

**1****MEASUREMENT OF SOUND**

(Based on Lesson-1, 2)

INTRODUCTION

In your study of theoretical lesson on measurement of sound, you have studied about units of sound i.e. decibels and sound pressure levels that are commonly used to measure the sound levels of any programme. You have also studied about the concept of various sound characteristics such as loudness, frequency, pitch and dynamic range. Now in this practical session, you will get an opportunity to actually observe and learn about the importance and significance of these properties of sound waves and how the human ear perceives them. Following four activities are to be carried out in this lesson:

- (i) Make a list of every day sound levels in terms of dB.
- (ii) Listen to a pitch of one octave above and below in harmonium.
- (iii) Record different types of sound on your mobile (audio recorder if available) and check up its playback.
- (iv) Listen to different levels of sound and see its level on Vu meter in audio console

ACTIVITY-I

AIM

Make a list of everyday listened sound levels in terms of dB.

OBJECTIVES

At the conclusion of this activity you will be able to:

- Understand the concept of threshold of hearing.



Notes

- Identify the range of sound levels of various sounds which are encountered in our daily life.
- Understand the significance of these levels which dictate the settings of controls on recording equipments during programme production activities.

RESOURCES/TOOLS REQUIRED

- Reference books/internet sources giving the sound levels of everyday activities.
- Knowledge of the terms 'Threshold of hearing' and dB levels.

PROCEDURE

From the text of your lesson 2 or from other reference books or from internet sources make a list of sound levels (in decibels with respect to threshold of hearing) of following everyday activities in the format given below.

Note: Take threshold of hearing as 0 db reference and write all other average sound levels higher than threshold in dB.

Sl. No.	Activity	Sound levels in dB threshold
1	Threshold of hearing	0 dB
2	Virtual silence/Studio without any activity	
3	Quiet room	
4	Tickling sound of a watch at 3 feet	
5	Quiet street	
6	Average home	
7	Quiet conversation	
8	Loud conversation	
9	Door slamming	
10	Busy typing Room	
11	Near loud motor horn	
12	Sound level of a diesel truck 10 m away	
13	Threshold of discomfort	
14	Jet Aircraft taking off/landing (at 50 m distance)	
15	Threshold of pain	



Notes

RESULT/CONCLUSION

Write down summary of your observations on these sound levels briefly mentioning how your ear responds to them.

ACTIVITY-II

AIM

Listen to a pitch of 1 Octave above and below in harmonium

OBJECTIVES

At the conclusion of this activity you will be able to:

- Understand pitch-distance relationship of a harmonium
- Understand and explain the terms frequency, pitch and loudness as perceived by human ear.

RESOURCES/TOOLS REQUIRED

- (i) Studio set up
- (ii) Harmonium with a player
- iii) Listening and recording facility.

PROCEDURE

- (i) Visit a sound studio and listen to playing of harmonium.
- (ii) Listen to the pitch of sound produced by pressing first key of middle octave (Madh or Octave 2)
- (iii) Press first key one octave above (octave 3) and listen to its pitch
- (iv) Press first key of one octave below (Octave 1) and listen to its pitch.
- (v) Repeat the experiment 2-3 times.
- (vi) Differentiate between the pitches observed in each case.
- (vii) Note down your observations on difference in pitch in the given format.

OBSERVATIONS/TABULATION OF RESULTS

Sl. No.	Pitch of Harmonium	Observations
1	Middle Octave	
2	One Octave above	
3	One Octave below	



Notes

RESULT/CONCLUSION

Summarize your observations on the Activity-II

ACTIVITY-III

AIM

Record different type of sound on your mobile (or audio recorder if available) and check up its play back

OBJECTIVE

At the conclusion of this activity you will be able to:

- Differentiate the frequency, pitch and loudness between different type of sounds.
- Judge the difference in quality heard during recording and play back.
- Feel the effect of background noise especially if you have done outside or field recording.
- Judge the quality or playback response of mobile or audio recorder.

RESOURCES/TOOLS REQUIRED

- (i) Availability of different sound clips or music from different instruments.
- (ii) Field recording of talk, music, singing of birds, clapping or whistling sounds.
- (iii) Recording and play back facility such as mobile or audio recorder.

PROCEDURE

- (i) Record different type of sounds such as clapping, tabla, whistle, flute, piano, talk or singing of birds.
- (ii) Observe the quality of playback of each sound with respect to level, frequency, pitch and background noise.
- (iii) Note down your observations in the format given.

PRECAUTIONS

- (i) Select the type of sound at a sufficient level to record.
- (ii) Place the recorder/mobile in such a way as to get maximum level.
- (iii) Record in a room with no background noise.



Notes

OBSERVATIONS/TABULATION OF RESULTS

S. No.	Type of sound recorded	Observations on playback
1		
2		
3		
4		

RESULT/CONCLUSION

Summarize your observations about this activity.

ACTIVITY-IV

Listen to different levels of sound and see its level in Vu meter on audio Console.

OBJECTIVES

At the conclusion of this activity you will be able to:

- (i) Get an idea of particular sound level as heard by your ear and its corresponding level in VU meter.
- (ii) Judge how your ear perceives to different sound levels at different frequencies.
- (iii) Understand the concept of pitch by listening same frequency at different levels.
- (iv) Understand the concept of threshold of hearing and threshold of pain.

RESOURCES/TOOLS REQUIRED

Sound studio setup with

- (i) Audio console with PPM/VU meter.
- (ii) Audio oscillator capable of generating audio frequencies at varying levels.
- (iii) Good quality loudspeaker for listening to different sound levels.



PROCEDURE

- (i) Visit to a sound studio having audio oscillator, loudspeaker and audio console.
- (ii) Make the setup with the help of the studio in-charge or site engineer.
- (iii) Set the audio oscillator initially at 1 KHz frequency.
- (iv) Set the audio oscillator output at very low level (inaudible level).
- (v) Listen what your ears feel.
- (vi) Measure the level with Vu meter provided on audio console. Note the reading.
- (vii) Gradually increase audio level in steps and listen recording your observations at each step till your ears feel uncomfortable. Measure the audio level with Vu meter at each step and record the reading.
- (viii) Repeat the experiment (steps iii to vii) with low frequency say 100 Hz and record the observations and Vu meter readings in each case.
- (ix) Repeat the experiment (steps iii to vii) with high frequency say 10 KHz and record the observations and Vu meter readings.
- (x) Note down these details in the format given

PRECAUTIONS

- (i) During your visit to the sound recording studio take care to observe the safety precautions you have learnt earlier and do not disturb or fiddle with the setup or equipment without permission of the studio in charge.
- (ii) Observe discipline and do not disturb during recording
- (iii) Follow instructions of your coordinator and be polite in your interaction with the staff there.
- (iv) Do not increase the levels suddenly. Go to minimum level and then increase gradually in steps.
- (v) Do not increase the sound levels beyond uncomfortable levels.

