture interspersed with discussions |
| 5. | FT-IR (instrumentation and IR of some organic compounds, applications). | 10-4-2021 | |
| 6. | Magnetic resonance imaging and CT scan (procedure & applications). | 10-4-2021 | |
| 7. | **Part B: NON CONVENTIONAL ENERGY SOURCES** | 06-4-2021 | |
| 8. | Design, working, schematic diagram, advantages and disadvantages of photovoltaic cell, | 06-4-2021 | |
| | hydropower, geothermal power, | 07-4-2021 | |
| | Tidal and wave power | 07-4-2021 | |
| **UNIT V: ADVANCED CONCEPTS/TOPICS IN CHEMISTRY**<br>**(Engineering Chemistry by Jain and Jain; Dhanpat Rai Publicating Co.)**<br>**C05:** Outline the basics of computational chemistry and molecular switches. | | | |
| 1. | Computational chemistry: Introduction, Ab Initio studies Molecular switches | 10-4-2021 | Lecture interspersed with discussions |
| 2. | characteristics of molecular motors and machines, Rotaxanes | 10-4-2021 | |
| 3 | Catenanes as artificial molecular machines, prototypes | 11-4-2021 | |
| 4. | linear motions in rotaxanes, an acid-base controlled molecular shuttle | 11-4-2021 | |
| 5. | a molecular elevator, | 11-4-2021 | |
| | an autonomous light-powered molecular motor | 12-4-2021 | |
| 7. | Computational chemistry: Introduction, Ab Initio studies Molecular switches | 12-4-2021 | |
| 8. | characteristics of molecular motors and machines, | 12-4-2021 | |

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# TENTATIVE LESSON PLAN: R201101

| Course Title: MATHEMATICS – 1 | | |
|---|---|---|
| Section : CSE-A | Date : 04-01-2021 | Page No : 01 of 02 |
| Revision No : 00 | Prepared By : S.SUMAN | Approved By : HOD |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: SEQUENCES, SERIES AND MEAN VALUE THEOREMS**<br>**CO1:utilize mean value theorems to real life problems**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| **1** | SEQUENCES AND SERIES:<br>Convergence and Divergence | From:<br>06-01-2021<br><br>To:<br>23-01-2021 | Lecture interspersed with discussions |
| **2** | Ratio test | | |
| **3** | Comparison test | | |
| **4** | Integral test | | |
| **5** | Cauchy 's root test | | |
| **6** | Alternating series | | |
| **7** | Leibnitz 's rule | | |
| **8** | Mean Value Theorems:<br>Rolle 's Theorem | | |
| **9** | Lagrange 's mean value theorem | | |
| **10** | Cauchy 's mean value theorem | | |
| **11** | Taylor 's and Maclaurin 's theorems with remainders | | |
| **UNIT-II DIFFERENTIAL EQUATIONS OF FIRST ORDER AND FIRST DEEGREE**<br>**CO2: Solve the differential equations related to various engineering fields**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 12 | Introduction: Differential Equations of First order first degree | From:<br>25-01-2021<br><br>To:<br><br>06-02-2021 | Lecture interspersed with discussions |
| 13 | Exact Equations – Conditions of Exactness | | |
| 14 | Equations reducible to Exact | | |
| 15 | Non Exact Differential Equations | | |
| 16 | Linear Differential Equations of first order | | |
| 17 | Bernouli Equation | | |
| 18 | Equations reducible to linear | | |
| 19 | Orthogonal Trajectories - Cartesian | | |
| 20 | Orthogonal Trajectories - Polar | | |
| 21 | Newton's law of cooling | | |
| 22 | Natural growth or decay | | |
| 23 | Electrical Circuits | | |
| **UNIT-III : LINEAR DIFFERENTIAL EQUATIONS OF HIGHER ORDER** | | | |

| | | | |
|---|---|---|---|
| **CO3: Solve the differential equations related to various engineering fields**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 24 | Linear DE of constant coefficients | From: 08-02-2021 To: 13-02-2021 & From: 22-02-2021 To: 06-03-2021 | Lecture interspersed with discussions |
| 25 | Solutions of $f(D) = Q(x), Q(x) = e^{ax}$ | | |
| 26 | $Q(x) = \sin ax \ or \ \cos ax$ | | |
| 27 | $Q(x) = x^n$ | | |
| 28 | $Q(x) = e^{ax}V(x)$ | | |
| 29 | $Q(x) = xV(x)$ | | |
| 30 | $Q(x) = x^n \sin ax \ or \ \cos ax$ | | |
| 31 | Method of variation of parameters | | |
| 32 | Applications: LCR Circuit | | |
| 33 | Simple Harmonic Motion | | |
| **UNIT-IV PARTIAL DIFFERENTIATION**<br>**CO4: Familirize with functions of several variables which is useful in optimization**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 34 | Homogeneous function; Euler's Theorem | From: 08-03-2021 To: 27-03-2021 | Lecture interspersed with discussions |
| 35 | Total Derivative; Chain rule | | |
| 36 | Taylor's mean value theorems | | |
| 37 | Maclaurin's series | | |
| 38 | Jacobians, formulae | | |
| 39 | Functional dependence | | |
| 40 | Maxima minima of two variables | | |
| 41 | Langranges method | | |
| **UNIT-V: MULTIPLE INTEGRALS**<br>**CO5: Apply double integration techniques in evaluating areas bounded by region**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 42 | Introduction | From: 29-03-2021. To: 12-04-2021 | Lecture interspersed with discussions |
| 43 | Double integrals | | |
| 44 | Triple integrals | | |
| 45 | Change of order of integration | | |
| 46 | Change of variable | | |
| 47 | Applications: Finding areas | | |
| 48 | Finding volumes | | |

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# TENTATIVE LESSON PLAN: R201101

| Course Title: MATHEMATICS – 1 | | |
|---|---|---|
| **Section : CSE-B** | **Date : 04-01-2021** | **Page No :** 01 of 02 |
| **Revision No :** 00 | **Prepared By : B.V.RAMAKRISHNA RAO** | **Approved By : HOD** |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: SEQUENCES, SERIES AND MEAN VALUE THEOREMS**<br>**CO1:utilize mean value theorems to real life problems**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| **1** | SEQUENCES AND SERIES:<br>Convergence and Divergence | From:<br>06-01-2021<br><br>To:<br>23-01-2021 | Lecture interspersed with discussions |
| **2** | Ratio test | | |
| **3** | Comparison test | | |
| **4** | Integral test | | |
| **5** | Cauchy 's root test | | |
| **6** | Alternating series | | |
| **7** | Leibnitz 's rule | | |
| **8** | Mean Value Theorems:<br>Rolle 's Theorem | | |
| **9** | Lagrange 's mean value theorem | | |
| **10** | Cauchy 's mean value theorem | | |
| **11** | Taylor 's and Maclaurin 's theorems with remainders | | |
| **UNIT-II DIFFERENTIAL EQUATIONS OF FIRST ORDER AND FIRST DEEGREE**<br>**CO2: Solve the differential equations related to various engineering fields**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 12 | Introduction: Differential Equations of First order first degree | From:<br>25-01-2021<br><br>To:<br><br>06-02-2021 | Lecture interspersed with discussions |
| 13 | Exact Equations – Conditions of Exactness | | |
| 14 | Equations reducible to Exact | | |
| 15 | Non Exact Differential Equations | | |
| 16 | Linear Differential Equations of first order | | |
| 17 | Bernouli Equation | | |
| 18 | Equations reducible to linear | | |
| 19 | Orthogonal Trajectories - Cartesian | | |
| 20 | Orthogonal Trajectories - Polar | | |
| 21 | Newton's law of cooling | | |
| 22 | Natural growth or decay | | |
| 23 | Electrical Circuits | | |
| **UNIT-III : LINEAR DIFFERENTIAL EQUATIONS OF HIGHER ORDER** | | | |

