



QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR MEDIA AND ENTERTAINMENT INDUSTRY

What are Occupational Standards(OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

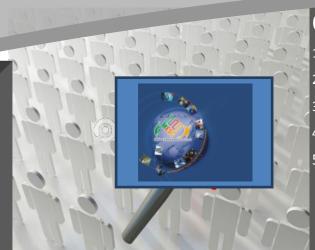
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Introduction

Qualifications Pack-Sound engineer

SECTOR: MEDIA AND ENTERTAINMENT

SUB-SECTOR: Film, Television, Radio, Animation, Gaming, Advertising

OCCUPATION: Sound engineer

REFERENCE ID: MES/ Q 3402

ALIGNED TO: NCO-2004/2144.50

Sound engineer in the Media & Entertainment Industry is also known as a Sound mixer or Sound recordist

Brief Job Description: Individuals at this job are responsible to record/mix sound sources to create end-products that meet the quality standards and requirements of production.

Personal Attributes: This job requires the individual to know how to operate a range of sound equipment and software. The individual must be well-versed with the principles of sound and acoustics. The individual must be able to select sound sources and apply various mixing techniques and treatments to create quality end-products that meet production requirements.







Qualifications Pack Code	MES/ Q 3402		
Job Role	Sound engineer This job role is applicable in both national and international scenarios		
Credits (NSQF)	TBD	Version number	1.0
Sector	Media and Entertainment	Drafted on	10/11/14
Sub-sector	Film, Television, Radio, Animation, Gaming, Advertising	Last reviewed on	21/11/14
Occupation	Sound	Next review date	20/11/16

Job Role	Sound engineer		
Role Description	Record/mix sound sources to create required end-products		
NSQF level	4		
Minimum Educational Qualifications	Class XII, preferably with a background in physical sciences		
Maximum Educational Qualifications	Graduation, preferably in electronics		
Training (Suggested but not mandatory)	Sound mixing, editing, production and sound editing software		
Experience	2+ Years of work experience, with experience as an apprentice installing studio equipment		
	Compulsory:		
Applicable National Occupational	1. MES / N 3405 (Prepare sound equipment)		
Standards (NOS)	2. MES / N 3407 (Record/mix sound)		
Standards (1403)	3. MES / N 3409 (Maintain workplace health and safety)		
	Optional: N.A.		
Performance Criteria	As described in the relevant OS units		





Keywords /Terms	Description	
Acoustics	Acoustics is the science of sound production, creation of effects and transmission	
Budget	Budget is an estimate of the total cost of production that may include a break-up of cost components	
Continuity	Continuity represents the seamless transition from one shot to another	
Copyright Laws	A legal framework linked to intellectual property and the rights given to creators of original products/ concepts	
Creative Brief	Creative brief is a document that captures the key questions that serve as a guide for the production including the vision, objective of the project, target audience, timelines, budgets, milestones, stakeholders etc.	
Target Audience	Group of people at whom content/ adverting is aimed. A target audience is typically defined by age, gender, economic classification, geography and any other relevant parameters (e.g. Females, aged 25-40, average monthly household income INR 25,000-50,000, from Hindi speaking states in North India)	
Timelines	Timelines is a listing of dates by which the production milestones/stages need to be completed	
Sector	Sector is a conglomeration of different business operations having similar businesses and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.	
Sound concept	Sound concept is a description of the overall sound experience for the production	
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.	
Vertical	Vertical may exist within a sub-sector representing different domain areas or the client industries served by the industry.	
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry	
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of OS.	
Sub-functions	Sub-functions are sub-activities essential to fulfill the achieving the objectives of the function.	
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.	
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.	
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task	
National Occupational Standards (NOS)	NOS are Occupational Standards which apply uniquely in the Indian context.	
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.	
Qualifications Pack(QP)	Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A	

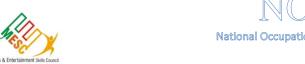




Qualifications Pack For Sound engineer



	Qualifications Pack is assigned a unique qualification pack code.
Unit Code	Unit Code is a unique identifier for an Occupational Standard , which is denoted by an 'N'.
Unit Title	Unit Title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is the set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on the quality of performance required.
Knowledge and Understanding	Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard.
Organizational Context	Organizational Context includes the way the organization is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Keywords /Terms	Description
NOS	National Occupational Standard(s)
QP Qualifications Pack	
NSQF	National Skill Qualifications Framework
NVEQF	National Vocational Education Qualifications Framework
NVQF	National Vocational Qualifications Framework

