

## LESSON PLAN

Name of Faculty : Sh. Sanjay Kumar

Discipline :ELECTRONICS & COMMUNICATION ENGG

Semester : 6th

Subject : Wireless & Mobile Communication

Work Load :

| Week | Lecture Day | Practicals Topic   | Week | Practical Day | Practicals Topic   |
|------|-------------|--|------|---------------|--|
| 1    | 1           | Overview of syllabus interconnect of various chapters to be covered in course. | 1    | G-1           | Discussion on concepts of cellular mobile, features & parameters etc.                    |
|      | 2           | Wireless communication system block diagram                                    |      | G-2           | Discussion on concepts of cellular mobile, features & parameters etc.                    |
|      | 3           | Functioning of various blocks  |      |               |  |
|      | 4           | Application of Wireless communication.   |      |               |  |
| 2    | 5           | <b>Electro-magnetic waves – spectrum</b>                                       | 2    | G-1           | Signal strength concept, transmitting antenna & cordless phone demonstration on kit      |
|      | 6           | Application of electromagnetic waves   |      | G-2           | Signal strength concept, transmitting antenna & cordless phone demonstration on kit      |
|      | 7           | Frequency used in wireless detailed study                                      |      |               |  |
|      | 8           | Posing system block diagram working.   |      |               |  |
| 3    | 9           | Cordless telephone system  | 3    | G-1           | Performance of practical by students, observing various readings                         |
|      | 10          | Cellular telephone system  |      | G-2           | Performance of practical by students, observing various readings                         |
|      | 11          | Comparison of all above wireless communication system                          |      |               |  |
|      | 12          | Generation evolution of mobile. Communication                                  |      |               |  |
| 4    | 13          | 2 <sup>nd</sup> generation of mobile communication                             | 4    | G-1           | Visit of MSC in Sonipat/Delhi Exchange   |
|      | 14          | 3 <sup>rd</sup> generation of mobile communication.                            |      | G-2           | Visit of MSC in Sonipat/Delhi Exchange   |
|      | 15          | 4 <sup>th</sup> generation and upcoming generation in mobile communication.    |      |               |  |
|      | 16          | Cell area, shape and reason for hexagonal shape                                |      |               |  |
| 5    | 17          | Capacity of cell   | 5    | G-1           | Demonstration of base trans receiver station with near by cellular tower                 |
|      | 18          | cluster and formula  |      | G-2           | Demonstration of base trans receiver station with near by cellular tower                 |
|      | 19          | Numericals on capacity of cell   |      |               |  |
|      | 20          | <b>Frequency reuse – numericals</b>  |      |               |  |
| 6    | 21          | Interference, type of interference   | 6    | G-1           | Vivo voice of practical's related to BTS   |
|      | 22          | Co channel interference  |      | G-2           | Vivo voice of practical's related to BTS   |
|      | 23          | Adjacent channel interference  |      |               |  |
|      | 24          | Cause of losses and ways to over come losses                                   |      |               |  |
| 7    | 25          | Power control for reducing interference  | 7    | G-1           | Concept of call processing, connection setup and establishment, channel allotment on kit |
|      | 26          | Numericals on power and loss consideration                                     |      |               |  |