OBSERVATIONS/TABULATION OF RESULTS

Based on your listening observations of various sound levels note down the corresponding Vu readings in the format as given below:



Notes

Sl. No.	Comfort of sound level as perceived by ear.	Corresponding VU meter readings (in dB)		
		100 Hz	1 KHz	10 KHz
1	Inaudible			
2	Threshold of hearing			
3	Low (soft) level			
4	Average level			
5	High level			
6	Uncomfortable level			

RESULT/CONCLUSION

Summarise your observations about this activity.



2

FUNDAMENTALS OF SOUND TECHNOLOGY

(Based on Lesson-3)

INTRODUCTION

In your study of theoretical lesson on fundamentals of sound technology, you have studied about analog and digital signals. You also studied about converters which convert audio signals to digital and vice versa. Now in this practical session you will get an opportunity to actually convert analog audio file to a digital format using different sample rates and listen to the difference in quality. You will also understand the process of studio and field recording with necessary precautions involved in each case. Following two activities are to be carried out in this lesson:

- (i) Go to a studio with one audio file of about 5 minutes length and convert audio in different sample rates and listen to the difference in quality.
- (ii) Understanding studio recording and field recording process.

ACTIVITY-I

AIM

Go to a studio with one audio file of about 5 minutes length and convert audio in different sample rates and listen to the difference in quality. Note down your observations.

OBJECTIVES

At the conclusion of this activity you will be able to:

- (i) Learn the different sample rates normally used for converting analog to digital programmes.



- (ii) Visualize difference in quality by converting analog file to digital with different sample rates.
- (iii) Learn the necessity of minimum sampling rate required for recording audio frequency range (20 Hz to 20 KZ).
- (iv) Effect of using lower or higher sampling rates.

RESOURCES/TOOLS REQUIRED

- (i) Sound studio setup with Digital Audio Work station having facility to select different sampling rates.
- (ii) One audio file of 5 minutes length.
- (iii) Playback and listening facility.

PROCEDURE

- (i) Visit a sound studio with audio file of 5 minutes length.
- (ii) With the help of a studio in-charge make a set up to convert the audio file to digital files using different sample rates.
- (iii) Adjust all controls for optimum setting for recording.
- (iv) Play the original audio file and note down your observations on quality and bandwidth.
- (v) Select the different sample rates one by one and record the files.
- (vi) Play back each file and record your observations on quality of each.
- (vii) Note down these details in the format given.

PRECAUTIONS

- (i) During your visit to the sound recording studio take care to observe the safety precautions you have learnt earlier and do not disturb or fiddle with the setup or equipment without permission of the studio in charge.
- (ii) Observe discipline and do not disturb during recording
- (iii) Follow instructions of your coordinator and be polite in your interaction with the staff there

OBSERVATIONS/TABULATION OF RESULTS

Tabulate your observations on recording the audio file with different sampling rates (whatever possible at the station) keeping the effect on quality in your mind.



Notes

Sl. No	Sampling Rate	Observations
1	16 KHz	
2	32 KHz	
3	44.1KHz	
4	48 KHz	
5	88.2 KHz	
6	96 KHz	

RESULT/CONCLUSION

Write down summary of your observations about the Activity-I

ACTIVITY-II

Understanding studio recording and field recording process.

OBJECTIVES

At the conclusion of this activity you will be able to:

- (i) Learn the process/procedure to be followed while recording programmes in studio or in field.
- (ii) Learn the instructions in handling the recording equipments in studio and field recording.
- (iii) List the precautions to be taken in handling of different recording equipments

RESOURCES/TOOLS REQUIRED

- (i) Sound studio setup with recording consoles/Recorders.
- (ii) Portable (battery operated) field recorders.
- (iii) Different types of microphones, cables with connectors and accessories.

PROCEDURE

A. Studio recording Process

- (i) Visit a sound studio and observe the recording engineer doing the recording in studio and understand the process.



- (ii) Study the interconnections of different microphones in the recording studio and control booth.
- (iii) Check/enquire about the method for supplying phantom power supply to the condenser microphones if used.
- (iv) Check the settings of various gain controls and faders provided on the Audio console/Mixer and the recorders.
- (v) Check the Audio chain alignment by feeding 1KHZ tone and adjusting the output at 0 VU on PPM/VU meter.
- (vi) Check the test signal recording from each instrument and the artists.
- (vii) Adjust the gain controls for optimum recording levels.
- (viii) After completing the adjustment, have a test drill for recording.
- (ix) Play back the test recording and do fine adjustments if required.
- (x) Start actual recording.
- (xi) Replay and listen the recordings to ensure good quality.
- (xii) Note down these steps and your observations in the format given.

PRECAUTIONS

- (i) During your visit to a sound recording studio take care to observe the safety precautions you have learnt earlier and do not disturb or fiddle with the setup or equipment without permission of the studio in charge.
- (ii) Observe discipline and do not disturb during recording
- (iii) Follow instructions of your coordinator and be polite in your interaction with the staff there

B. Field Recording

There are number of instances where you have to record some special events/functions outside the studios. As you are aware that ambient noise level outside the studio is quiet higher than studio you have to take special care in such field recordings.

RESOURCES/TOOLS REQUIRED

1. Good quality Portable Field recorders (Two sets) or lap tops.
2. Good quality highly directional microphones with wind shields.
3. Cables fitted with appropriate connectors.
4. A spare set of batteries or cells.



Notes

PROCEDURE

- (i) Check all the equipments, cables and connectors before moving out of studio for field recording.
- (ii) Learn about all controls and settings of portable field recorder.
- (iii) Have a test recording drill to ensure everything is working ok.
- (iv) Be careful in placement of microphones.

OBSERVATIONS/TABULATION OF RESULTS

Based on your visit and your observations:

- (i) Draw a block schematic showing the inter connection of various components used for recording in studio.
- (ii) Prepare the list of equipments used with type/make and model nos.

