**LESSON PLAN**

Name of faculty: Revti Raman

Discipline: ECE

Semester 5th

Subject : **Wireless and Mobile Communication**

Lesson plan duration : 15 Weeks

Work load (4lecture) per week (in hours) : 03 hrs(per Group)

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| week | Theory | Practical |
|  | Lecture day | Topic | Practical day | Topic |
| 1st | 1st | Basics about Wreless communication and its applications | 1st | Study the features, specification and working of cellular mobile |
| 2nd | Advantages of wireless communication |
| 3rd | Electromagnetic waves |
| 4th | Frequency Spectrum used |
| 2nd | 5th | Revision on application, advantage of wireless communication, electromagnetic waves, frequency spectrum used | 2nd | Study the features, specification and working of cellular Mobile |
| 6th | Paging system |
| 7th | Cordless Telephone System |
| 8th | Cordless Telephone System |
| 3rd | 9th | Cellular Telephone System | 3rd |  Signal strength measurement of various points from a transmitting antenna/cordless Phone |
| 10th | Cellular Telephone System |
| 11th | Comparison of above wireless communication systems |
| 12th | Revision/Doubts |
| 4th | 13th | Cellular Telephone System 1st Generation | 4th | Revision |
| 14th | Second Generation |
| 15th | Third Generation |
| 16th | Fourth Generation of cellular telephone system |
| 5th | 17th | REVISION /doubt//ASSIGNMENT | 5th | INTERNAL Practical Sessional Viva |
| 18th | Test of unit 1&2 |
|  | 19th | Cellular Concept ,Cell Area |
| 20th | Cellular Capacity ,Frequency reuse concept |
| 6th | 21st | Frequency reuse factor | 6th | Visit of MSC in the nearest M,S facility provider |
| 22th | Interference ,Adjacent channel Interference |
| 23rd | Co-channel Interference |
| 24th | Power Control for reducing Interference |
| 7th | 25th | Improving coverage and capacity in cellular system a) Cell Splitting | 7th | Demonstration of BTS with nearby Cellular TowerPairing of two devices using Bluetooth |
| 26th | b) Sectoring |
| 27th | c) Repeater for Range Extension |
| 28th | REVISION/DOUBT |
| 8th | 29th | Old Question Papers Questions | 8th | Observing call processing of GSM trainer  |
| 30th | Introduction to Multiple Accesses |
| 31st | Frequency Division Multiple Access (FDMA) |
| 32nd | Frequency Division Multiple Access (FDMA) : Features, No of Channel |
| 9th | 33rd | Time Division Multiple Access (TDMA) :Features | 9th |  Revision |
| 34th | Time Division Multiple Access (TDMA); Efficiency No. of Channel |
| 35th | Code Division Multiple Access (CDMA) |
| 36th | Code Division Multiple Access (CDMA) |
| 10th | 37th | Spread Spectrum Multiple Access (SSMA) | 10th | Observing call processing of CDMA trainer Kit |
| 38th | Spread Spectrum Multiple Access (SSMA) |
| 39th | Frequency Hopping spread Spectrum (FHSS) |
| 40th | Comparison of FDMA/TDMA/CDMA |
| 11th | 41st | REVISION/DOUBT/TEST/ASSIGNMENT-2 | 11th | Pairing of two devices using Bluetooth |
| 42nd | Test unit 2&3 |
| 43rd | Introduction of Global Systems for Mobile Communication (GSM)  |
| 44th |  GSM architecture, Services |
| 12th | 45th | Introduction of CDMA System | 12th | Pairing of two devices using Bluetooth |
| 46th | comparison of CDMA and GSM Systems |
| 47th | comparison of CDMA and GSM Systems |
| 48th | Introduction of GPRS System. |
| 13th | 49th | Introduction of GPS System. | 13th | Data transfer using WI-FI |
| 50th | Introduction to Blue tooth |
| 51st |  Introduction to Wi-Fi |
|  | 52nd | REVISON/DOUBT |
| 14th | 53rd | Introduction to digital &data communication System | 14th | Revision/uncovered practical if any |
| 54th | Basic block diagram of digital and data communication system |
| 55th | Advantage of digital Communication |
| 56th | comparison with analog communication systems |
| 15th | 57th | Revision/Doubts session/ /ASSIGNMENT-3 | 15th | Internal Viva |
| 58th | Test |
| 59th | Revision/Doubts session//OLD QUESTION PAPERS |

 **SESSIONAL TEST CONDUCTED AS PER HSBTE TIME TABLE/SYLLABUS**