|    |    |   |    |     |  |
|----|----|---|----|-----|--|
|    | 27 | Methods to improve converge and capacity in cellular system   |    | G-2 | Concept of call processing, connection setup and establishment, channel allotment on kit                 |
|    | 28 | cell splitting diagram  |    |     |  |
| 8  | 29 | Sectoring   | 8  | G-1 | Performance of practical's on gsm on kit by students   |
|    | 30 | Repeation and Rugeextension   |    |     |  |
|    | 31 | Concept of multiple access  |    | G-2 | Performance of practical's on gsm on kit by students   |
|    | 32 | Advantages and techniques   |    |     |  |
| 9  | 33 | FDMA, FDD, TDD scheme analysis  | 9  | G-1 | Concept of call processing on CDMA kit, connection setup establishment of channels. Demonstration on kit |
|    | 34 | TDMA advantages   |    |     |  |
|    | 35 | Frames in TDMA  |    | G-2 | Concept of call processing on CDMA kit, connection setup establishment of channels. Demonstration on kit |
|    | 36 | Timing diagram  |    |     |  |
| 10 | 37 | CDMA Code PN function sequence  | 10 | G-1 | Performance of practical's on CDMA kit by students & vivo voice preparation                              |
|    | 38 | SSMA  |    |     |  |
|    | 39 | FHSS  |    | G-2 | Performance of practical's on CDMA kit by students & vivo voice preparation                              |
|    | 40 | Camparison of SSMA amd FHSS   |    |     |  |
| 11 | 41 | Comparision of TDMA/FDMA/CDMA   | 11 | G-1 | Bluetooth technology concept and working demonstration of kit, vivo voice                                |
|    | 42 | Comparision of TDMA/FDMA/CDMA   |    |     |  |
|    | 43 | Introduction of global system for mobile communication (GSM)  |    | G-2 | Bluetooth technology concept and working demonstration of kit, vivo voice                                |
|    | 44 | Services and features of GSM,   |    |     |  |
| 12 | 45 | Architecture  | 12 | G-1 | Performance of practical's on Bluetooth technology kit   |
|    | 46 | Advantages of GSM   |    |     |  |
|    | 47 | architectue of CDMA   |    | G-2 | Performance of practical's on Bluetooth technology kit   |
|    | 48 | Different between GSM and CDMA  |    |     |  |
| 13 | 49 | CDMA structure  | 13 | G-1 | Concept of Wi-fi - technologies and working of Wi-fi systems, vivo voice                                 |
|    | 50 | GPRS  |    |     |  |
|    | 51 | GPS System  |    | G-2 | Concept of Wi-fi - technologies and working of Wi-fi systems, vivo voice                                 |
|    | 52 | Blue Tooth technology   |    |     |  |
| 14 | 53 | Wi-fi technology  | 14 |     | Performance of practical's by student on Wi-fi kit   |
|    | 54 | Discussion on problem of GSM and CDMA   |    |     |  |
|    | 55 | Block diagram of digital communication its working and detailed diagram.                            |    |     | Performance of practical's by student on Wi-fi kit   |
|    | 56 | Block diagram of data communication and function of each block                                      |    |     |  |
| 15 | 57 | Concept of data assembly communication system from with data and data digital communication system. | 15 |     | Revision on selected practical's   |
|    | 58 | concept of Analog Communication   |    |     |  |
|    | 59 | Concept of Digital Communication  |    |     | Revision on selected practical's   |
|    | 60 | Evolution of Data Communication   |    |     |  |



## LESSON PLAN

**Name of Faculty:** Mr. Sandeep  
**Discipline:** Civil Engg.  
**Semester:** 6<sup>th</sup>  
**Subject:** EDM  
**Lesson Plan Duration:** 16 weeks (from Jan, 2018 to April 2018)  
**Work load (Lecture /Practical) per week (in hours):** Lectures—03, Practical—00

| Week            | Theory      |  | Practical     |       |
|-----------------|-------------|--|---------------|-------|
|                 | Lecture Day | Topic (Including Assignment/ Test  | Practical Day | Topic |
| 1 <sup>st</sup> | 1           | Concept /Meaning and Its need  | 1             |       |
|                 | 2           | Qualities and Functions of an entrepreneur and Barriers in entrepreneurship                |               |       |
|                 | 3           | Sole proprietorship and Partnership forms of business organizations                        |               |       |
| 2 <sup>nd</sup> | 4           | Scheme of assistance by entrepreneurial Support agencies at National State, District Level | 2             |       |
|                 | 5           | Organization: NSIC, NRDC, DC   |               |       |
|                 | 6           | MSME, SIDBI, NABARD  |               |       |
| 3 <sup>rd</sup> | 7           | Commercial Banks,  | 3             |       |
|                 | 8           | SFC's, TCO,  |               |       |
|                 | 9           | KVIB   |               |       |
| 4 <sup>th</sup> | 10          | DIC , Technology business incubators   | 4             |       |
|                 | 11          | Science and technology entrepreneur parks  |               |       |
|                 | 12          | Scanning of the business environment   |               |       |
| 5 <sup>th</sup> | 13          | Salient features of National & State Indus. Policies                                       | 5             |       |
|                 | 14          | Resultant business opportunities   |               |       |
|                 | 15          | Types and Conduct of market survey   |               |       |
| 6 <sup>th</sup> | 16          | Assessment of demand   | 6             |       |
|                 | 17          | Supply in potential area of growth   |               |       |
|                 | 18          | Identifying business opportunity   |               |       |
| 7 <sup>th</sup> | 19          | -do-   | 7             |       |