Sl. No.	Equipment	Make	Type/model no.	Remarks
1				
2				
3				
4				
5				

- (iii) Note down your observations in recording a type of programme in studio and in field with special mention to recorded quality and back ground noise levels.
- (iv) List the input/output levels and gain control settings done on Audio Consoles/ Mixer/recorders in respect of following:

Sl. No.	Equipment	Details of input/output levels and gain control settings
1	Microphone channels	
2	Announcer Channel	
3	Instruments	
4	Recorders	

RESULT/CONCLUSION

Summarize your observations and experience on this Activity

**3****STUDIO ACOUSTICS**

(Based on Lesson-4)

INTRODUCTION

In your study of theoretical lesson on studio acoustics, you have studied about reverberation, sound isolation, noise level and basics of psychoacoustics. Studio acoustics is designed basically on two criteria namely; Reverberation Time (RT) and Noise Criteria (NC) level. The reverberation time is controlled by providing sound absorbing and sound reflecting surfaces in the room and the room volume. The noise criteria level describes the level of background noise in a studio or in the surrounding environment. The RT can also have an effect on the NC. Now in this practical session you will get an opportunity to actually observe and learn about the types and characteristics of various types of materials used to get the optimum RT (usually of the order of 0.4 to 0.5 sec for the audio frequency range). Special types of Sound Proof (SP) doors and sound lock rooms are used to get required sound isolation from the surrounding noise levels. Following two activities are to be carried out in this lesson:

- i) Visit any sound studio and observe on the acoustics especially the materials used on walls and floors.
- ii) Mic an acoustic instrument (guitar/piano) at a distance of 1 or 3 inches. Move the mic over the instrument's body as is being played, while listening to variations in the sound. Does the sound change? Note your observations.

ACTIVITY-I

AIM

Visit any sound studio and observe on the acoustics especially material used on walls and floors. Note your observations.



Notes

OBJECTIVES

At the conclusion of this activity you will be able to:

- Find the appreciable difference between a normal room and a studio.
- Observe the different types of materials used on walls, doors and floor.
- Note the difference of acoustic treatment in recording, production and transmission studios, if available.
- Understand the importance/significance of use of these materials in studios.

RESOURCES/TOOLS REQUIRED

- i) A typical Sound studio with a contact person to take you around the studio.
- ii) Note book with pen/pencil.

PROCEDURE

- i) Visit a sound studio and study the location. It will be usually at the dead end of a corridor.
- ii) Observe the type of doors from where you are entering in the studios. These are special type of thick doors called SP (Sound Proof) and are acoustically fabricated to give a sound isolation from corridor noise.
- iii) Enquire about the constructional features used in fabrication of these doors.
- iv) Try to listen if any outside noise is available in studio.
- v) Observe the size, construction and use of special acoustic panels in next room called sound lock room.
- vi) Observe the type of sound (acoustic) panels and materials used on walls, floor and even the false ceiling.
- vii) Learn the absorbing and reflecting properties of these materials.
- viii) Observe and note down the dimensions of each type of material used on all the four walls of a studio.
- ix) Observe and note the type of material used on floor.
- x) Note the special feature of glass observation window.
- xi) Observe if any window or split AC unit is used for cooling. If not, observe the inlet and outlet of AC ducts and enquire what treatment has been done in ducts to reduce the noise level in studio.
- xii) Note down all these details in the format given



Notes

PRECAUTIONS

- i) During your visit to a sound recording studio take care to observe the safety precautions and do not disturb or fiddle with the setup or equipment without permission of the studio in charge.
- ii) Observe discipline and do not disturb during recording.
- iii) Follow instructions of your coordinator and be polite in your interaction with the staff there.

Formula used:

Surface Area of a wall or Panel = Height × Length (or Breadth)

Percentage of each type of material used = (Total Area of each type of material used on four walls/Total Surface Area of all four walls) × 100

OBSERVATIONS/TABULATION OF RESULTS

Tabulate your observations on different types of materials used for each of the following items of studio:

S. No	Item	Approx. area in sq. feet	Types of Material used	Your Observations in Brief
1	SP Doors			
2	Sound Lock Room			
3	Studio Walls-1-2-3-4			
4	Studio Floor			
5	Observation Window			
6	AC ducting			

CALCULATIONS

Percentage of each type of acoustic material used in a studio.

RESULT/CONCLUSION

Write down summary of your observations about the Activity-I



Notes

ACTIVITY-II

Mic an acoustic instrument (guitar/piano) at a distance of 1 or 3 inches. Move the mic over the instrument's body as it is being played, while listening to variations in the sound. Does the sound change? Note your observations.

OBJECTIVES

At the conclusion of this activity you will be able to:

- i) Observe the variations in sound in respect of sound level, tone and pitch as you move the microphone from centre position to left side and then to right side.
- ii) Explain the changes in sound.
- iii) Learn the proper placement of microphones while recording the programmes.

RESOURCES/TOOLS REQUIRED

- i) Sound studio setup
- ii) Instrument (guitar/piano) with artist.
- iii) Microphone
- iv) Recording and Listening facilities

PROCEDURE

- i) Visit a sound studio with the contact person.
- ii) Request the site engineer for the set up along with listening facilities.
- iii) Keep the microphone at about 1 to 3 inches above the instrument and in the centre.
- iv) Move the microphone along the body of the instrument from centre to left and then to right side.
- v) Observe minutely the changes in sound.
- vi) Record your observations with different positions of microphone.
- vii) You can repeat with different instrument if possible.
- viii) Enquire and learn about the precautions to be observed in placing the microphone over the instrument.



Notes

PRECAUTIONS

- i) During your visit to the sound recording studio take care to observe the safety precautions you have learnt earlier and do not disturb or fiddle with the setup or equipment without permission of the studio in charge.
- ii) Observe discipline and do not disturb during recording
- iii) Follow instructions of your coordinator and be polite in your interaction with the staff there

OBSERVATIONS/TABULATION OF RESULTS

Record your observations on variations of sound at following positions:

- i) When the microphone is placed directly above the instrument in the centre of instrument.
- ii) While moving the microphone towards left on the body of instrument.
- iii) While moving back to centre and then to right.

List the precautions and care to be taken in handling of microphones

- 1.
- 2.
- 3.

RESULT/CONCLUSION

Write down the summary of your observations about the Activity –II



4

BASIC ELECTRONICS

(Based on Lesson-5)

INTRODUCTION

In your text book, you studied the basics of electrical and electronics engineering you will frequently refer to while working with sound equipments. Intricate practical problems will be encountered every now and then while at work. This chapter deals with some of the practical and numerical exercises you need to solve during your job. Many times, the problem will be novel in its kind and you need to explore your theoretical and practical skills to crack the problem on the spot and that too without support of any third person or learning materials. In light of such challenging real life situation, you are given with some practical problems in this chapter to orient you toward such skills. To solve the problems you may need to visit the sound studio or laboratory or both.