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|---|---|---|---|
| **UNIT-III: LINEAR DIFFERENTIAL EQUATIONS OF HIGHER ORDER**<br>**CO3:Solve the differential equations related to various engineering fields**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 24 | Linear DE of constant coefficients | From: 08-02-2021 To: 13-02-2021 & From: 22-02-2021 To: 06-03-2021 | Lecture interspersed with discussions |
| 25 | Solutions of $f(D) = Q(x), Q(x) = e^{ax}$ | | |
| 26 | $Q(x) = \sin ax \ or \ \cos ax$ | | |
| 27 | $Q(x) = x^n$ | | |
| 28 | $Q(x) = e^{ax}V(x)$ | | |
| 29 | $Q(x) = xV(x)$ | | |
| 30 | $Q(x) = x^n \sin ax \ or \ \cos ax$ | | |
| 31 | Method of variation of parameters | | |
| 32 | Applications: LCR Circuit | | |
| **UNIT-IVPARTIAL DIFFERENTIATION**<br>**CO4:Familirize with functions of several variables which is useful in optimization**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 33 | Homogeneous function; Euler's Theorem | From: 08-03-2021 To: 27-03-2021 | Lecture interspersed with discussions |
| 34 | Total Derivative; Chain rule | | |
| 35 | Taylor's mean value theorems | | |
| 36 | Maclaurin's series | | |
| 37 | Jacobians, formulae | | |
| 38 | Functional dependence | | |
| 39 | Maxima minima of two variables | | |
| 40 | Langranges method | | |
| **UNIT-V:MULTIPLE INTEGRALS**<br>**CO5: Apply double integration techniques in evaluating areas bounded by region**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 41 | Introduction | From: 29-03-2021 To: 17-03-2021 | Lecture interspersed with discussions |
| 42 | Double integrals | | |
| 43 | Triple integrals | | |
| 44 | Change of order of integration | | |
| 45 | Change of variable | | |
| 46 | Applications: Finding areas | | |
| 47 | Finding volumes | | |

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# TENTATIVE LESSON PLAN: R201102

| Course Title: COMMUNICATIVE ENGLISH | | |
|---|---|---|
| Section : CSE-A | Date : 08-01-2021 | Page No : 01 of 03 |
| Revision No : 00 | Prepared By: Dr.G.Maithreyi | Approved By : HOD |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: A Drawer full of happiness, Deliverance by Premchand**<br>**CO1: Facilitate effective listening skills for better comprehension of academic lectures and English spoken by native speakers**<br>**TB: —Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| **1** | **A Drawer full of happiness** | 08-01-21 | Lecture interspersed with discussions |
| **2** | **Listening : Short Audio Texts** | 08-01-21 | |
| **3** | **Speaking :** Asking and answering questions | 08-01-21 | |
| **4** | **Reading : Skimming and Scanning** | 19-01-21 | |
| **5** | **Reading for Writing :** Paragraph writing | 19-01-21 | |
| **6** | **Vocabulary :** Technical Vocabulary | 20-01-21 | |
| **7** | **Grammar :** Content words and function words | 20-01-21 | |
| **8** | The Deliverance : Munshi Prem Chand | 21-01-21 | |
| **9** | Long Answers | 25-01-21 | |
| **10** | Short Answers | 27-01-21 | |
| **UNIT-II Nehru's letter to his daughter Indira on her birthday, Bosom Friend by Hira Bansode**<br>**CO2: Focus on appropriate reading strategies for comprehension of various academic texts and authentic materials**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 12 | **Nehru's letter to his daughter Indira on her birthday** | | Lecture interspersed |
| 13 | **Listening:** Answering a series of questions | 28-01-21 | |
| 14 | **Speaking:** Discussion in pairs | 01-02-21 | |
| 15 | **Reading**: Identifying sequence of ideas | 02-02-21 | |

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|---|---|---|---|
| 16 | **Reading for Writing**: Summarizing | 03-02-21 | with discussions |
| 17 | **Vocabulary**: Technical vocabulary | 04-02-21 | |
| 18 | **Grammar**: Use of articles | 05-02-21 | |
| 19 | Bosom Friend Hira Bansode | 08-02-21 | |
| 20 | Long Answers | 10-02-21 | |
| 21 | Short Answers | 10-02-21 | |
| **UNIT-III: Stephen Hawking-Positivity "Benchmark", Shakespeare's Sister by Virginia Woolf**<br>**CO3: Help improve speaking skills through participation in activities such as role plays, discussions and structured talks/oral presentations**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 24 | **Stephen Hawking-Positivity 'Benchmark** | 11-02-21 | Lecture interspersed with discussions |
| 25 | **Listening:** Listening for global comprehension | 15-02-21 | |
| 26 | **Speaking:** Discussing specific topics in pairs | 16-02-21 | |
| 27 | **Reading**: Reading a text in detail | 17-02-21 | |
| 28 | **Reading for Writing**: Summarizing | 19-02-21 | |
| 29 | **Vocabulary**: Technical vocabulary | 22-02-21 | |
| 30 | **Grammar**: Verbs - tenses; subject-verb agreement | 22-02-21 | |
| 31 | **Shakespeare's Sister by Virginia Woolf** | 24-02-21 | |
| 32 | Long Answers | 26-02-21 | |
| **UNIT IV Liking a Tree, Unbowed: Wangari Maathai, Telephone Conversation-Wole Soyinka**<br>**CO4: Impart effective strategies for good writing and demonstrate the same in summarizing, writing well organized essays, record and report useful information.**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 33 | **Like a Tree, Unbowed: Wangari Maathai-biography** | | |
| 34 | **Listening:** Making predictions while listening | 03-03-21 | Lecture interspersed with |
| 35 | **Speaking:** Role plays for practice of conversational | 04-03-21 | |

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|---|---|---|---|
| | English | | discussions |
| 36 | **Reading**: Studying the use of graphic elements | 08-03-21 | |
| 37 | **Reading for Writing**: Information transfer | 10-03-21 | |
| 38 | **Vocabulary**: Technical vocabulary | 22-03-21 | |
| 39 | **Grammar**: Quantifying expressions | 24-03-21 | |
| 40 | Telephone Conversation: Wole Soyinka | 26-03-21 | |
| **UNIT-V: Stay Hungry-Stay foolish, Still I Rise by Maya Angelou**<br>**CO5: Provide knowledge of grammatical structures and vocabulary and encourage their appropriate use in speech and writing**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 41 | **Stay Hungry-Stay foolish** | 30-03-21 | Lecture interspersed with discussions |
| 42 | **Listening** Identifying key terms | 01-04-21 | |
| 43 | **Speaking:** Formal oral presentations | 05-04-21 | |
| 44 | **Reading**: Reading for comprehension | 08-04-21 | |
| 45 | **Reading for Writing**: Writing academic proposals | 09-04-21 | |
| 46 | **Vocabulary**: Technical vocabulary | 10-04-21 | |
| 47 | **Grammar**: Editing short texts | 12-04-21 | |

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# TENTATIVE LESSON PLAN: R201102

| Course Title: COMMUNICATIVE ENGLISH | | |
|---|---|---|
| Section : CSE-B | Date : 08-01-2021 | Page No : 01 of 03 |
| Revision No : 00 | Prepared By: Dr.G.Maithreyi | Approved By : HOD |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: A Drawer full of happiness, Deliverance by Premchand**<br>**CO1: Facilitate effective listening skills for better comprehension of academic lectures and English spoken by native speakers**<br>**TB: —Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| **1** | **A Drawer full of happiness** | 08-01-21 | Lecture interspersed with discussions |
| **2** | **Listening : Short Audio Texts** | 08-01-21 | |
| **3** | **Speaking :** Asking and answering questions | 08-01-21 | |
| **4** | **Reading : Skimming and Scanning** | 19-01-21 | |
| **5** | **Reading for Writing :** Paragraph writing | 19-01-21 | |
| **6** | **Vocabulary :** Technical Vocabulary | 20-01-21 | |
| **7** | **Grammar :** Content words and function words | 20-01-21 | |
| **8** | The Deliverance : Munshi Prem Chand | 21-01-21 | |
| **9** | Long Answers | 25-01-21 | |
| **10** | Short Answers | 27-01-21 | |
| **UNIT-II Nehru's letter to his daughter Indira on her birthday, Bosom Friend by Hira Bansode**<br>**CO2: Focus on appropriate reading strategies for comprehension of various academic texts and authentic materials**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 12 | **Nehru's letter to his daughter Indira on her birthday** | | Lecture interspersed |
| 13 | **Listening:** Answering a series of questions | 28-01-21 | |
| 14 | **Speaking:** Discussion in pairs | 01-02-21 | |
| 15 | **Reading**: Identifying sequence of ideas | 02-02-21 | |