|                  |    |  |    |  |
|------------------|----|--|----|--|
|                  | 20 | Considerations in product selection  |    |  |
|                  | 21 | -do-   |    |  |
| 8 <sup>th</sup>  | 22 | Preliminary project report   | 8  |  |
|                  | 23 | -do-   |    |  |
|                  | 24 | Detailed project report including technical  |    |  |
| 9 <sup>th</sup>  | 25 | Economic and market feasibility  | 9  |  |
|                  | 26 | Common errors in project report preparations   |    |  |
|                  | 27 | -do-   |    |  |
| 10 <sup>th</sup> | 28 | Exercises on preparation of project report   | 10 |  |
|                  | 29 | -do-   |    |  |
|                  | 30 | Definitions and importance of management   |    |  |
| 11 <sup>th</sup> | 31 | Functions of management: Importance and process of planning, organizing, staffing, directing and controlling   | 11 |  |
|                  | 32 | Principles of management, Concept and structure of an organization   |    |  |
|                  | 33 | Types of industrial organizations: Line Organization, Line and staff organization and Functional organization  |    |  |
| 12 <sup>th</sup> | 34 | Definition and Need<br>Qualities and functions of a leader   | 12 |  |
|                  | 35 | Manager Vs leader, Types of leadership   |    |  |
|                  | 36 | Motivation : Definitions and characteristics, Factors affecting motivation, Theories of motivation (Maslow, Herzberg, Douglas, McGregor)                 |    |  |
| 13 <sup>th</sup> | 37 | Management Scope in Different Areas Human Resource Management, Introduction and objective, Introduction to Man power planning, recruitment and selection | 13 |  |
|                  | 38 | Introduction to performance appraisal methods  |    |  |
|                  | 39 | Material and Store Management, Introduction functions, and objectives, ABC Analysis and EOQ  |    |  |
| 14 <sup>th</sup> | 40 | Marketing and sales, Introduction, importance, and its functions, Physical distribution  | 14 |  |
|                  | 41 | Introduction to promotion mix<br>Sales promotion   |    |  |
|                  | 42 | Financial Management, Introductions, importance and its functions, Elementary knowledge of income tax, sales tax, excise duty, custom duty and VAT       |    |  |

|                  |    |  |    |  |
|------------------|----|--|----|--|
| 15 <sup>th</sup> | 43 | Customer Relation Management (CRM)<br>Definition and need<br>Types of CRM  | 15 |  |
|                  | 44 | Total Quality Management (TQM)<br>Statistical process control<br>Total employees Involvement<br>Just in time (JIT)                           |    |  |
|                  | 45 | Intellectual Property Right (IPR)<br>Introductions, definition and its importance<br>Infringement related to patents, copy right, trade mark |    |  |

# LESSON PLAN

**Name of the Faculty** : Yet To be Assigned  
**Discipline** : Electronics and Communication Engineering  
**Semester** : 6<sup>th</sup>  
**Subject** : **Medical Electronics**  
**Lesson Plan Duration** : 15 weeks (from January, 2018 to April, 2018)