1. Energy Consumption

Visit a sound studio and observe the following:

A cable is drawn from a pole nearest and outside your premises upto the energy meter installed inside the studio premises. This connection is called as service connection. The entire energy consumed in your sound studio will be monitored and recorded in the energy meter installed. This meter used to be electromechanical, but now-a-days replaced with electronic energy meters. The energy consumed is measured in kWh (kilo-watt-hour) equivalent to 3600 kJ, commercially known as 'unit'.

ACTIVITY-I

- A) Watch out the service connection of electrical power supply of your studio. How did you identify the starting point of your service connection outside your premises?



- B) Record the meter reading at a given time on a day. Repeat the recording on the next day at the same time. Both days should be working. Count the number of units of energy (kWh) consumed in 24 hours. Thus, appraise the energy to be consumed in a year (365 days). Based on the fixed charges and unit rate, estimate the billing for one year. Assume no reading on holidays.

OBJECTIVES

Upon completion of the above activity, you will be able to

- 1) Interpret service connection for your sound studio.
- 2) Prepare the bill of energy consumed for your sound studio.

RESOURCES/TOOLS REQUIRED

- 1) Energy meter
- 2) Calculator
- 3) Pen and paper

PROCEDURE

A) Service Connection

- Step 1.** Consult the Electrician/Operator-in-charge who is looking after the administration at studio premises. Collect the keys for meter box or meter room.
- Step 2.** Visit the nearest pole/pole sub-station outside your premises from where the power is being tapped.
- Step 3.** Observe the fork-like three terminal protrusion from the cable at the pole which is connected to bare conductors at the pole.
- Step 4.** Trace the cable upto the meter box.
- Step 5.** Draw a neat sketch of this observation on record book.

B) Billing

- Step 1.** Observe the disk rotating inside the main meter.
- Step 2.** Record the units (R1) from the front of the meter box.
- Step 3.** Repeat the activity in step 2 at the same time on the next day and record the units (R2).



Notes

- Step 4. Calculate the one day energy consumption $R = R_2 - R_1$.
- Step 5. Collect the last bill (assumed monthly) from the in-charge.
- Step 6. Determine the fixed charges as F.
- Step 7. Write down the unit rate as U.
- Step 8. Estimate the bill of one year using the formula, Annual Bill, $AB = F \times 12 + R \times U \times 22 \times 12$.

Note. Assumed 22 working days per month. In case of change in this figure for a particular month, make necessary changes in the expression for AB.

PRECAUTIONS

1. Keep your hand dry while touching electrical/electronic equipments.
2. Wear covered shoes with rubber base.
3. Wear gloves in case you require to working with live circuit.
4. Close the meter box panel after taking its reading.
5. Do not ride pole/pole substation to watch service connection from proximity.
6. Repeat each reading for 3 times and take average for better approximation.

RESULT/INFERENCE

Write down the result(s) and your inference(s), if needed.

2. Types of loads

This is very important for you to know how you can manage the loads being used in a sound studio and thus make a cost cutting on AB determined in the last activity. For this, you must know what are the elementary types of loads used in a sound studio. These are resistor, inductor and capacitor. Commercial name of capacitor is condenser. Most of the loads used for lighting are resistive and inductive. More is the proportion of inductance in the load, less is the power factor. For ordinary loads this is 0.8-1.0. Capacitive loads improve power factor by increasing its value.

ACTIVITY-II

Observe the different kinds of loads used in a sound studio. Draw an hourly usage chart and suggest how to improve the power usage for cost cutting.



OBJECTIVES

Upon completion of this activity you will be able to use the electrical resources efficiently in your sound studio.

RESOURCES/TOOLS REQUIRED

- 1) Pen and paper
- 2) Calculator

PROCEDURE

- Step 1.** Make a careful observation of different type of loads (say, light and fan) used in your studio.
- Step 2.** Make tabular chart mentioning type of load (resistance, inductance and/or capacitance), name of load (fluorescent, CFL, fan, etc.), hours of use and suggested changes in load or its use.
- Step 3.** Apply the suggested changes.
- Step 4.** Repeat activity 1B step 1 – step 4.
- Step 5.** Estimate one day bill.

PRECAUTIONS

1. Wiring of an electrical circuit is done in accordance with the kind of load to be used. While changing the type of load care should be taken not to overload a given circuit.
2. In an electrical power sub-circuit maximum two sockets may be provided with combined load not exceeding 3 kW, according to Indian Electricity rules, 1956.
3. Use proper safety measures while working on electrical circuits.

RESULTS/INFERENCES

Write a neat and clean result. Write inference on suggesting improvements of load use.

3. Current Amplification

In the previous section, you have studied the uses of basic electrical elements, passive in nature. In this section we shall learn about a few active electronic



Notes

elements and their uses. BJT's, FET's – JFET's and MOSFET's and OP AMPs few active elements as they are used in building amplifiers. Two NPN transistors can be coupled together to amplify the common emitter current. This configuration is called as a Darlington pair.

ACTIVITY-III

Collect the circuit configuration from your laboratory and develop a Darlington pair. Determine the amplification factor experimentally.

OBJECTIVES

On completion of this experiment you will be able to explain the importance of (current) amplification.

RESOURCES/TOOLS REQUIRED

1. BJT's
2. Resistors
3. Capacitors
4. Multimeters
5. Wire connectors
6. Bread Board
7. 0-5 volts dc source

PROCEDURE

- Step 1.** Collect the circuit diagram for implementation of Darlington pair.
- Step 2.** Consult the laboratory in-charge and make list of accessories.
- Step 3.** Collect the list of accessories for the experiment along with the DC supply source.
- Step 4.** Prepare the circuit and get it verified by the laboratory in-charge.
- Step 5.** Conduct the experiment and determine the overall emitter current gain.
- Step 6.** Find three values and determine average.



PRECAUTIONS

1. Keep your hands dry before starting the experiment.
2. While preparing the circuit, connect the earth terminal first, if required for the circuit.
3. If the source voltage is greater than estimated maximum input voltage, use voltage divider to generate appropriate base voltage.
4. The milli ammeter current range should be more than the maximum current estimated to be produced for measurement.
5. Emitter to ground resistance should be appropriately selected.
6. Conduct the experiment strictly under supervision of the instructor.

