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| **MAHAMAYA INSTITUTE OF MEDICAL AND TECHNICAL SCIENCE, NUAPADA** |
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| **Discipline : ELECTRICAL ENGG.** | **Semester: 3th Sem** | **Name of the Teaching Faculty : ER. K.V. REDDY** |
| **Subject : EEM** | **No. of Days / per week class** **allotted : 04** | **Semester From date : 15.09.2022 To 22.12.2022****No. of Weesks : 14** |
| **Week**  | **Class Day**  |  **Topics**  |
| **1ST** | 1st | **Chapter 1 ( CONDUCTING MATERIAL )** 1. 1 Introduction  |
| 2nd | 1. 2 Resistivity, factors affecting resistivity  |
| 3rd | 1. 3 Classification of conducting materials into  |
| 4th | low-resistivity and high resistivity materials  |
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| **2ND** | 1st | 1. 4 Low Resistivity Materials  |
| 2nd | Application of copper |
| 3rd | Application of silver and gold |
| 4th | Application of lluminium and steel |
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| **3RD**  | 1st | 1. 5 Stranded conductors  |
| 2nd | 1. 6 Bundled conductors  |
| 3rd | 1. 7 Low resistivity copper alloys  |
| 4th | 1. 8 High Resistivity Materials and their Applications (Tungsten, Carbon, Platinum, Mercury)  |
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| **4TH**  | 1st | 1. 9 Superconductivity  |
| 2nd | 1. 10 Superconducting materials  |
| 3rd | 1. 11 Application of superconductor materials  |
| 4th | 1. 11 Application of superconductor materials  |
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| **5TH** | 1st | **SEMICONDUCTING MATERIAL(CHAPTER 2)** 2.1 Introduction |
| 2nd | 2. 2 Semiconductors 2.3Electron energy and Energy band theory |
| 3rd | 2. 4 Excitation of Atoms  |
| 4th | 1. 5 Insulators, Semiconductors and Conductors ,

2.6 Semiconductor Material |
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| **6TH** | 1st | 2. 7 Covalent Bonds 2.8  |
| 2nd | 2. 8 Intrinsic Semiconductors  |
| 3rd | 2. 9 Extrinsic Semiconductors 2. 10 N-Type Materials 2. 11 P-Type Materials  |
| 4th | 2. 12 Minority and Majority Carriers 2. 13 Semi-Conductor Materials  |
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| **7TH** | 1st | 2.14 Application of rectifier, photo conducting cell, photo voltaic cell , varisters  |
| 2nd | hall effect generator, solar power. |
| 3rd | **INSULATING MATERAL(CHAPTER 3)** 3.1 Introduction,general property of insulating material |
| 4th | electrical, visual, mechanical, thermal, chemical property, ageing |
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| **8TH** | 1st | 3.3 Insulating Materials – Classification, properties, applications  |
| 2nd | 3.3.1 Introduction  |
| 3rd | 3.3.2 Classification of insulating materials on the basis physical structure |
| 4th | chemical structure. |
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| **9TH** | 1st | 3.4 Insulating Gases  |
| 2nd | 3.4.1 Introduction.  |
| 3rd | 3.4.2 Commonly used insulating gases  |
| 4th | **DIELECTRIC MATERIAL(CHAPTER 4)** 4.1 Introduction |
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| **10TH** | 1st | 4.2 Dielectric Constant of Permittivity  |
| 2nd | 4.3 Polarization  |
| 3rd | 4.4 Dielectric Loss  |
| 4th | 4.5 Electric Conductivity of Dielectrics and their Break Down  |
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| **11TH** | 1st | 4.6 Properties of Dielectrics.  |
| 2nd | 4.7 Applications of Dielectrics  |
| 3rd | 4.7 Applications of Dielectrics  |
| 4th | **MAGNETIC MATERIAL(CHAPTER 5)** 5.1 Introduction |
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| **12TH** | 1st | 5.2 Classification 5.2.1 Diamagnetism  |
| 2nd | 5.2.2 Para magnetism  |
| 3rd | 5.2.3 Ferromagnetism 5.3 magnetization curve |
| 4th | 5.4 Hysteresis 5.5 Eddy current |
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| **13TH** | 1st | 5.6 Curie Point ,5.7 Magneto- striction  |
| 2nd  | 5.8 Soft and Hard magnetic Materials  |
| 3rd | 5.8.1 Soft magnetic materials 5.8.2 Hard magnetic materials  |
| 4th | **MATERIAL FOR SPECIAL PURPOSES(CHAPTER 6)** 6.1 Introduction |
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| **14TH** | 1st | 6.2 Structural Materials 6.3 Protective Materials |
| 2nd  | Lead Steel tapes, wires and strips 6.4 Other Materials |
| 3rd | Thermocouple materials, Bimetals, Soldering Materials |
| 4th | Fuse and Fuse materials, Dehydrating material |
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