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|---|---|---|---|
| 16 | **Reading for Writing**: Summarizing | 03-02-21 | with discussions |
| 17 | **Vocabulary**: Technical vocabulary | 04-02-21 | |
| 18 | **Grammar**: Use of articles | 05-02-21 | |
| 19 | Bosom Friend Hira Bansode | 08-02-21 | |
| 20 | Long Answers | 10-02-21 | |
| 21 | Short Answers | 10-02-21 | |
| **UNIT-III: Stephen Hawking-Positivity "Benchmark", Shakespeare's Sister by Virginia Woolf**<br>**CO3: Help improve speaking skills through participation in activities such as role plays, discussions and structured talks/oral presentations**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 24 | **Stephen Hawking-Positivity 'Benchmark** | 11-02-21 | Lecture interspersed with discussions |
| 25 | **Listening:** Listening for global comprehension | 15-02-21 | |
| 26 | **Speaking:** Discussing specific topics in pairs | 16-02-21 | |
| 27 | **Reading**: Reading a text in detail | 17-02-21 | |
| 28 | **Reading for Writing**: Summarizing | 19-02-21 | |
| 29 | **Vocabulary**: Technical vocabulary | 22-02-21 | |
| 30 | **Grammar**: Verbs - tenses; subject-verb agreement | 22-02-21 | |
| 31 | **Shakespeare's Sister by Virginia Woolf** | 24-02-21 | |
| 32 | Long Answers | 26-02-21 | |
| **UNIT IV Liking a Tree, Unbowed: Wangari Maathai, Telephone Conversation-Wole Soyinka**<br>**CO4: Impart effective strategies for good writing and demonstrate the same in summarizing, writing well organized essays, record and report useful information.**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 33 | **Like a Tree, Unbowed: Wangari Maathai-biography** | | Lecture interspersed with |
| 34 | **Listening:** Making predictions while listening | 03-03-21 | |
| 35 | **Speaking:** Role plays for practice of conversational | 04-03-21 | |

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|---|---|---|---|
| | English | | discussions |
| 36 | **Reading**: Studying the use of graphic elements | 08-03-21 | |
| 37 | **Reading for Writing**: Information transfer | 10-03-21 | |
| 38 | **Vocabulary**: Technical vocabulary | 22-03-21 | |
| 39 | **Grammar**: Quantifying expressions | 24-03-21 | |
| 40 | Telephone Conversation: Wole Soyinka | 26-03-21 | |
| **UNIT-V: Stay Hungry-Stay foolish, Still I Rise by Maya Angelou**<br>**CO5: Provide knowledge of grammatical structures and vocabulary and encourage their appropriate use in speech and writing**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 41 | **Stay Hungry-Stay foolish** | 30-03-21 | Lecture interspersed with discussions |
| 42 | **Listening** Identifying key terms | 01-04-21 | |
| 43 | **Speaking:** Formal oral presentations | 05-04-21 | |
| 44 | **Reading**: Reading for comprehension | 08-04-21 | |
| 45 | **Reading for Writing**: Writing academic proposals | 09-04-21 | |
| 46 | **Vocabulary**: Technical vocabulary | 10-04-21 | |
| 47 | **Grammar**: Editing short texts | 12-04-21 | |

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# TENTATIVE LESSON PLAN: R201110
# PROGRAMMING FOR PROBLEM SOLVING USING C

| Course Title: PROGRAMMING FOR PROBLEM SOLVING USING C (R201110) | | |
|---|---|---|
| Section : CSE-A | Date : 05/01/2021 | Page No : 01 of 03 |
| Revision No : 00 | Prepared By : M.V.SUMANTH | Approved By : HOD |

**Tools: Black board, PPTs, Moodle**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-I** | **Introduction to C language** | | |
| **CO1: To learn about the computer systems, computing environments, developing of a computer program and Structure of a C Program.** | | | |
| **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 1 | Computer Systems | From: 06/01/21 To: 27/01/21 | Lecture Interspersed With discussions |
| 2 | Computing Environments | | |
| 3 | Computer languages | | |
| 4 | Creating and running Programs | | |
| 5 | Computer Numbering System | | |
| 6 | Storing Integers | | |
| 7 | Storing Real Numbers | | |
| 8 | C Programs, Identifiers | | |
| 9 | Types, Variable | | |
| 10 | Constants, Input/output | | |
| 11 | Programming Examples | | |
| 12 | Scope, Storage Classes and Type Qualifiers | | |
| 13 | Expressions Precedence and Associativity | | |
| 14 | Side Effects, Evaluating Expressions | | |
| 15 | Type Conversion Statements | | |
| 16 | Simple Programs | | |
| 17 | Command Line Arguments | | |
| 18 | Tutorial | | |
| **UNIT-II** | **Operators, Selection and Repetition** | | |
| **CO2: To gain knowledge of the operators, selection, control statements and repetition in C.** | | | |
| **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 19 | Exact Size Integer Types | | Lecture interspersed with |
| 20 | Logical Bitwise Operators | | |
| 21 | Shift Operators | | |
| 22 | Logical Data and Operators | | |
| 23 | Two Way Selection | | |
| 24 | Multiway Selection | | |
| 25 | More Standard Functions | | |

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|---|---|---|---|
| 26 | Concept of Loop | From: 28/01/21 To: 11/02/21 | discussions |
| 27 | Pretest and Post-test Loops | | |
| 28 | Initialization and Updating | | |
| 29 | Event and Counter Controlled Loops | | |
| 30 | Loops in C | | |
| 31 | Other Statements Related to Looping | | |
| 32 | Looping Applications | | |
| 33 | Programming Example The Calculator Program | | |
| 35 | Tutorial | | |
| **No. of Periods** | **TOPIC** | **Date** | **Mode of Delivery** |
| **UNIT-III Arrays, String, Enum, Structure, Unions** | | | |
| **CO3: To learn about the design concepts of arrays, strings, enumerated structure and union types. To learn about their usage.** | | | |
| **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 36 | Concepts, Using Array in C | From: 11/02/21 To: 04/03/21 | Lecture interspersed with discussions |
| 37 | Array Application | | |
| 38 | Two Dimensional Arrays | | |
| 39 | Multidimensional Arrays | | |
| 40 | Programming Example – Calculate Averages | | |
| 41 | String Concepts, C String | | |
| 42 | String Input / Output Functions | | |
| 43 | Arrays of Strings | | |
| 44 | String Manipulation Functions | | |
| 45 | String/ Data Conversion | | |
| 46 | A Programming Example – Morse Code | | |
| 47 | The Type Definition (Type def) | | |
| 48 | Enumerated Types | | |
| 49 | Structure | | |
| 50 | Unions | | |
| 51 | Programming Application | | |
| 52 | Tutorial | | |
| **UNIT-IV Pointers** | | | |
| **CO4: To assimilate about pointers, dynamic memory allocation and know the significance of Preprocessor.** | | | |
| **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| **No. of Periods** | **TOPIC** | **Date** | **Mode of Delivery** |
| 53 | Introduction | From: 05/03/21 | Lecture interspersed |
| 54 | Pointers to pointers | | |
| 55 | Compatibility, L value and R value | | |
| 56 | Arrays, and Pointers | | |

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|---|---|---|---|
| 57 | Pointer Arithmetic and Arrays | To: 26/03/21 | with discussions |
| 58 | Memory Allocation Function | | |
| 59 | Array of Pointers | | |
| 60 | Programming Application | | |
| 61 | Processor Commands | | |
| 62 | Tutorial | | |
| **UNIT-V Files and Functions**<br>**CO5: To assimilate about File I/O and significance of functions.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 63 | Function in C | From: 27/03/21<br><br>To: 10/04/21 | Lecture interspersed with discussions |
| 64 | User Defined Functions | | |
| 65 | Inter-Function Communication | | |
| 66 | Standard Functions | | |
| 67 | Passing Array to Functions | | |
| 68 | Passing Pointers to Functions | | |
| 69 | Recursion | | |
| 70 | Passing an Array to Function | | |
| 71 | Files, Streams | | |
| 72 | Standard Library Input / Output Functions | | |
| 73 | Formatting Input / Output Functions | | |
| 74 | Character Input / Output Functions | | |
| 75 | Text versus Binary Streams | | |
| 76 | Functions for Files | | |
| 77 | Converting File Type | | |
| 78 | Designing, Structured Programs | | |
| 79 | Tutorial | | |