RESULTS/INFERENCES

Record the amplification factor of the Darlington pair determined experimentally and comment on the current amplification as compared to independent BJT amplifier.

4. Voltage Rectification

AC to DC conversion of supply sources is an essential part of electronic circuits because the supply sources are of alternating current type and the electronic circuits work on DC voltages. A rectifier is a device that converts AC supply to DC. A half wave rectifier converts AC waveform to DC waveform, but only one half cycle is converted and the other half cycle lost. A full wave rectifier converts both half cycles to DC. A bridge rectifier is more popular for full wave rectification. It uses four diodes for rectification.

ACTIVITY-IV

Construct a full wave rectifier with and without capacitor filter. Measure the rectified voltage using a voltmeter and comment on the readings.

OBJECTIVES

On completion of this experiment you will be able to explain the use of different types of rectifiers depending upon the requirement.



Notes

RESOURCES/TOOLS REQUIRED

1. Diodes
2. Resistor
3. AC voltage source
4. Multimeter
5. Capacitor
6. Bread board
7. Connecting wires

PROCEDURE

- Step 1.** Collect the circuits of bridge rectifiers with and without capacitor filter.
- Step 2.** Draw the rectifier circuits on your record book.
- Step 3.** Collect the accessories from your laboratory in-charge.
- Step 4.** Make the bridge rectifier circuit without capacitor filter.
- Step 5.** Take output voltage reading using DC setting of multimeter.
- Step 6.** Make the bridge rectifier circuit with capacitor filter at the output.
- Step 7.** Repeat step 5.

PRECAUTIONS

1. Keep your hands dry before starting the experiment.
2. While preparing the circuit, connect the earth terminal first, if required for the circuit.
3. If the source voltage is greater than estimated maximum input voltage, use voltage divider to generate appropriate input voltage.
4. Connect diode properly by identifying the anode and cathode of a diode.
5. One end of the load should be grounded.
6. Three reading should be taken for each case and average taken.
7. Conduct the experiment strictly under supervision of the instructor.

RESULTS/INFERENCES

Record the voltages measured in two different cases. Comment upon the differences with proper reasoning.

**5****MICROPHONES**

(Based on Lesson-6, 7)

INTRODUCTION

In your study of theoretical lesson on microphones, you have studied about classification of microphones based on the sound pickup device/transducer used for the construction of different types of microphones. You studied also about different categories of microphones based on their directivity of signal pick up/directional pattern. Now in this practical session you will get opportunity to actually observe and learn about the types/characteristics/directivity and deployment of these microphones for various applications. Following three activities are to be carried out in this lesson:

- i) Visit to a sound studio and prepare a list of microphones available there along with their type, directivity pattern and how and where these are deployed.
- ii) Study the phantom power supply arrangement for condenser microphones and note your observations. List the precautions to be taken in handling and storage of microphones.
- iii) Study the positioning and placement arrangement for microphones for recording of different programmes like announcements/talk show. Discussion/drama/music programmes. Note your observations

ACTIVITY-I

AIM

Visit to an sound studio and prepare a list of microphones available there along with their type, directivity pattern and how and where these are deployed.



OBJECTIVES

At the conclusion of this activity you will be able to:

- i) Identify correctly the type of pickup device/transducer of a given microphones
- ii) Identify correctly the directivity/polar pattern of the given microphones
- iii) Prepare a list of the microphones available indicating their type/model/make and its directivity pattern and use.
- iv) Study the positioning and placement arrangement for microphones for recording of different programmes like announcements/talk show, Discussion/drama/music programmes. Explain reason for the same

RESOURCES/TOOLS REQUIRED

- i) Sound studio setup
- ii) Different types of microphones

PROCEDURE

- i) Visit a sound studio and study the audio signal chain
- ii) Observe the placement of different microphones in the recording studio and control booth. Check/enquire about their type/make –model and detailed characteristics from its manual/data sheets etc.
- iii) Note down these details in the format given

PRECAUTIONS

- i) During your visit to the sound recording studio take care to observe the safety precautions you have learnt earlier and do not disturb or fiddle with the setup or equipment without permission of the studio in charge.
- ii) Observe discipline and do not disturb during recording
- iii) Follow instructions of your coordinator and be polite in your interaction with the staff there

OBSERVATIONS/TABULATION OF RESULTS

Based on your visit and your observations about the microphones available in the studios, tabulate as below:



Notes

S. No	Make/ model device)	Type (of pickup	Directional	Sensitivity pattern	Used for

RESULT/CONCLUSION

Write down summary of your observations about the Activity-I

ACTIVITY-II

AIM

Study the phantom power supply arrangement for condenser microphones and note your observations. List the precautions to be taken in handling and storage of microphones.

OBJECTIVES

At the conclusion of this activity you will be able to:

- i) Explain the arrangement for supplying phantom power supply to the condenser microphones.
- ii) List the precautions to be taken in handling and storage of different microphones

RESOURCES/TOOLS REQUIRED

- i) Sound studio setup
- ii) Different types of condenser microphones

PROCEDURE

- i) Visit a sound studio and study the connection/power supply arrangement for different microphones in the recording studio and control booth. Check/enquire about the method for supplying phantom power supply to the condenser microphones in these.



Notes

- ii) Note down these details in the format given
- iii) Enquire and learn about the precautions to be observed in storage and handling of microphones

PRECAUTIONS

- i) During your visit to the sound recording studio take care to observe the safety precautions you have learnt earlier and do not disturb or fiddle with the setup or equipment without permission of the studio in charge.
- ii) Observe discipline and do not disturb during recording
- iii) Follow instructions of your coordinator and be polite in your interaction with the staff there

OBSERVATIONS/TABULATION OF RESULTS

Based on your visit and your observations:

- i) Draw the circuit for phantom power supply arrangement for different condenser microphones
- ii) List the precautions and care to be taken in handling and storage of microphones
 - 1.
 - 2.
 - 3.
 - 4.

RESULT/CONCLUSION

Summarise your observations on the Activity-II

ACTIVITY-III

AIM

Study the positioning and placement arrangement for microphones for recording of different programmes like announcements/talk show. Discussion/drama/music programmes. Note your observations.