**Work Load (Lecture / Practical) per week (in hours):** Lectures-03, Practical-03

| Week            | Theory           |   | Practical       |   |
|-----------------|------------------|---|-----------------|---|
|                 | Lecture day      | Topic<br>(including assignment / test)  | Practical Day   | Topic   |
| 1 <sup>st</sup> | 1 <sup>st</sup>  | Introduction to Anatomy and Physiology  | 1 <sup>st</sup> | Operate and Feminization with B.P Apparatus and ECG Machine |
|                 | 2 <sup>nd</sup>  | Elementary ideas of Cell Structure  |                 |   |
|                 | 3 <sup>rd</sup>  | Heart and Circulatory System  |                 |   |
|                 | 4 <sup>th</sup>  | Central Nervous System  |                 |   |
| 2 <sup>nd</sup> | 5 <sup>th</sup>  | Muscle Action   | 2 <sup>nd</sup> | To measure the Concentration of Blood sugar with Glucometer |
|                 | 6 <sup>th</sup>  | Respiratory System  |                 |   |
|                 | 7 <sup>th</sup>  | Body temperature and Reproduction System  |                 |   |
|                 | 8 <sup>th</sup>  | Overview of Medical Electronics Equipments  |                 |   |
| 3 <sup>rd</sup> | 9 <sup>th</sup>  | Classification, application and specification of laboratory Equipments            | 3 <sup>rd</sup> | VIVA  |
|                 | 10 <sup>th</sup> | Classification, application and specification of therapeutic Equipments           |                 |   |
|                 | 11 <sup>th</sup> | Classification, application and specification of clinical Equipments              |                 |   |
|                 | 12 <sup>th</sup> | Method of operation of these instruments  |                 |   |
| 4 <sup>th</sup> | 13 <sup>th</sup> | Revision for 1 <sup>st</sup> Sessional, Classwork check and Assignment evaluation | 4 <sup>th</sup> | Measuring of Respiration Rate                               |
|                 | 14 <sup>th</sup> | Introduction to Electrodes  |                 |   |
|                 | 15 <sup>th</sup> | Bioelectric Signals   |                 |   |
|                 | 16 <sup>th</sup> | Bio electrodes  |                 |   |
| 5 <sup>th</sup> | 17 <sup>th</sup> | Electrode   | 5 <sup>th</sup> | VIVA  |
|                 | 18 <sup>th</sup> | Electrode Tissue Interface  |                 |   |
|                 | 19 <sup>th</sup> | Contact Impedance   |                 |   |
|                 | 20 <sup>th</sup> | Types of Electrodes   |                 |   |
| 6 <sup>th</sup> | 21 <sup>st</sup> | Electrodes used for ECG   | 6 <sup>th</sup> | Measuring of Pulse Rate                                     |
|                 | 22 <sup>nd</sup> | Electrodes used for EEG   |                 |   |
|                 | 23 <sup>rd</sup> | Introduction to Transducers   |                 |   |
|                 | 24 <sup>th</sup> | Typical Signals from Physiological Parameters                                     |                 |   |