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## TENTATIVE LESSON PLAN: R201110

## PROGRAMMING FOR PROBLEM SOLVING USING C

| Course Title: PROGRAMMING FOR PROBLEM SOLVING USING C (R201110) | | |
|---|---|---|
| Section : Sec B | Date : 05/01/2021 | Page No : 01 of 03 |
| Revision No : 00 | Prepared By : Dr. B.Srikanth | Approved By : HOD |

**Tools: Black board, PPTs, Moodle**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-I** | **Introduction to C language**<br>**CO1: To learn about the computer systems, computing environments, developing of a computer program and Structure of a C Program.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | |
| 1 | Computer Systems | **From: 06/01/21**<br><br>**To: 30/01/21** | Lecture Interspersed With discussions |
| 2 | Computing Environments | | |
| 3 | Computer languages | | |
| 4 | Creating and running Programs | | |
| 5 | Computer Numbering System | | |
| 6 | Storing Integers | | |
| 7 | Storing Real Numbers | | |
| 8 | C Programs, Identifiers | | |
| 9 | Types, Variable | | |
| 10 | Constants, Input/output | | |
| 11 | Programming Examples | | |
| 12 | Scope, Storage Classes and Type Qualifiers | | |
| 13 | Expressions Precedence and Associativity | | |
| 14 | Side Effects, Evaluating Expressions | | |
| 15 | Type Conversion Statements | | |
| 16 | Simple Programs | | |
| 17 | Command Line Arguments | | |
| 18 | Tutorial | | |
| **UNIT-II** | **Operators, Selection and Repetition**<br>**CO2: To gain knowledge of the operators, selection, control statements and repetition in C.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | |
| 19 | Exact Size Integer Types | | Lecture interspersed with |
| 20 | Logical Bitwise Operators | | |
| 21 | Shift Operators | | |
| 22 | Logical Data and Operators | | |
| 23 | Two Way Selection | | |
| 24 | Multiway Selection | | |
| 25 | More Standard Functions | | |

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|---|---|---|---|
| 26 | Concept of Loop | From: 1/2/21 To: 10/02/21 | discussions |
| 27 | Pretest and Post-test Loops | | |
| 28 | Initialization and Updating | | |
| 29 | Event and Counter Controlled Loops | | |
| 30 | Loops in C | | |
| 31 | Other Statements Related to Looping | | |
| 32 | Looping Applications | | |
| 33 | Programming Example The Calculator Program | | |
| 35 | Tutorial | | |
| **No. of Periods** | **TOPIC** | **Date** | **Mode of Delivery** |
| **UNIT-III Arrays, String, Enum, Structure, Unions** | | | |
| **CO3: To learn about the design concepts of arrays, strings, enumerated structure and union types. To learn about their usage.** | | | |
| **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 36 | Concepts, Using Array in C | From: 11/02/21 To: 05/03/21 | Lecture interspersed with discussions |
| 37 | Array Application | | |
| 38 | Two Dimensional Arrays | | |
| 39 | Multidimensional Arrays | | |
| 40 | Programming Example – Calculate Averages | | |
| 41 | String Concepts, C String | | |
| 42 | String Input / Output Functions | | |
| 43 | Arrays of Strings | | |
| 44 | String Manipulation Functions | | |
| 45 | String/ Data Conversion | | |
| 46 | A Programming Example – Morse Code | | |
| 47 | The Type Definition (Type def) | | |
| 48 | *Enumerated Types* | | |
| 49 | Structure | | |
| 50 | Unions | | |
| 51 | Programming Application | | |
| 52 | Tutorial | | |
| **UNIT-IV Pointers** | | | |
| **CO4: To assimilate about pointers, dynamic memory allocation and know the significance of Preprocessor.** | | | |
| **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| **No. of Periods** | **TOPIC** | **Date** | **Mode of Delivery** |
| 53 | Introduction | From: | Lecture interspersed |
| 54 | Pointers to pointers | | |
| 55 | Compatibility, L value and R value | | |
| 56 | Arrays, and Pointers | | |

| | | | |
|---|---|---|---|
| 57 | Pointer Arithmetic and Arrays | **06/03/21** | with discussions |
| 58 | Memory Allocation Function | | |
| 59 | Array of Pointers | **To: 20/03/21** | |
| 60 | Programming Application | | |
| 61 | Processor Commands | | |
| 62 | Tutorial | | |
| **UNIT-V Files and Functions**<br>**CO5: To assimilate about File I/O and significance of functions.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 63 | Function in C | | |
| 64 | User Defined Functions | | |
| 65 | Inter-Function Communication | | |
| 66 | Standard Functions | | |
| 67 | Passing Array to Functions | **From: 22/03/21** | |
| 68 | Passing Pointers to Functions | | |
| 69 | Recursion | | |
| 70 | Passing an Array to Function | **To: 10/04/21** | Lecture interspersed with discussions |
| 71 | Files, Streams | | |
| 72 | Standard Library Input / Output Functions | | |
| 73 | Formatting Input / Output Functions | | |
| 74 | Character Input / Output Functions | | |
| 75 | Text versus Binary Streams | | |
| 76 | Functions for Files | | |
| 77 | Converting File Type | | |
| 78 | Designing, Structured Programs | | |
| 79 | Tutorial | | |

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# TENTATIVE LESSON PLAN: R201117

| Course Title: Applied Physics | | | |
|---|---|---|---|
| Section :CSE-A | Date : 08.01.2021 | Page No : 00 | |
| Revision No :00 | Prepared By : Dr. J. Ashok | Approved By : HOD | |
| Tools: | | | |

| No. of Periods | TOPIC | DATE | Mode of Delivery |
|---|---|---|---|
| UNIT-I | **Wave Optics**<br>**CO1:** Analyze the differences between interference and diffraction with applications. And illustrate the resolving power of various optical instruments. | From: 08/01/2021 To: 30/01/2021 | Lecture interspersed with discussions |
| 1 | **INTERFERENCE:** Introduction | | |
| 2 | Principle of Superposition | | |
| 3 | Coherent Sources-Types | | |
| 4 | Interference- Types | | |
| 5 | Interference in Thin Films | | |
| 6 | Colours in Thin Film | | |
| 7 | Newton's Rings | | |
| 8 | Applications of Interference | | |
| 9 | Problems | | |
| 10 | **Diffraction:** Introduction | | |
| 11 | Fresnel and Fraunhoffer Diffraction | | Lecture interspersed with discussions |
| 12 | Fraunhoffer diffraction at single slit | | |
| 13 | Fraunhoffer diffraction at single slit | | |
| 14 | Fraunhoffer diffraction at Double Slit | | |
| 15 | Fraunhoffer diffraction at N-Slits | | |
| 16 | Grating Equation | | |
| 17 | Dispersive Power of Grating | | |
| 18 | Resolving Power of Grating | | |
| 19 | Problems | | |
| 20 | **Polarization :** Introduction | | |
| 21 | Types of Polarization | | |
| 22 | Polarization by Reflection, Refraction | | |
| 23 | Polarization by Duoble Refraction | | Lecture interspersed with discussions |
| 24 | Nicol Prism | | |
| 25 | Quarter Wave & Half Wave Plates and Problems | | |
| UNIT- II | **Lasers and Fiber Optics**<br>**CO2:** Explain various types of emission of radiation. Identify the role of laser in engineering applications. Identify the applications of optical fibers in medical, communication and other fields. Apply the fiber optic concepts in various fields. | From: 01-02-2021 To: 13-02-2021 | |
| 26 | **Lasers :** Introduction | | |
| 27 | Characteristics of Laser | | |
| 28 | Spontaneous and Stimulated emission | | |
| 29 | Einstein's Coefficients | | |
| 30 | Population Inversion, Lasing action | | |
| 31 | Pumping Mechanism-Pumping method | | |