OBJECTIVES

At the conclusion of this activity you will be able to:

- i) Explain the type and number of microphones required for a typical:
 - a) Announcer booth
 - b) Recording talk/discussion programme
 - c) Recording a music programme
- ii) Observe and discuss the placement and positioning of microphones for
 - a) Announcer booth
 - b) Recording talk/discussion programme
 - c) Recording a music programme

RESOURCES/TOOLS REQUIRED

- i) Sound studio setup
- ii) Setups with different microphones for recording of the above programme

PROCEDURE

- i) Visit a sound studio and study the placement and correct positioning of different microphones in the recording of above mentioned programmes
- ii) Note down these details in the format given

PRECAUTIONS

- i) During your visit to the sound recording studio take care to observe the safety precautions you have learnt earlier and do not disturb or fiddle with the setup or equipment without permission of the studio in charge.
- ii) Observe discipline and do not disturb during recording
- iii) Follow instructions of your coordinator and be polite in your interaction with the staff there

OBSERVATIONS/TABULATION OF RESULTS

Based on your visit and your observations, note and explain the microphones arrangements in the format as below:



Notes

S. No.	Location	Number(s) of mics. used and type	Placement and position diagram	Remarks

1. Annoucer Booth
2. Studio I
3. Studio II
4. Outside LocationSports coverage

RESULT/CONCLUSION

Summarise your observations about this activity.



6

OTHER SOUND EQUIPMENT

(Based on Lesson-8)

INTRODUCTION

In your study of previous practical lessons on microphones and loudspeakers, you have learnt about practical aspects of various types of microphones and loudspeakers. You studied also about connection arrangements of loudspeakers for studios and PA system etc. Now in this practical session you will get opportunity to actually see and observe how the sound/audio system works in totality by use of other sound equipment i.e. PA consoles/Amplifier apart from microphones and loudspeakers.

The activities for this lesson include:

- i) Visit to a Public address system and see the PA console and Power Amplifier. See all the controls, input and output connections and understand their function.
- ii) Set up a PA system with microphones, loudspeakers and CD player connected to the console/power amplifier. Check its working and note your observations. Draw the block schematic of the system you setup.

ACTIVITY-I

AIM

Visit to a Public address system and see the PA console and Power Amplifier. See all the controls, input and output connections and understand their function.

OBJECTIVES

At the conclusion of this activity you will be able to:



Notes

- i) Explain the input output connections of a typical PA system including microphones/CD player etc. connections, loudspeaker connections and different controls of PA consoles/amplifiers.
- ii) Setup a PA system with microphones, CD player, loudspeakers and PA console/amplifier. Check its working and note your observations.

RESOURCES/TOOLS REQUIRED

- i) Sound public address system setup comprising of different components like microphones, loudspeakers, CD player etc. PA console/Amplifier, connectors and connecting wires etc.
- ii) Tools and testing instruments for checking PA setup.

PROCEDURE

- i) Visit a sound equipment contractor to study the PA system set up
- ii) Check/enquire about the type/make of the PA console/Amplifier and other equipment available with him and their features.
- iii) Study the different controls and switches available on the PA console/Amplifier and understand their functions

PRECAUTIONS

- i) During your visit to the sound equipment contractor to study PA setup, take care to observe the safety precautions you have learnt earlier and do not disturb or fiddle with the setup or equipment without permission of the in-charge there.
- ii) Observe discipline and do not disturb during actual programme
- iii) Follow instructions of your coordinator and be polite in your interaction with the staff there

OBSERVATIONS/TABULATION OF RESULTS

Based on your visit and your observations/note as below:

PA console/Amplifier: list the different switches and controls available and their function

S. No	PS console/ Amplifier	Control/ Switch	Function



RESULT/CONCLUSION

Summarize your observations about this activity.

ACTIVITY-II

AIM

Set up a PA system with microphones, loudspeakers and CD player connected to the console/power amplifier. Check its working and note your observations. Draw the block schematic/connection diagram of the system you setup.

OBJECTIVE

At the conclusion of this activity you will be able to:

- i) Properly set up a PA system with microphones, loudspeakers and CD player connected to the console/power amplifier. Check its working and ensure the quality and levels of sound required for proper listening at different positions for audience.
- ii) Draw the connection diagram of the PA set up arranged above

RESOURCES/TOOLS REQUIRED

- i) Sound public address system setup comprising of different components like microphones, loudspeakers, CD player etc. PA console/Amplifier, connectors and connecting wires etc.
- ii) Tools and testing instruments for checking the PA setup.

PROCEDURE

- i) Visit a sound equipment contractor/PA system supplier to study and have hand on experience in setting up the PA system set up
- ii) During the actual coverage of one of the events associate yourself and learn/ do the wiring and connections yourself.
- iii) Check the quality and levels of sound and note your observations.
- iv) Draw the connection diagram of the PA setup and get it checked up.



Notes

SAFETY PRECAUTIONS

- iv) During your visit to the sound equipment contactor to study PA setup, take care to observe the safety precautions you have learnt earlier and do not disturb or fiddle with the setup or equipment without permission of the in-charge there.
- v) Observe discipline and do not disturb during actual programme
- vi) Follow instructions of your coordinator and be polite in your interaction with the staff there

OBSERVATIONS/TABULATION OF RESULTS

- A. Based on your experience and your observations write down the steps in setting up a PA system:
 - 1.
 - 2.
 - 3.
 - 4.
 - 5.
 - 6.
- B. Note down your observation about the quality checking up and level control
- C. Draw the connection diagram of the PA system setup you did to cover an event.

RESULTS AND CONCLUSIONS

Summarize your observations and leanings about this activity.

**7****AUDIO CONSOLE**

(Based on Lesson-9)

INTRODUCTION

In your study of theoretical lesson on Installing and dismantling sound equipments, you have studied about audio console. You studied also about different categories of sound equipments like mixers, microphones and other accessories of sound equipments. Now in this practical session you will get opportunity to actually observe and learn the types of different sound equipments of a typical sound studio. There are following three activities in this lesson:

- i) Visit to a sound studio and prepare a list various equipments available there along with their types, characteristics and how and where these are mounted/ deployed.
- ii) Study the Signal Flow of the mixers connected in an audio console.

ACTIVITY-I

Visit to a sound studio and prepare a list of sound equipments available there along with their type, characteristic and how and where these are mounted/deployed in an audio console.

OBJECTIVES

At the conclusion of this activity you will be able to:

- i) Identify correctly the type of conversion device/transducer in a given audio console from its data-manual/construction
- ii) Prepare a list of the various equipments employed/available in the studios indicating their type/mounting arrangement and placement.



Notes

RESOURCES/TOOLS REQUIRED

- i) Sound studio setup
- ii) Different types of Audio consoles .