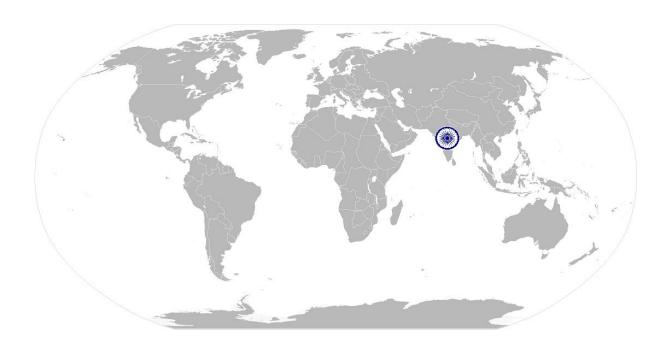






Prepare sound equipment

National Occupational Standard



Overview

This unit is about preparing sound equipment prior to recording/ playback to ensure that they are correctly aligned in accordance to requirements



National Occupational Standards

MES/ N 3405



Prepare sound equipment

MES/	Ν	3405

Unit Code

	18125/14 3403
Unit Title (Task)	Prepare sound equipment
Description	This OS unit is about preparing sound equipment prior to recording/ playback to ensure that they are correctly aligned in accordance to requirements
Scope	 This unit/task covers the following: Aligning the sound input and output interfaces, including sound levels, polarity/phase, acoustic impedance, frequency, path, interferences, troubleshooting, sampling rate, bandwidth
Performance Criteria (P	
Element	Performance Criteria
Aligning the sound input and output interfaces	To be competent, the user/individual on the job must be able to: PC1. Align/synchronise the inputs and output interfaces of sound systems to ensure that the sound signals are sent and received at the correct specifications PC2. Test sound signals for an appropriate duration to ensure that they meet requirements and are free from disturbances and defects
Knowledge and Unders	tanding (K)
A. Organizational Context (Knowledge of the company / organization and its processes)	 The user/individual on the job needs to know and understand: KA1. The acoustics of the performance area and how they affect sound production requirements (eg: the bifurcation of different sound sources) KA2. The layout and positioning of sound equipment, including the various origin and destination points
B. Technical Knowledge	 The user/individual on the job needs to know and understand: KB1. The principles of sound and acoustics KB2. How to use and handle various types of sound equipment (input and output devices) KB3. How to create a good signal-to-noise ratio, amplifying certain sounds while limiting ambient noises to a safe and appropriate sound level KB4. How to align sound equipment to the appropriate polarity, acoustic impedance, frequency etc. KB5. How to use audio metering devices to meter, monitor and level sound, mitigating sound-quality deviations KB6. How to place output devices such as amplifiers, speakers, headphones etc. in an optimum way so as to not cause interference with input devices KB7. How to phone in and out KB8. Applicable health and safety guidelines







Prepare sound equipment

Sk	Skills (S) (Optional)		
A.	Core Skills/	Writing Skills	
	Generic Skills	The user/individual on the job needs to know and understand how to: SA1. Record the technical requirements of sound, to refer to while aligning sound equipment	
		Reading Skills	
		The user/individual on the job needs to know and understand how to: SA2. Read recording schedules to ensure that the sound equipment is aligned and ready for recording/play out ahead of timelines	
		SA3. Read user manuals, handling specifications and safety considerations to aid the correct use and handling of sound equipment	
		Oral Communication (Listening and Speaking skills)	
		The user/individual on the job needs to know and understand how to: SA4. Discuss the sound requirements and the layout of sound equipment with the Sound supervisor and clarify doubts, if any SA5. Discuss handling guidelines and safety considerations with contributors (artists, commentators, presenters, field journalists etc.)	
В.	Professional Skills	Plan and Organize	
		Problem Solving	
		The user/individual on the job needs to know and understand how to: SB2. Identify potential issues/variations from sound requirements and identify solutions to be able to resolve/correct them proactively	



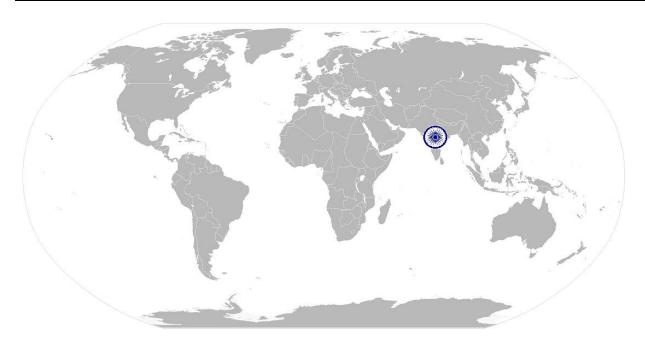




Prepare sound equipment

NOS Version Control

NOS Code	MES / N 3405		
Credits (NSQF)	TBD	Version number	1.0
Sector	Media and Entertainment	Drafted on	10/11/14
Sub-sector	Film, Television, Radio, Animation, Gaming, Advertising	Last reviewed on	21/11/14
Occupation	Sound	Next review date	20/11/16