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|---|---|---|---|
| 32 | Ruby Laser | | |
| 33 | Helium Neon Laser | | |
| 34 | Applications of Lasers | | |
| 35 | **Fiber Optics:** Introduction | | |
| 36 | Principle of Optical Fiber | | |
| 37 | Acceptance angle and Numerical Aperture | | |
| 38 | Classifications optical fibers based on refractive index profile and modes | | Lecture interspersed with discussions |
| 39 | Propagation of electromagnetic wave through optical fibers, applications | | |
| 40 | Problems | | |
| **UNIT -III** | **Quantum Mechanics, Free Electron Theory and Band theory**<br>**CO3:** Describe the dual nature of matter. Identify the role of Schrodinger's time independent wave equation in studying particle in one-dimensional infinite potential well. Identify the role of classical and quantum free electron theory in the study of electrical conductivity. | From: 22-02-2021 To 10-03-2021 | |
| 41 | **Quantum Mechanics:** Introduction | | |
| **42** | Dual Nature of Matter | | |
| 43 | Heisenberg's Uncertainty Principle, Significance and properties of wave function | | |
| 44 | Schrodinger Time Independent Equation | | |
| 45 | Schrodinger Time Dependent Equation | | |
| 46 | Particle in a Box | | |
| 47 | Problems | | Lecture interspersed with discussions |
| 48 | **Free Electron Theory:** Introduction | | |
| 49 | Classical free electron theory- merits and demerits | | |
| 50 | Quantum free electron theory- merits and demerits | | |
| **51** | Equation for electrical conductivity based on quantum free electron theory | | |
| 52 | Fermi-Dirac distribution, Fermi energy. | | |
| 53 | Density of states (3D) | | |
| 54 | Problems | | |
| 55 | **Band theory of Solids :**Introduction | | |
| 56 | Bloch's Theorem, Kronig - Penney model | | |
| 57 | E vs K diagram - v vs K diagram | | |
| 58 | Effective Mass of Electron, Concept of Hole | | |
| 59 | Energy Bands in Crystalline Solids Classification | | |
| **UNIT-IV** | **Dielectric and Magnetic Materials**<br>**CO4:** Explain the concept of dielectric constant and polarization in dielectric materials. Explain the applications of dielectric and magnetic materials . Apply the concept of magnetism to magnetic devices. | From 12-03-2021 To 25-03-2021 | |
| 60 | **Dielectric Materials:** Introduction, Dielectric polarization | | |
| 61 | Types of polarizations- Electronic polarisation | | |
| 62 | Ionic polarisation, Orientation polarizations | | Lecture interspersed with discussions |
| 63 | Lorentz internal field | | |
| 64 | Clausius-Mossotti equation, Piezoelectricity. | | |
| 65 | **Magnetic Materials:** Introduction | | |
| 66 | Magnetic dipole moment , Magnetization, Magnetic susceptibility and permeability | | |

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| 67 | Origin of permanent magnetic moment | | |
| 68 | Classification of magnetic materials: Dia, para, Ferro, antiferro and Ferri magnetic materials | | |
| 69 | Domain concept for Ferromagnetism, Domainwalls | | |
| 70 | Hysteresis soft and hard magnetic materials | | |
| 71 | Eddy currents, Engineering applications and Problems | | |
| **UNIT – V** | **Semiconductors and Superconductors**<br>**CO5:** Explain the properties of charge carriers in semiconductors . Identify the type of semiconductor using Hall effect . Identify applications of semiconductors in electronic devices. Explain Meissner's effect, BCS theory & Josephson effect in superconductors. | From 26-03-2021 To 03-04-2021 | Lecture interspersed with discussions |
| 72 | **Semiconductors:** Introduction, Intrinsic semiconductors | | |
| 73 | Density of charge carriers ,Electrical conductivity, Fermi level | | |
| 74 | Extrinsic semiconductors , density of charge carriers, Dependence of Fermi energy on carrier concentration and temperature | | |
| 75 | Drift and diffusion currents – Einstein's equation | | |
| 76 | Hall effect, Hall coefficient, Applications of Hall effect | | |
| 77 | **Superconductors**: Introduction – Properties of superconductors | | |
| 78 | Meissner effect , Type I and Type II superconductors | | |
| 70 | BCS theory , Josephson effects (AC and DC) | | |
| 80 | SQUID's – High Tc superconductors , Applications of superconductors | | |

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# TENTATIVE LESSON PLAN: R201117

| Course Title: Applied Physics | | | |
|---|---|---|---|
| Section :CSE-B | Date : 08.01.2021 | Page No : 00 | |
| Revision No :00 | Prepared By : Dr. J. Ashok | Approved By : HOD | |
| Tools: | | | |

| No. of Periods | TOPIC | DATE | Mode of Delivery |
|---|---|---|---|
| UNIT-I | **Wave Optics**<br>**CO1:** Analyze the differences between interference and diffraction with applications. And illustrate the resolving power of various optical instruments. | From: 08/01/2021 To: 30/01/2021 | Lecture interspersed with discussions |
| 1 | **INTERFERENCE:** Introduction | | |
| 2 | Principle of Superposition | | |
| 3 | Coherent Sources-Types | | |
| 4 | Interference- Types | | |
| 5 | Interference in Thin Films | | |
| 6 | Colours in Thin Film | | |
| 7 | Newton's Rings | | |
| 8 | Applications of Interference | | |
| 9 | Problems | | |
| 10 | **Diffraction:** Introduction | | |
| 11 | Fresnel and Fraunhoffer Diffraction | | Lecture interspersed with discussions |
| 12 | Fraunhoffer diffraction at single slit | | |
| 13 | Fraunhoffer diffraction at single slit | | |
| 14 | Fraunhoffer diffraction at Double Slit | | |
| 15 | Fraunhoffer diffraction at N-Slits | | |
| 16 | Grating Equation | | |
| 17 | Dispersive Power of Grating | | |
| 18 | Resolving Power of Grating | | |
| 19 | Problems | | |
| 20 | **Polarization :** Introduction | | |
| 21 | Types of Polarization | | |
| 22 | Polarization by Reflection, Refraction | | |
| 23 | Polarization by Duoble Refraction | | Lecture interspersed with discussions |
| 24 | Nicol Prism | | |
| 25 | Quarter Wave & Half Wave Plates and Problems | | |
| UNIT- II | **Lasers and Fiber Optics**<br>**CO2:** Explain various types of emission of radiation. Identify the role of laser in engineering applications. Identify the applications of optical fibers in medical, communication and other fields. Apply the fiber optic concepts in various fields. | From: 01-02-2021 To: 13-02-2021 | |
| 26 | **Lasers :** Introduction | | |
| 27 | Characteristics of Laser | | |
| 28 | Spontaneous and Stimulated emission | | |
| 29 | Einstein's Coefficients | | |
| 30 | Population Inversion, Lasing action | | |
| 31 | Pumping Mechanism-Pumping method | | |

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| 32 | Ruby Laser | | |
| 33 | Helium Neon Laser | | |
| 34 | Applications of Lasers | | |
| 35 | **Fiber Optics:** Introduction | | |
| 36 | Principle of Optical Fiber | | |
| 37 | Acceptance angle and Numerical Aperture | | Lecture interspersed with discussions |
| 38 | Classifications optical fibers based on refractive index profile and modes | | |
| 39 | Propagation of electromagnetic wave through optical fibers, applications | | |
| 40 | Problems | | |
| **UNIT -III** | **Quantum Mechanics, Free Electron Theory and Band theory**<br>**CO3:** Describe the dual nature of matter. Identify the role of Schrodinger's time independent wave equation in studying particle in one-dimensional infinite potential well. Identify the role of classical and quantum free electron theory in the study of electrical conductivity. | From: 22-02-2021 To 10-03-2021 | |
| 41 | **Quantum Mechanics:** Introduction | | |
| **42** | Dual Nature of Matter | | |
| 43 | Heisenberg's Uncertainty Principle, Significance and properties of wave function | | Lecture interspersed with discussions |
| 44 | Schrodinger Time Independent Equation | | |
| 45 | Schrodinger Time Dependent Equation | | |
| 46 | Particle in a Box | | |
| 47 | Problems | | |
| 48 | **Free Electron Theory:** Introduction | | |
| 49 | Classical free electron theory- merits and demerits | | |
| 50 | Quantum free electron theory- merits and demerits | | |
| **51** | Equation for electrical conductivity based on quantum free electron theory | | |
| 52 | Fermi-Dirac distribution, Fermi energy. | | |
| 53 | Density of states (3D) | | |
| 54 | Problems | | |
| 55 | **Band theory of Solids :**Introduction | | |
| 56 | Bloch's Theorem, Kronig - Penney model | | |
| 57 | E vs K diagram - v vs K diagram | | |
| 58 | Effective Mass of Electron, Concept of Hole | | |
| 59 | Energy Bands in Crystalline Solids Classification | | |
| **UNIT-IV** | **Dielectric and Magnetic Materials**<br>**CO4:** Explain the concept of dielectric constant and polarization in dielectric materials. Explain the applications of dielectric and magnetic materials . Apply the concept of magnetism to magnetic devices. | From 12-03-2021 To 25-03-2021 | |
| 60 | **Dielectric Materials:** Introduction, Dielectric polarization | | |
| 61 | Types of polarizations- Electronic polarisation | | Lecture interspersed with discussions |
| 62 | Ionic polarisation, Orientation polarizations | | |
| 63 | Lorentz internal field | | |
| 64 | Clausius-Mossotti equation, Piezoelectricity. | | |
| 65 | **Magnetic Materials:** Introduction | | |
| 66 | Magnetic dipole moment , Magnetization, Magnetic susceptibility and permeability | | |