PROCEDURE

- i) Visit a sound studio and study the audio signal chain
- ii) Observe the placement of different sections in the recording studio and control booth as well as monitoring area. Check/enquire about their type/ make and detailed characteristics from their manual/data sheets etc.
- iii) Note down these details in the format given

PRECAUTIONS

- i) During your visit to the sound recording studio take care to observe the safety precautions you have learnt earlier and do not disturb or fiddle with the setup or equipment without permission of the studio in charge.
- ii) Observe discipline and do not disturb during recording
- iii) Follow instructions of your coordinator and be polite in your interaction with the staff there

OBSERVATIONS/TABULATION OF RESULTS

Based on your visit and your observations/note as below:

S. No	Make/ model/ location	Type (of conversion device)	Size and mounting arrangement	Type of connectors used	Power handling capacity

RESULT/CONCLUSION

Summarize your observations about this activity.



ACTIVITY-II

Study of various types of Audio consoles:

- i) Analog
- ii) Digital
- iii) Draw the block circuit diagram (I/O signal path) of a typical audio console

OBJECTIVES

At the conclusion of this activity you will be able to:

- i) Explain the different types of audio consoles .
- ii) Observe purpose, features and facilities of an audio console
- iii) Explain the Visual and Aural metering

RESOURCES/TOOLS REQUIRED

- i) Audio console
- ii) Different types of connectors/accessories of an audio console

PROCEDURE

- i) Visit a sound studio and study the arrangement for connecting/setting up of different types of audio consoles available in the studio
- ii) Note down these details in the format given

PRECAUTIONS

- i) During your visit to the sound recording studio take care to observe the safety precautions you have learnt earlier and do not disturb or fiddle with the setup or equipment without permission of the studio in charge.
- ii) Observe discipline and do not disturb during recording
- iii) Follow instructions of your coordinator and be polite in your interaction with the staff there

OBSERVATIONS/TABULATION OF RESULTS

Based on your visit and your observations:

- i) Draw the block diagram (I/O signal path) of an audio console:



Notes

Based on your observation chalk down the purpose, features and facilities available in an audio console

RESULT/CONCLUSION

Summarize your observations about this activity.



8

AUDIO CHAIN SETUP

(Based on Lesson-10)

INTRODUCTION

In your study of theoretical lesson on Audio Chain Setup, you have studied about various types of sound studio, and audio chain. You studied also about different categories of sound equipments like mixers, microphones and other accessories of sound equipments. Now in this practical session you will get opportunity to actually observe and learn the types of different sound equipments of a typical sound studio. There are following three activities in this lesson:

- i) Visit to a sound studio and prepare a list various equipments available there along with their types, characteristics and how and where these are mounted/ deployed.
- ii) Study the connection arrangements for following types of EQUIPMENTS:
 - i) Microphones
 - ii) Mixers
 - iii) Signal conditioning module

And draw the circuit diagram for connections

- iii) Visit and Study the loud-speaker connections of a PA (Public Address) system for coverage of a indoor and a outdoor public function. Note your observations.

ACTIVITY-I

Visit to a sound studio and prepare a list of sound equipments available there along with their type, characteristic and how and where these are mounted/deployed.



Notes

OBJECTIVES

At the conclusion of this activity you will be able to:

- i) Identify correctly the type of conversion device/transducer in a given loudspeakers from its data-manual/construction
- ii) Prepare a list of the various equipments employed/available in the studios indicating their type/mounting arrangement and placement.

RESOURCES/TOOLS REQUIRED

- i) Sound studio setup
- ii) Different types of sound equipments

PROCEDURE

- i) Visit a sound studio and study the audio signal chain
- ii) Observe the placement of different sections in the recording studio and control booth as well as monitoring area. Check/enquire about their type/ make and detailed characteristics from their manual/data sheets etc.
- iii) Note down these details in the format given

PRECAUTIONS

- i) During your visit to the sound recording studio take care to observe the safety precautions you have learnt earlier and do not disturb or fiddle with the setup or equipment without permission of the studio in charge.
- ii) Observe discipline and do not disturb during recording
- iii) Follow instructions of your coordinator and be polite in your interaction with the staff there

OBSERVATIONS/TABULATION OF RESULTS

Based on your visit and your observations/note as below:

S. No	Make/ model/ location	Type (of conversion device)	Size and mounting arrangement	Type of connectors used	Power handling capacity

RESULT/CONCLUSION

Summarize your observations about this activity.



ACTIVITY-II

Study the connection arrangements for following types of sound equipments dismantle and reconnect the sound equipments :

- i. Microphone
- ii. Mixer
- iii. Amplifier and

Draw the circuit diagram for the connection arrangements

OBJECTIVE

At the conclusion of this activity you will be able to:

- i) Explain the different connection arrangements/cross over networks to set up Microphone, monitor speaker ,mixer and amplifier connections.
- ii) Observe and differentiate the response of these type of speakers to conform to the designed frequencies ranges
- iii) Dismantle and again reconnect the sound equipments and check for their proper functioning

RESOURCES/TOOLS REQUIRED

- i) Sound studio setup
- ii) Different types of sound equipments in an audio chain

PROCEDURE

- i) Visit a sound studio and study the arrangement for connecting/setting up of different frequency range loudspeakers i.e woofer, tweeter and mid-range.
- ii) Note down these details in the format given

PRECAUTIONS

- i) During your visit to the sound recording studio take care to observe the safety precautions you have learnt earlier and do not disturb or fiddle with the setup or equipment without permission of the studio in charge.
- ii) Observe discipline and do not disturb during recording
- iii) Follow instructions of your coordinator and be polite in your interaction with the staff there



Notes

OBSERVATIONS/TABULATION OF RESULTS

Based on your visit and your observations:

- i) Draw the circuit diagram/connection arrangement for different Terminal connections :
- a) Amplifier
- b) Mixer

RESULT/CONCLUSION

Summarize your observations about this activity.



