**GOVERNMENT POLYTECHNIC, MANESAR**

**LESSON PLAN**

**NAME OF THE FACULTY** : - Ms. MANJU

**DISCIPLINE** : - ECE

**SEMESTER** : - 5th

**SUBJECT** : - AUDIO VIDEO SYSTEMS

**LESSON PLAN DURATION** : - 15 weeks ( September to December 2020)

WORK LOAD (LECTURE/PRACTICAL) PER WEEK (IN HOURS):- Lecture-**03**, Practical-**03**

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| **Week** | **THEORY** | | **PRACTICAL** | |
| **Lecture Day** | **Topic**  **(Including assignment/test)** | **Practical Day** | **Topic** |
| 1st | 1st | 1. Introduction of Audio Systems | 1st Group | Introduction about practical |
| 2nd | a) Microphones  Carbon microphone |  |  |
| 3rd | Movingcoil microphone | 2ndGroup | Introduction about Practical |
| 2nd | 4th | Cordlessmicrophone | 1stGroup | To plot the directional response of a Microphone |
| 5th | b) Loudspeakers  Direct radiating |  |
| 6th | Horn loudspeaker | 2ndGroup | To plot the directional response of a Microphone |
| 3rd | 7th | c) Multi-speaker system | 1st Group | To plot the directional response of a Loud Speaker |
| 8th | d)Optical Sound recording |  |  |
| 9th | 2. Digital Audio Fundamentals  Audio as Data | 2nd Group | To plot the directional response of a Loud Speaker |
| 4th | 10th | Audio as Signal | 1st Group | To study public address system and its components. |
| 11th | Digital Audio Processes outlined |  |  |
| 12th | Time compression | 2nd Group | To study public address system and its components. |
| 5th | 13th | Time Expansion | 1st Group | Revision |
| 14th | **Assignment-1** |  |  |
| 15th | **Sessional-1** | 2nd Group | Revision |
| 6th | 16th | **3. Television**  a) Basics of Television | 1st Group | To test color TV using pattern generator. |
| 17th | Elements of TV communication system | 2nd Group | To test color TV using pattern generator. |
| 18th | Scanning and its need |
| 7th | 19th | Need of synchronizing and blanking pulses, | 1st Group | To perform fault identification in Colour TV. |
| 20th | VSB |  |  |
| 21th | Composite Video Signal | 2nd Group | To perform fault identification in Colour TV. |
| 8th | 22nd | b) Colour Television  Primary, Secondary colours | 1st Group | Revision |
| 23rd | Concept of Mixing, Colour Triangle |  |  |
| 24th | Camera tube | 2nd Group | Revision |
| 9th | 25th | PAL TV Receiver | 1st Group | To perform fault identification in Colour TV. |
| 26th | NTSC, PAL, SECAM ( brief comparison) |  |  |
| 27th | 4) Digital Video, Compression Techniques and Standards  Digital Video | 2nd Group | To perform fault identification in Colour TV. |
| 10th | 28th | The RGB and YUV Representation of Video Signals | 1st Group | Revision |
| 29th | The Need for Compression and How compression works |  |  |
| 30th | Compression formats for video - MPEG-x , H.26x format | 2nd Group | Revision |
| 11th | 31st | **Assignment-2** | 1st Group | Revision |
| 32nd | **Sessional Test-2** |  |  |
| 33rd | 5) Digital Television-Transmission and Reception | 2nd Group | Revision |
| 12th | 34th | Digital satellite television | 1st Group | Installation of Dish Antenna for best reception. |
| 35th | Direct-To-Home(DTH)satellite television, |
| 36th | Digital Terrestrial Television(DTT) | 2nd Group | Installation of Dish Antenna for best reception. |
| 13th | 37th | Introduction to :Video on demand, | 1st Group | Installation of CCTV system. |
| 38th | CCTV |  |  |
| 39th | CATV with optical fibre. | 2nd Group | Installation of CCTV system. |
| 14th | 40th | 6) Introduction to Liquid Crystal Televisions | 1st Group | Revision |
| 41st | Introduction to LED Screen Televisions |  |  |
| 42nd | Basic block diagram of LCD | 2nd Group | Revision |
| 15th | 43rd | Basic block diagram of LED Television and their comparison | 1st Group | Viva |
| 44th | **Assignment-3** |  |  |
| 45th | **Sessional Test-3** | 2nd Group | Viva |