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| 67 | Origin of permanent magnetic moment | | |
| 68 | Classification of magnetic materials: Dia, para, Ferro, antiferro and Ferri magnetic materials | | |
| 69 | Domain concept for Ferromagnetism, Domainwalls | | |
| 70 | Hysteresis soft and hard magnetic materials | | |
| 71 | Eddy currents, Engineering applications and Problems | | |
| **UNIT – V** | **Semiconductors and Superconductors**<br>**CO5:** Explain the properties of charge carriers in semiconductors . Identify the type of semiconductor using Hall effect . Identify applications of semiconductors in electronic devices. Explain Meissner's effect, BCS theory & Josephson effect in superconductors. | From 26-03-2021 To 03-04-2021 | Lecture interspersed with discussions |
| 72 | **Semiconductors:** Introduction, Intrinsic semiconductors | | |
| 73 | Density of charge carriers ,Electrical conductivity, Fermi level | | |
| 74 | Extrinsic semiconductors , density of charge carriers, Dependence of Fermi energy on carrier concentration and temperature | | |
| 75 | Drift and diffusion currents – Einstein's equation | | |
| 76 | Hall effect, Hall coefficient, Applications of Hall effect | | |
| 77 | **Superconductors**: Introduction – Properties of superconductors | | |
| 78 | Meissner effect , Type I and Type II superconductors | | |
| 70 | BCS theory , Josephson effects (AC and DC) | | |
| 80 | SQUID's – High Tc superconductors , Applications of superconductors | | |

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# TENTATIVE LESSON PLAN: R201101

| Course Title: MATHEMATICS – 1 | | |
|---|---|---|
| **Section : IT** | **Date : 04-01-2021** | **Page No :** 01 of 02 |
| **Revision No :** 00 | **Prepared By : B.V.RAMAKRISHNA RAO** | **Approved By : HOD** |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: SEQUENCES, SERIES AND MEAN VALUE THEOREMS**<br>**CO1:utilize mean value theorems to real life problems**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| **1** | SEQUENCES AND SERIES:<br>Convergence and Divergence | From:<br>06-01-2021<br><br>To:<br>23-01-2021 | Lecture interspersed with discussions |
| **2** | Ratio test | | |
| **3** | Comparison test | | |
| **4** | Integral test | | |
| **5** | Cauchy 's root test | | |
| **6** | Alternating series | | |
| **7** | Leibnitz 's rule | | |
| **8** | Mean Value Theorems:<br>Rolle 's Theorem | | |
| **9** | Lagrange 's mean value theorem | | |
| **10** | Cauchy 's mean value theorem | | |
| **11** | Taylor 's and Maclaurin 's theorems with remainders | | |
| **UNIT-II DIFFERENTIAL EQUATIONS OF FIRST ORDER AND FIRST DEEGREE**<br>**CO2: Solve the differential equations related to various engineering fields**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 12 | Introduction: Differential Equations of First order first degree | From:<br>25-01-2021<br><br>To:<br><br>06-02-2021 | Lecture interspersed with discussions |
| 13 | Exact Equations – Conditions of Exactness | | |
| 14 | Equations reducible to Exact | | |
| 15 | Non Exact Differential Equations | | |
| 16 | Linear Differential Equations of first order | | |
| 17 | Bernouli Equation | | |
| 18 | Equations reducible to linear | | |
| 19 | Orthogonal Trajectories - Cartesian | | |
| 20 | Orthogonal Trajectories - Polar | | |
| 21 | Newton's law of cooling | | |
| 22 | Natural growth or decay | | |
| 23 | Electrical Circuits | | |
| **UNIT-III : LINEAR DIFFERENTIAL EQUATIONS OF HIGHER ORDER** | | | |

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| **UNIT-III: LINEAR DIFFERENTIAL EQUATIONS OF HIGHER ORDER**<br>**CO3:Solve the differential equations related to various engineering fields**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 24 | Linear DE of constant coefficients | From: 08-02-2021 To: 13-02-2021 & From: 22-02-2021 To: 06-03-2021 | Lecture interspersed with discussions |
| 25 | Solutions of $f(D) = Q(x), Q(x) = e^{ax}$ | | |
| 26 | $Q(x) = \sin ax \ or \ \cos ax$ | | |
| 27 | $Q(x) = x^n$ | | |
| 28 | $Q(x) = e^{ax}V(x)$ | | |
| 29 | $Q(x) = xV(x)$ | | |
| 30 | $Q(x) = x^n \sin ax \ or \ \cos ax$ | | |
| 31 | Method of variation of parameters | | |
| 32 | Applications: LCR Circuit | | |
| **UNIT-IVPARTIAL DIFFERENTIATION**<br>**CO4:Familirize with functions of several variables which is useful in optimization**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 33 | Homogeneous function; Euler's Theorem | From: 08-03-2021 To: 27-03-2021 | Lecture interspersed with discussions |
| 34 | Total Derivative; Chain rule | | |
| 35 | Taylor's mean value theorems | | |
| 36 | Maclaurin's series | | |
| 37 | Jacobians, formulae | | |
| 38 | Functional dependence | | |
| 39 | Maxima minima of two variables | | |
| 40 | Langranges method | | |
| **UNIT-V:MULTIPLE INTEGRALS**<br>**CO5: Apply double integration techniques in evaluating areas bounded by region**<br>**TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications** | | | |
| 41 | Introduction | From: 29-03-2021 To: 17-03-2021 | Lecture interspersed with discussions |
| 42 | Double integrals | | |
| 43 | Triple integrals | | |
| 44 | Change of order of integration | | |
| 45 | Change of variable | | |
| 46 | Applications: Finding areas | | |
| 47 | Finding volumes | | |

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# TENTATIVE LESSON PLAN: R201102

| Course Title: COMMUNICATIVE ENGLISH | | |
|---|---|---|
| **Section : IT** | **Date : 08-01-2021** | **Page No :** 01 of 03 |
| **Revision No :** 00 | **Prepared By: N. Gayathri** | **Approved By : HOD** |

**Tools: Black board**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-1: A Drawer full of happiness, Deliverance by Premchand**<br>**CO1: Facilitate effective listening skills for better comprehension of academic lectures and English spoken by native speakers**<br>**TB: —Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| **1** | **A Drawer full of happiness** | 08-01-21 | Lecture interspersed with discussions |
| **2** | **Listening : Short Audio Texts** | 08-01-21 | |
| **3** | **Speaking :** Asking and answering questions | 08-01-21 | |
| **4** | **Reading : Skimming and Scanning** | 19-01-21 | |
| **5** | **Reading for Writing :** Paragraph writing | 19-01-21 | |
| **6** | **Vocabulary :** Technical Vocabulary | 20-01-21 | |
| **7** | **Grammar :** Content words and function words | 20-01-21 | |
| **8** | The Deliverance : Munshi Prem Chand | 21-01-21 | |
| **9** | Long Answers | 25-01-21 | |
| **10** | Short Answers | 27-01-21 | |
| **UNIT-II Nehru's letter to his daughter Indira on her birthday, Bosom Friend by Hira Bansode**<br>**CO2: Focus on appropriate reading strategies for comprehension of various academic texts and authentic materials**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 12 | **Nehru's letter to his daughter Indira on her birthday** | | Lecture interspersed |
| 13 | **Listening:** Answering a series of questions | 28-01-21 | |
| 14 | **Speaking:** Discussion in pairs | 01-02-21 | |
| 15 | **Reading**: Identifying sequence of ideas | 02-02-21 | |