|                  |                  |  |                  |  |
|------------------|------------------|--|------------------|--|
| 7 <sup>th</sup>  | 25 <sup>th</sup> | Concept of Pressure Transducer   | 7 <sup>th</sup>  | VIVA   |
|                  | 26 <sup>th</sup> | Concept of Flow Transducer   |                  |  |
|                  | 27 <sup>th</sup> | Concept of Temperature Transducer  |                  |  |
|                  | 28 <sup>th</sup> | Concept of Pulse Sensor  |                  |  |
| 8 <sup>th</sup>  | 29 <sup>th</sup> | Study of Respiration Sensor  | 8 <sup>th</sup>  | Study of Large Medical Equipments in Hospitals                             |
|                  | 30 <sup>th</sup> | Introduction to Biomedical Recorders   |                  |  |
|                  | 31 <sup>st</sup> | ECG Machine and its diagram description and application                            |                  |  |
|                  | 32 <sup>nd</sup> | EEG Machine and its diagram description and application                            |                  |  |
| 9 <sup>th</sup>  | 33 <sup>rd</sup> | EMG Machine and its diagram description and application                            | 9 <sup>th</sup>  | VIVA   |
|                  | 34 <sup>th</sup> | Sessional 2 <sup>nd</sup> , revision , Classwork check and assignment evaluation   |                  |  |
|                  | 35 <sup>th</sup> | Introduction to Patient Monitoring System  |                  |  |
|                  | 36 <sup>th</sup> | Heart rate Measurement   |                  |  |
| 10 <sup>th</sup> | 37 <sup>th</sup> | Pulse rate Measurement   | 10 <sup>th</sup> | Installation of Small Medical Equipments in Hospitals                      |
|                  | 38 <sup>th</sup> | Respiration rate Measurement   |                  |  |
|                  | 39 <sup>th</sup> | Blood Pressure Measurement   |                  |  |
|                  | 40 <sup>th</sup> | Principle of defibrillator and Pace Mark   |                  |  |
| 11 <sup>th</sup> | 41 <sup>st</sup> | Use of Microprocessor in Patient Monitoring  | 11 <sup>th</sup> | VIVA   |
|                  | 42 <sup>nd</sup> | Blood Sugar Measurement  |                  |  |
|                  | 43 <sup>rd</sup> | Study of Safety Aspects of Medical Instruments                                     |                  |  |
|                  | 44 <sup>th</sup> | Concept of Gross current Shock   |                  |  |
| 12 <sup>th</sup> | 45 <sup>th</sup> | Concept of Micro current Shock   | 12 <sup>th</sup> | Operation and use of Electro-physiotherapy                                 |
|                  | 46 <sup>th</sup> | Study about special design from safety consideration                               |                  |  |
|                  | 47 <sup>th</sup> | Concept of Safety Standards  |                  |  |
|                  | 48 <sup>th</sup> | Revision of Monitoring System for Various Measurements                             |                  |  |
| 13 <sup>th</sup> | 49 <sup>th</sup> | Instrumentation Handling Methods   | 13 <sup>th</sup> | VIVA   |
|                  | 50 <sup>th</sup> | Revision for 3 <sup>rd</sup> Sessional , Classwork check and Assignment evaluation |                  |  |
|                  | 51 <sup>st</sup> | Classwork check  |                  |  |
|                  | 52 <sup>nd</sup> | Assignment Evaluation  |                  |  |
| 14 <sup>th</sup> | 53 <sup>rd</sup> | Revision of full syllabus  | 14 <sup>th</sup> | Maintenance Schedule for different equipment and their records in Hospital |
|                  | 54 <sup>th</sup> | Old question papers Solved   |                  |  |
|                  | 55 <sup>th</sup> | Final question Answers Evaluation from students                                    |                  |  |
|                  | 56 <sup>th</sup> | Examination Attemptation Techniques  |                  |  |
| 15 <sup>th</sup> | 57 <sup>rd</sup> | Revision of full syllabus  | 15 <sup>th</sup> | VIVA   |
|                  | 58 <sup>th</sup> | Old question papers Solved   |                  |  |
|                  | 59 <sup>th</sup> | Final question Answers Evaluation from students                                    |                  |  |
|                  | 60 <sup>th</sup> | Examination Attemptation Techniques  |                  |  |



**Name of the Faculty** : Mr. Kiran Kumar (Theory, Practical)

**Discipline** : (Elex & Comm. Engineering)

**Semester** : 6<sup>TH</sup>

**Subject** : Maintenance Of Computer System

**Lesson plan Duration** : 15 Week (from January, 2018)

**Workload per week in hours** : Lectures-04, Practicals-03

| Week            | Theory      |   | Practical       |  |
|-----------------|-------------|---|-----------------|--|
|                 | Lecture Day | Topic(including assignment test)                                  | Practical Day   | Topic  |
| 1 <sup>st</sup> | 1           | Introduction about subject  | 1 <sup>st</sup> | Introduction about Practical of MOCS                                 |
|                 | 2           | Introduction about Mother Board                                   |                 |  |
|                 | 3           | Introduction to different type of mother boards                   |                 |  |
|                 | 4           | Single Board Based System   |                 |  |
| 2 <sup>ND</sup> | 5           | Block diagram of motherboard                                      | 2 <sup>ND</sup> | Monitors (LCD and LED)   |
|                 | 6           | Installation of Computer System                                   |                 |  |
|                 | 7           | Revision & Assignment   |                 |  |
|                 | 8           | Buses and Ports   |                 |  |
| 3 <sup>RD</sup> | 9           | Different type of Buses   | 3 <sup>RD</sup> | HDD, Partitioning and Formatting                                     |
|                 | 10          | PCI Local Buses   |                 |  |
|                 | 11          | SCSI Buses  |                 |  |
|                 | 12          | Serial and Parallel ports (COM ports) Ports COM1                  |                 |  |
| 4 <sup>TH</sup> | 13          | Basic of LPTI, USB  | 4 <sup>TH</sup> | DOT Matrix Printer   |
|                 | 14          | Basic of RS 232 C,  |                 |  |
|                 | 15          | Use of computer for instrumentation                               |                 |  |
|                 | 16          | Introduction of Memory  |                 |  |
| 5 <sup>TH</sup> | 17          | Principle and construction of Hard Disk Drive (HDD).              | 5 <sup>TH</sup> | Laser Printer  |
|                 | 18          | Floppy Disk Controller & Hard Disk                                |                 |  |
|                 | 19          | Basic of Controller   |                 |  |
|                 | 20          | Pen Drives, common faults with hard disk drive floppy disk drive, |                 |  |
| 6 <sup>TH</sup> | 21          | Test & Revision   | 6 <sup>TH</sup> | Mother board based on latest microprocessor and chipset CMOS Set up. |
|                 | 22          | Keyboard and Mouse  |                 |  |
|                 | 23          | Block Diagram of keyboard Controller                              |                 |  |
|                 | 24          | Keyboard switches   |                 |  |
| 7 <sup>TH</sup> | 25          | Keyboard faults   | 7 <sup>TH</sup> | DVD-ROM/DVD Writer   |
|                 | 26          | Mouse,common faults with mouse                                    |                 |  |

