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 |  |