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| 16 | **Reading for Writing**: Summarizing | 03-02-21 | with discussions |
| 17 | **Vocabulary**: Technical vocabulary | 04-02-21 | |
| 18 | **Grammar**: Use of articles | 05-02-21 | |
| 19 | Bosom Friend Hira Bansode | 08-02-21 | |
| 20 | Long Answers | 10-02-21 | |
| 21 | Short Answers | 10-02-21 | |
| **UNIT-III: Stephen Hawking-Positivity "Benchmark", Shakespeare's Sister by Virginia Woolf**<br>**CO3: Help improve speaking skills through participation in activities such as role plays, discussions and structured talks/oral presentations**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 24 | **Stephen Hawking-Positivity 'Benchmark** | 11-02-21 | Lecture interspersed with discussions |
| 25 | **Listening:** Listening for global comprehension | 15-02-21 | |
| 26 | **Speaking:** Discussing specific topics in pairs | 16-02-21 | |
| 27 | **Reading**: Reading a text in detail | 17-02-21 | |
| 28 | **Reading for Writing**: Summarizing | 19-02-21 | |
| 29 | **Vocabulary**: Technical vocabulary | 22-02-21 | |
| 30 | **Grammar**: Verbs - tenses; subject-verb agreement | 22-02-21 | |
| 31 | **Shakespeare's Sister by Virginia Woolf** | 24-02-21 | |
| 32 | Long Answers | 26-02-21 | |
| **UNIT IV Liking a Tree, Unbowed: Wangari Maathai, Telephone Conversation-Wole Soyinka**<br>**CO4: Impart effective strategies for good writing and demonstrate the same in summarizing, writing well organized essays, record and report useful information.**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 33 | **Like a Tree, Unbowed: Wangari Maathai-biography** | | Lecture interspersed with |
| 34 | **Listening:** Making predictions while listening | 03-03-21 | |
| 35 | **Speaking:** Role plays for practice of conversational | 04-03-21 | |

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| | English | | discussions |
| 36 | **Reading**: Studying the use of graphic elements | 08-03-21 | |
| 37 | **Reading for Writing**: Information transfer | 10-03-21 | |
| 38 | **Vocabulary**: Technical vocabulary | 22-03-21 | |
| 39 | **Grammar**: Quantifying expressions | 24-03-21 | |
| 40 | Telephone Conversation: Wole Soyinka | 26-03-21 | |
| **UNIT-V: Stay Hungry-Stay foolish, Still I Rise by Maya Angelou**<br>**CO5: Provide knowledge of grammatical structures and vocabulary and encourage their appropriate use in speech and writing**<br>**TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications** | | | |
| 41 | **Stay Hungry-Stay foolish** | 30-03-21 | Lecture interspersed with discussions |
| 42 | **Listening** Identifying key terms | 01-04-21 | |
| 43 | **Speaking:** Formal oral presentations | 05-04-21 | |
| 44 | **Reading**: Reading for comprehension | 08-04-21 | |
| 45 | **Reading for Writing**: Writing academic proposals | 09-04-21 | |
| 46 | **Vocabulary**: Technical vocabulary | 10-04-21 | |
| 47 | **Grammar**: Editing short texts | 12-04-21 | |

8/1/21

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## TENTATIVE LESSON PLAN: 1R201110

| Course Title: PROGRAMMING FOR PROBLEM SOLVING USING C (1R201110) | | |
|---|---|---|
| **Section : IT** | **Date : 08/01/21** | **A.Y:2020-21** |
| **Revision No : 00** | **Prepared By : M.SURESH BABU** | **Approved By : HOD** |

**Tools: Black board, PPTs, Moodle**

| No. of Periods | TOPIC | Date | Mode of Delivery |
|---|---|---|---|
| **UNIT-I** | **Introduction to C language**<br>**CO1: To learn about the computer systems, computing environments, developing of a computer program and Structure of a C Program.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | |
| 1 | Creating and running Programs | 08/1/21 | Lecture Interspersed With discussions |
| 2 | Computer Numbering System | 09/1/21 | |
| 3 | Storing Integers | 11/1/21 | |
| 4 | Storing Real Numbers | 18/1/21 | |
| 5 | C Programs, Identifiers | 19/1/21 | |
| 6 | Types, Variable | 20/1/21 | |
| 7 | Constants, Input/output | 21/1/21 | |
| 8 | Programming Examples | 22/1/21 | |
| 9 | Scope | 23/1/21 | |
| 10 | Storage Classes | 25/1/21 | |
| 11 | Type Qualifiers | 27/1/21 | |
| 12 | Expressions Precedence | 28/1/21 | |
| 13 | Associativity | 29/1/21 | |
| 14 | Side Effects, Evaluating Expressions | 30/1/21 | |
| 15 | Type Conversion Statements | 1/2/21 | |
| 16 | Simple Programs | 2/2/21 | |
| 17 | Command Line Arguments | 3/2/21 | |
| 18 | Tutorial | 4/2/21 | |
| **UNIT-II** | **Operators, Selection and Repetition**<br>**CO2: To gain knowledge of the operators, selection, control statements and repetition in C.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | |
| 19 | Exact Size Integer Types | 5/2/21 | Lecture interspersed with discussions |
| 20 | Logical Bitwise Operators | 6/2/21 | |
| 21 | Shift Operators | 8/2/21 | |
| 22 | Logical Data and Operators | 9/2/21 | |
| 23,24, 25 | Two Way Selection | 10-12/2/21 | |
| 26 | Multiway Selection | 13/2/21 | |
| 27 | More Standard Functions | 15/2/21 | |
| 28 | Concept of Loop | 16/2/21 | |

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| 29 | Pretest and Post-test Loops | 17/2/21 | |
| 30 | Initialization and Updating | 18/2/21 | |
| 31 | Event and Counter Controlled Loops | 19/2/21 | |
| 32 | Loops in C | 20/2/21 | |
| 33 | Other Statements Related to Looping | 22/2/21 | |
| 34 | Looping Applications | 23-25/2/21 | |
| 35 | Programming Example | | |
| 36 | Tutorial | 26/2/21 | |
| **No. of Periods** | **TOPIC** | **Date** | **Mode of Delivery** |
| **UNIT-III Arrays, String, Enum, Structure, Unions** | | | |
| **CO3: To learn about the design concepts of arrays, strings, enumerated structure and union types. To learn about their usage.** | | | |
| **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 37 | Concepts, Using Array in C | 27/2/21 | |
| 38 | Array Application | 1/3/21 | |
| 39 | Two Dimensional Arrays | 2/3/21 | |
| 40 | Multidimensional Arrays | 3/3/21 | |
| 41 | Programming Example – Calculate Averages | 4/3/21 | |
| 42 | String Concepts, C String | 5/3/21 | |
| 43,44 45 | String Input / Output Functions | 6-9/3/21 | |
| 46 | Arrays of Strings | 10/3/21 | |
| 47 | String Manipulation Functions | 11/3/21 | |
| 48 | String/ Data Conversion | 12/3/21 | Lecture interspersed with discussions |
| 49,50 51 | A Programming Example | 13-15/3/21 | |
| 52 | The Type Definition (Type def) | 16/3/21 | |
| 53 | Enumerated Types | 17/3/21 | |
| 54,55 56 | Structure, Unions | 18-20/3/21 | |
| 57 | Programming Application | 26/03/21 | |
| 58 | Tutorial | 26-31/3/21 | |
| **UNIT-IV Pointers** | | | |
| **CO4: To assimilate about pointers, dynamic memory allocation and know the significance of Preprocessor.** | | | |
| **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| **No. of Periods** | **TOPIC** | **Date** | **Mode of Delivery** |
| 59 | Introduction | 1/4/21 | |
| 60 | Pointers to pointers | 2/4/21 | |
| 61 | Compatibility, L value and R value | 3/4/21 | |
| 62 | Arrays, and Pointers | 5/4/21 | |
| 63 | Pointer Arithmetic and Arrays | 6/4/21 | Lecture interspersed with |
| 64 | Memory Allocation Function | 7/4/21 | |
| 65 | Array of Pointers | 8/4/21 | |