|                  |    |  |                  |  |
|------------------|----|--|------------------|--|
|                  | 27 | Basic of optical mouse                                       |                  |  |
|                  | 28 | Introduction to scanner                                      |                  |  |
| 8 <sup>TH</sup>  | 29 | Introduction to digitizer                                    | 8 <sup>TH</sup>  | Connectors and Cables                        |
|                  | 30 | CRT Display Devices  |                  |  |
|                  | 31 | Block Diagram of Computer Monitor.                           |                  |  |
|                  | 32 | Principle of operation of Computer Monitor                   |                  |  |
| 9 <sup>TH</sup>  | 33 | Principle of operation of Computer Monitor                   | 9 <sup>TH</sup>  | MODEM/ROUTER/<br>SWITCH                      |
|                  | 34 | Difference between TV and Computer Monitor.                  |                  |  |
|                  | 35 | Video display Adaptors (monochrome and Colour).              |                  |  |
|                  | 36 | Introduction to solid state displays                         |                  |  |
| 10 <sup>TH</sup> | 37 | Assignment   | 10 <sup>TH</sup> | Installation of any operating system.        |
|                  | 38 | REVISION   |                  |  |
|                  | 39 | REVISION   |                  |  |
|                  | 40 | <b>Test</b>  |                  |  |
| 11 <sup>TH</sup> | 41 | Basic of Printers  | 11 <sup>TH</sup> | Establish LAN,WLAN, using Networking Devices |
|                  | 42 | Printing Mechanism   |                  |  |
|                  | 43 | Construction and working principles of Dot Matrix Printer.   |                  |  |
|                  | 44 | Construction and working principles of Inkjet Printer.       |                  |  |
| 12 <sup>TH</sup> | 45 | Construction and working principles of Laser Printer,Printer | 12 <sup>TH</sup> | Study of LAPTOP, IPAD, Smart Phone           |
|                  | 46 | Controller.  |                  |  |
|                  | 47 | Centronics Interface.  |                  |  |
|                  | 48 | Signals from PC to Printer and Printer to PC.                |                  |  |
| 13 <sup>TH</sup> | 49 | Networking Devices   | 13 <sup>TH</sup> | Revision & Viva                              |
|                  | 50 | Basic of LAN, WAN,   |                  |  |
|                  | 51 | Basic of Wi-Fi, WLAN   |                  |  |
|                  | 52 | Basic of ROUTER,   |                  |  |
| 14 <sup>TH</sup> | 53 | Basic of SWITCH, HUB   | 14 <sup>TH</sup> | Revision & Viva                              |
|                  | 54 | Modems: Need and functions of modems.                        |                  |  |
|                  | 55 | Need and functions of modems Laptop.                         |                  |  |
|                  | 56 | Applications of Laptop and MODEM.                            |                  |  |
| 15 <sup>TH</sup> | 57 | Revision   | 15 <sup>TH</sup> | Revision & Viva                              |
|                  | 58 | Assignment   |                  |  |
|                  | 59 | Revision   |                  |  |
|                  | 60 | <b>Test &amp; Revision</b>                                   |                  |  |