9

HANDLING TECHNICAL CHALLENGES

(Based on Lesson-10, 11)

INTRODUCTION

In this section you shall learn about the practical aspects of the theories learnt in L-10 & L-11 as discussed there

Therefore, here you can go through the following practical activities :

- i) Handling Technical Challenges
- ii) Preventive measures to ensure Health and Safety standards

ACTIVITY-I

Handling Technical Challenges

OBJECTIVES

At the conclusion of this activity you will be able to:

- assess the impact of technical faults
- ascertain the reason for technical faults
- implement or ensure preventive maintenance

RESOURCES/TOOLS REQUIRED

- i) understanding of Technical set up and Audio Chain
- ii) questionnaire

PROCEDURE/METHOD

1. Make a list of 5 technical challenges that might arise while installing or assembling various sound equipments



Notes

2. Describe the probable cause or reasons for such technical issues
3. List the possible consequences of such faults
4. Mention against each if they are avoidable by preventive maintenance: Yes/No.
5. Enlist possible solutions for the above related issues

RESULT/CONCLUSION

List your recommendations that can avoid such technical challenges that can protect the station from serious downtime or outages in future .

ACTIVITY-II

Preventive measures to ensure Health and Safety standards

OBJECTIVE

At the conclusion of this activity you will be able to:

- enlist the Preventive measures to be taken to ensure Health and Safety standards

RESOURCES/TOOLS REQUIRED:

- I. knowledge of health and safety measures as discussed in L-11 of theory
- II. questionnaire

PROCEDURE/METHOD

1. visit any nearby music concert at least 3 hrs. in advance to see the equipment being assembled
2. list the various preventive measures they have taken to ensure safety such as use of hard hats, cable covers, cranes for lifting the heavy equipments, installation of generators etc.
3. Ask the engineer or team in charge about the safety measures to be keep in mind while installing such equipments . Also observe the command flow over there.
4. Once completed the above steps write down your views w.r.t. importance of safety while recording sounds

RESULT/CONCLUSION

List your recommendations on how one should troubleshoot safety problems if they arise under your supervision.



10

RECORDING AND CAPTURING SOUND

(Based on Lesson-12)

ACTIVITY-I

Try to record at 8 channel sound track at any studio using their equipment and premises (with at least one LIVE element)

OBJECTIVES

At the end of this activity, you will be able to

1. Understand the workflow of a multichannel recording environment.
2. Understand the recording process as discussed in lesson 12.

TOOLS REQUIRED

You will be requiring the following tools for this assignment.

1. An audio studio which is well equipped to handle an 8 channel sound track recording.
2. The studio's equipment like mixer, microphones, headphones, etc. (as per the recordings requirements).
3. The artists required for the recording.
4. One live element such as an Acoustic Guitar or a Harmonium, etc.

PROCEDURE

The following steps need to be taken in this activity

1. Figure out the kind of production you will be doing.
2. Co-ordinate with the artiste for the recording.



Notes

3. Start laying tracks one after the another. Always remember the important points to be kept in mind during a recording session.
4. Once you have recorded the tracks, then start to mix them so that they complement each other. Try to find a good balance between the tracks so that no track overpoweres the other track.
5. Once you are satisfied with our mix, export the audio file and keep as a record for yourself. You can attach this file with your CV while applying for jobs.

POINTS FOR CONSIDERATION

Do keep these important points in mind.

1. While recording, always experiment with the microphone placement to obtain the best and natural sound.
2. Always have a “B plan” when you’re “A plan” fails. For example, keep a second artist in mind in case the first does not show up.
3. While mixing the recording, always keep in mind that none of the tracks should be too loud or too soft. This will result in the recording becoming messy.

CONCLUSION

After you have finished this activity, write your conclusion as to what this activity has taught you and how it has inspired you.

ACTIVITY-II

Book some equipment from a studio and use it to record a small live performance. You can do this at certain venues where live performances are done regularly.

OBJECTIVES

After this activity you will be able to

1. Understand the process of recording outdoors
2. Understand the problems faced during an outdoor recording

TOOLS REQUIRED

You will require these equipment to perform this activity



1. A portable recorder with an inbuilt mixer
2. A few microphones.
3. Cables for connection of the microphones (as required)
4. A location with a live program that is to be recorded.

PROCEDURE

These will be the steps to be followed by you

1. Scout a location where any live program might be taking place. You might use your own network of friends to find such a place.
2. Obtain permission from the designated authority in the location for recording the show. Also inform them how this recording will be used.
3. Find a suitable place to set up your equipment and find the best possible places for placing the microphones.
4. Try not to clutter the wires. This might result in someone tripping and falling.
5. Record the program Live. Make adjustments of the levels during the recording.

POINTS FOR CONSIDERATION

Keep these points in mind during this activity.

1. Always have a backup plan in case the authorities do not give permission.
2. Do not make a clutter of the wires during the recording session.
3. Keep the headroom in mind during the recording so that there are no distortions.
4. Do not interfere with the artiste in any way possible.

CONCLUSION

Write a conclusion after finishing the recording as to how this activity helped you to understand the concepts behind outdoor recording. Also mention the problem that you faced and mention how you troubleshot these problems.

ACTIVITY-III

Take a 3 minutes clip of an existing film and recreate its entire sound track including dialogues, music (pre-recorded) and sound effects (pre-recorded).



Notes

OBJECTIVES

After this activity you will

1. Understand the problems faced during a film sound production.
2. Understand the different stages in the film sound production.

TOOLS REQUIRED

You will require the following tools for this activity

1. A three minute long movie clip of any genre like action, drama, comedy etc.
2. Microphones, headphones, etc.
3. Pre – recorded music tracks (suited to the film type)
4. Pre – recorded sound effects (suitable for the film type). These are available as free downloads from websites.
5. Artistes for recording dialogues.

PROCEDURE

These are the steps you will have to take to complete this activity

1. Take a three minute scene from any movie as per your liking.
2. Listen to it carefully. How the dialogues have been recorded? How is the background music complementing the scene? What sound effects are used in the particular scene?
3. Once you are confident, you will have to start recreating the entire soundtrack of the particular scene from the dialogues to the music and then to the sound effects.
4. You can get as creative as you would want to for the above step. You need not to create the same feel of the scene as in the original.
5. Once you are satisfied with this soundtrack you can replace it instead of the original soundtrack and listen. You can keep this file as an attachment to your CV for future job offers.

POINTS TO BE CONSIDERED

You need to consider these points while carrying out this activity

1. Do not try to replicate the original soundtrack. Be as creative as possible.

2. It is not necessary to fill the soundtrack for the entirety of the scene. You can have silent parts as well. For example, if you feel that there is no need to have a sound effect or a piece of music in a particular part of the scene, then there is no limitation on you to not keep the part silent.
3. Try to keep the dialogues in sync with the video file. You must direct the artist as required.

CONCLUSION

Once you have completed this activity, write your conclusion as to how this activity helped you in clearing up your doubts regarding film sound production. What were the problems you faced and how you solved them.



Notes

