Lesson Plan

Name of faculty : Sita Devi

Discipline : Electrical Engineering

Semester : 5th

Subject : Electronic Measurement & Instruments

Lesson plan duration: 15 weeks

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| **Theory** |
| **Week** | **Lecture**  | **Topic (Including Assignment / Test) : Planned** | **Actually covered on (date)** |
| 1st | 1 | Introduction to CRO |  |
| 2 | Introduction to cathode Ray Tube (CRT)  |  |
| 3 | Electron Gun |  |
| 4 | Electrostatic focussing  |  |
| 2nd | 5 | Electrostatic Deflection, it's limitations & Applications  |  |
| 6 | Sampling & Storage CRO |  |
| 7 | Introduction to digital CRO |  |
| 8 | Introduction to amplifier measurements  |  |
| 3rd | 9 | Measurement of noise figure of amplifier  |  |
| 10 | Measurement of op-amp parameters  |  |
| 11 | Instruments for measurement of voltage  |  |
| 12 | Instruments for measurement of current & other parameters  |  |
| 4th | 13 | R. F. Power measurements  |  |
| 14 | Introduction to digital meters |  |
| 15 | Introduction to digital indicating instruments  |  |
| 16 | Comparison with analog type digital display methods |  |
| 5th | 17 | Theory and application of digital voltmeters |  |
| 18 | Introduction to electronic galvanometers  |  |
| 19 | Introduction to Q-meter |  |
| 20 | Study of decade counting assembly (DCA)  |  |
| 6th | 21 | Measurements of frequency using cavity wave meter |  |
| 22 | Introduction to Heterodyne frequency meter  |  |
| 23 | Introduction to digital frequency meter |  |
| 24 | Instruments for measurement of power  |  |
| **7th** |  | **1st Sessionals** |  |
| 8th  | 25 | Discussion on 1st sessional  |  |
| 26 | Instrument for measurement of energy  |  |
| 27 |  Comparison of digital instruments with analog type instruments  |  |
| 28 | Introduction to digital display method |  |
| 9th | 29 | Introduction to transducer  |  |
| 30 | Classification of transducer  |  |
| 31 | Introduction to photocell  |  |
| 32 | Introduction to thermocouple  |  |
| 10th | 33 | Scheme of measurement of displacement  |  |
| 34 | Measurement of velocity  |  |
| 35 | Measurement of acceleration  |  |
| 36 | Measurement of strain |  |
| 11th | 37 | Measurement of pressure  |  |
| 38 | Measurement of temperature  |  |
| 39 | Measurement of liquid level |  |
| 40 | Introduction to signal conditioning  |  |
| 12th | 41 | Introduction to acquisition system  |  |
| 42 | DC & AC signal conditioning  |  |
| 43 | Introduction to analog to digital converter  |  |
| 44 | Introduction to digital to analog converter  |  |
| 13th | 45 | Use of op-amp in signal conditioning  |  |
| 46 | Basic component of analog and digital data acquisition system  |  |
| 47 | Introduction to square wave and pulse generators  |  |
| 48 | Introduction to function generator  |  |
| **14th** |  | **2nd Sessionals** |  |
| 15th | 49 | Introduction to random noise generator  |  |
|  | 50 | Introduction for frequency synthesizer  |  |
|  | 51 | Introduction to nixie tube, LED |  |
|  | 52 | Introduction to display device LCD, discharge device  |  |