# Lesson Plan

Nameof Faculty : Paritosh Parashar

Discipline : Electronics & Comm. Engg. Semester : 5th SEM

Subject : AUDIO VIDEO SYSTEMS

Lesson Plan Duration : 16 weeks

Work load (Lecture /Practical) per week (in hours): Lectures—03, Practical—02

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Week** | **Lecture Day** | **Theory** | **Practical** | |
| **Topic (Including Assignment/ Test)** | **Practical Day** | **Topic** |
| 1st | 1 | Introduction to Audio Systems | 1st | Introduction to AVS Lab |
| 2 | Overview of Microphones |
| 3 | Carbon Microphone |
| 2nd | 4 | Moving coil Microphones | 2nd | To plot the directional response of a Microphone |
| 5 | Cordless microphone |
| 6 | Overview of Loudspeakers |
| 3rd | 7 | Direct radiating Loudspeaker | 3rd | To plot the directional response of a Microphone |
| 8 | Horne loudspeaker |
| 9 | Multi-speaker system |
| 4th | 10 | Optical Sound recording | 4th | To plot the directional response of a Loud Speaker |
| 11 | Assignment |
| 12 | Introduction to Digital Audio Fundamentals |
| 5th | 13 | Audio as Data | 5th | To plot the directional response of a Loud Speaker |
| 14 | Audio as Signal |
| 15 | Digital Audio Processes Outlined |
| 6th | 16 | Digital Audio Processes Outlined | 6th | To study public address system and its components |
| 17 | Time Compression & Time Expansion |
| 18 | Assignment |
| 7th | 19 | Elements of TV communication system | 7th | To study public address system and its components |
| 20 | Scanning and its need |
| 21 | Need of synchronizing and blanking pulses |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 8th | 22 | VSB, Composite Video Signal | 8th | To test color TV using pattern generator |
| 23 | Assignment |
| 24 | In Colour Television Primary, secondary colours |
| 9th | 25 | Concept of Colour Mixing | 9th | To test color TV using pattern generator |
| 26 | Colour Triangle |
| 27 | Camera tube |
| 10th | 28 | PAL TV Receiver | 10th | To perform fault identification in Colour TV |
| 29 | NTSC, PAL, SECAM ( brief comparison) |
| 30 | Assignment |
| 11th | 31 | Test | 11th | To perform fault identification in Colour TV |
| 32 | Introduction to Digital Video |
| 33 | RGB and YUV Representation of Video Signals |
| 12th | 34 | Need for Compression | 12th | Installation of Dish Antenna for best reception. |
| 35 | How compression works |
| 36 | Compression formats for video |
| 13th | 37 | MPEG-x Format, H.26x format | 13th | Installation of Dish Antenna for best reception. |
| 38 | Assignment |
| 39 | Digital satellite television |
| 14th | 40 | Direct-To-Home(DTH) satellite television | 14th | Installation of CCTV system |
| 41 | Digital Terrestrial Television(DTT) |
| 42 | Introduction to Video on demand |
| 15th | 43 | CCTV, CATV with optical fibre | 15th | Installation of CCTV system |
| 44 | Basic block diagram of LCD |
| 45 | Basic block diagram of LED |
| 16th | 46 | Comparison of LCD and LED | 16th | Revision |
| 47 | Assignment |
| 48 | Revision |