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| 66 | Programming Application | 9/4/21 | discussions |
| 67 | Processor Commands | 10/4/21 | |
| 68 | Tutorial | 10/4/21 | |
| **UNIT-V Files and Functions**<br>**CO5: To assimilate about File I/O and significance of functions.**<br>**TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE** | | | |
| 69 | Designing, Structured Programs | 12/4/21 | Lecture interspersed with discussions |
| 70 | Function in C, User Defined Functions | 13/4/21 | |
| 71 | Inter-Function Communication, Standard Functions | 14/4/21 | |
| 72 | Passing Array to Functions, Passing Pointers to Functions | 15/4/21 | |
| 73 | Recursion, Passing an Array to Function | 16/4/21 | |
| 74 | Files, Streams, Standard Library Input / Output Functions | 17/4/21, 19/4/21 | |
| 75 | Formatting Input / Output Functions | 20/4/21 | |
| 76 | Character Input / Output Functions, Text versus Binary Streams | 21/4/21, 22/4/21 | |
| 77 | Functions for Files, Converting File Type | 23/4/21 | |
| 78 | Tutorial | 24/4/21 | |

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# TENTATIVE LESSON PLAN: R201117

| Course Title: Applied Physics | | | |
|---|---|---|---|
| Section :IT | Date : 08.01.2021 | Page No : 00 | |
| Revision No :00 | Prepared By : M.VIDYA ELIZABETH | Approved By : HOD | |
| Tools: | | | |

| No. of Periods | TOPIC | DATE | Mode of Delivery |
|---|---|---|---|
| UNIT-I | **Wave Optics**<br>**CO1:** Analyze the differences between interference and diffraction with applications. And illustrate the resolving power of various optical instruments. | From: 08/01/2021 To: 30/01/2021 | Lecture interspersed with discussions |
| 1 | **INTERFERENCE:** Introduction | | |
| 2 | Principle of Superposition | | |
| 3 | Coherent Sources-Types | | |
| 4 | Interference- Types | | |
| 5 | Interference in Thin Films | | |
| 6 | Colours in Thin Film | | |
| 7 | Newton's Rings | | |
| 8 | Applications of Interference | | |
| 9 | Problems | | |
| 10 | **Diffraction:** Introduction | | |
| 11 | Fresnel and Fraunhoffer Diffraction | | Lecture interspersed with discussions |
| 12 | Fraunhoffer diffraction at single slit | | |
| 13 | Fraunhoffer diffraction at single slit | | |
| 14 | Fraunhoffer diffraction at Double Slit | | |
| 15 | Fraunhoffer diffraction at N-Slits | | |
| 16 | Grating Equation | | |
| 17 | Dispersive Power of Grating | | |
| 18 | Resolving Power of Grating | | |
| 19 | Problems | | |
| 20 | **Polarization :** Introduction | | |
| 21 | Types of Polarization | | |
| 22 | Polarization by Reflection, Refraction | | |
| 23 | Polarization by Duoble Refraction | | Lecture interspersed with discussions |
| 24 | Nicol Prism | | |
| 25 | Quarter Wave & Half Wave Plates and Problems | | |
| UNIT- II | **Lasers and Fiber Optics**<br>**CO2:** Explain various types of emission of radiation. Identify the role of laser in engineering applications. Identify the applications of optical fibers in medical, communication and other fields. Apply the fiber optic concepts in various fields. | From: 01-02-2021 To: 13-02-2021 | |
| 26 | **Lasers :** Introduction | | |
| 27 | Characteristics of Laser | | |
| 28 | Spontaneous and Stimulated emission | | |
| 29 | Einstein's Coefficients | | |
| 30 | Population Inversion, Lasing action | | |
| 31 | Pumping Mechanism-Pumping method | | |

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| 32 | Ruby Laser | | |
| 33 | Helium Neon Laser | | |
| 34 | Applications of Lasers | | |
| 35 | **Fiber Optics:** Introduction | | |
| 36 | Principle of Optical Fiber | | |
| 37 | Acceptance angle and Numerical Aperture | | |
| 38 | Classifications optical fibers based on refractive index profile and modes | | Lecture interspersed with discussions |
| 39 | Propagation of electromagnetic wave through optical fibers, applications | | |
| 40 | Problems | | |
| **UNIT -III** | **Quantum Mechanics, Free Electron Theory and Band theory**<br>**CO3:** Describe the dual nature of matter. Identify the role of Schrodinger's time independent wave equation in studying particle in one-dimensional infinite potential well. Identify the role of classical and quantum free electron theory in the study of electrical conductivity. | From: 22-02-2021 To 10-03-2021 | |
| 41 | **Quantum Mechanics:** Introduction | | |
| **42** | Dual Nature of Matter | | |
| 43 | Heisenberg's Uncertainty Principle, Significance and properties of wave function | | |
| 44 | Schrodinger Time Independent Equation | | |
| 45 | Schrodinger Time Dependent Equation | | |
| 46 | Particle in a Box | | |
| 47 | Problems | | Lecture interspersed with discussions |
| 48 | **Free Electron Theory:** Introduction | | |
| 49 | Classical free electron theory- merits and demerits | | |
| 50 | Quantum free electron theory- merits and demerits | | |
| **51** | Equation for electrical conductivity based on quantum free electron theory | | |
| 52 | Fermi-Dirac distribution, Fermi energy. | | |
| 53 | Density of states (3D) | | |
| 54 | Problems | | |
| 55 | **Band theory of Solids :**Introduction | | |
| 56 | Bloch's Theorem, Kronig - Penney model | | |
| 57 | E vs K diagram - v vs K diagram | | |
| 58 | Effective Mass of Electron, Concept of Hole | | |
| 59 | Energy Bands in Crystalline Solids Classification | | |
| **UNIT-IV** | **Dielectric and Magnetic Materials**<br>**CO4:** Explain the concept of dielectric constant and polarization in dielectric materials. Explain the applications of dielectric and magnetic materials . Apply the concept of magnetism to magnetic devices. | From 12-03-2021 To 25-03-2021 | |
| 60 | **Dielectric Materials:** Introduction, Dielectric polarization | | |
| 61 | Types of polarizations- Electronic polarisation | | |
| 62 | Ionic polarisation, Orientation polarizations | | Lecture interspersed with discussions |
| 63 | Lorentz internal field | | |
| 64 | Clausius-Mossotti equation, Piezoelectricity. | | |
| 65 | **Magnetic Materials:** Introduction | | |
| 66 | Magnetic dipole moment , Magnetization, Magnetic susceptibility and permeability | | |

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| 67 | Origin of permanent magnetic moment | | |
| 68 | Classification of magnetic materials: Dia, para, Ferro, antiferro and Ferri magnetic materials | | |
| 69 | Domain concept for Ferromagnetism, Domainwalls | | |
| 70 | Hysteresis soft and hard magnetic materials | | |
| 71 | Eddy currents, Engineering applications and Problems | | |
| **UNIT – V** | **Semiconductors and Superconductors**<br>**CO5:** Explain the properties of charge carriers in semiconductors . Identify the type of semiconductor using Hall effect . Identify applications of semiconductors in electronic devices. Explain Meissner's effect, BCS theory & Josephson effect in superconductors. | From 26-03-2021 To 03-04-2021 | Lecture interspersed with discussions |
| 72 | **Semiconductors:** Introduction, Intrinsic semiconductors | | |
| 73 | Density of charge carriers ,Electrical conductivity, Fermi level | | |
| 74 | Extrinsic semiconductors , density of charge carriers, Dependence of Fermi energy on carrier concentration and temperature | | |
| 75 | Drift and diffusion currents – Einstein's equation | | |
| 76 | Hall effect, Hall coefficient, Applications of Hall effect | | |
| 77 | **Superconductors**: Introduction – Properties of superconductors | | |
| 78 | Meissner effect , Type I and Type II superconductors | | |
| 70 | BCS theory , Josephson effects (AC and DC) | | |
| 80 | SQUID's – High Tc superconductors , Applications of superconductors | | |

M.V. Elizabeth
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