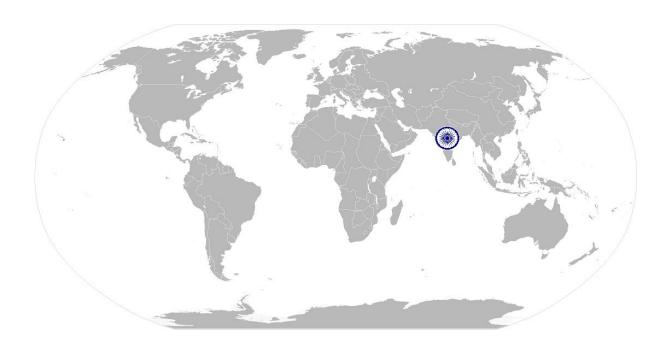






Record/mix sound

National Occupational Standard



Overview

This unit is about recording/mixing sound using different sound sources in accordance to production requirements



National Occupational Standards



Record/mix sound

MES/	Ν	3407

Unit Code	MES/ N 3407	
Unit Title (Task)	Record/mix sound	
Description	This OS unit is about recording/mixing sound using different sound sources in accordance to production requirements	
Scope	This unit/task covers the following: Recording/mixing realistic sound with software tools using different sound sources including live music, songs, interviews, announcements, dialogues, commentaries etc., pre-recorded sound tracks/ clips/ bytes, phone-ins Productions could include sound tracks/bytes/compressed formats, background scores, interviews, documentaries, live events, news broadcasts, radio programmes	
Performance Criteria (I	PC) w.r.t. the Scope	
Element	Performance Criteria	
Recording/mixing realistic sound with software tools using different sound sources	To be competent, the user/individual on the job must be able to: PC1. Develop creative possibilities for producing sound to achieve the requirements set out in the sound concept PC2. Assessing and selecting the sound sources most appropriate for recording/mixing/editing PC3. Controlling/manipulating sound sources to the required sound level, quality and balance PC4. Preparing end-products that meet production requirements	
Knowledge and Unders	standing (K)	
B. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. The technical and creative requirements of sound as laid down in the sound concept KA2. The expected quality standards for the production and formats in which they need to be stored KA3. The end-use and likely output devices from which the sound would be heard KA4. Applicable timelines and budget for recording the required sound	
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. The functional and operating characteristics of sound mixing equipment KB2. The principles and appropriate application of acoustics KB3. The characteristics of sound (tone, pitch, frequency, wavelength, threshold, volume, melody, acoustics, balance, timing, reverberation, quality, masking) KB4. How to operate different types of sound equipment (amplifiers, recording media, mixing consoles, speakers, converters) KB5. The typical problems that might arise while creating sound KB6. How to record sound onto digital audio tape or hard disk recorders KB7. The sources of different types of sound that would be required during	







MES/ N 3407 Record/mix sound

	recordings and the estimated cost of procurement and copyrights for pre- recorded sound tracks, if applicable
	KB8. How to monitor sound output to ensure it meets the required quality and
	creative standards
	KB9. The techniques and treatments that can be applied to create and modify
	sound sources to create realistic sound as set out in the concept
	KB10. The compatibility of the output with different types of playback (mono,
	stereo, surround sound)
	KB11. The techniques for cleaning and finalizing end-products in a way that
	facilitates the post-production process
	KB12. Sound editing/mixing software (Adobe Audition, Nuendo, Pyramix) w.r.t. both
	their theoretical and practical components
	KB13. The applicable copyright norms and intellectual property rights
	KB14. Applicable health and safety guidelines
Skills (S) (Optional)	
C. Core Skills/	Writing Skills
Generic Skills	
Concret Skins	The user/individual on the job needs to know and understand how to:
	SA1. Prepare notes to use during the recording/mixing sessions
	Reading Skills
	The user/individual on the job needs to know and understand how to:
	SA2. Read and understand the sound concept
	SA3. Read and understand the creative and technical requirements for recording
	SA4. Read the script and understand the context/emotion that would need to be
	expressed through the sound
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to:
	SA5. Communicate effectively with the Sound Supervisor, producers or
	contributors regarding the sound concept, as well as creative/technical
	requirements
	SA6. Discuss the possibilities of creating sound with the given sound sources so as
	to conform to the sound concept
	SA7. Present and solicit feedback on the end-products and identify modifications
4	required
D. Professional Skills	Plan and Organize
	The user/individual on the job needs to know and understand how to:
	SB1. Plan individual work and timelines so as to deliver the end-products required
	within timelines and within the designated budget
	Problem Solving
	The user/individual on the job needs to know and understand how to:
	SB2. Identify problems with successful execution of the task and resolve them in
	consultation with the Sound Supervisor
	Critical Thinking
	The user/individual on the job needs to know and understand how to:
	SB3. Critically analyse the end-products to ensure they are of the optimum quality
	and meet the requirements of post-production
	and meet the requirements of post-production



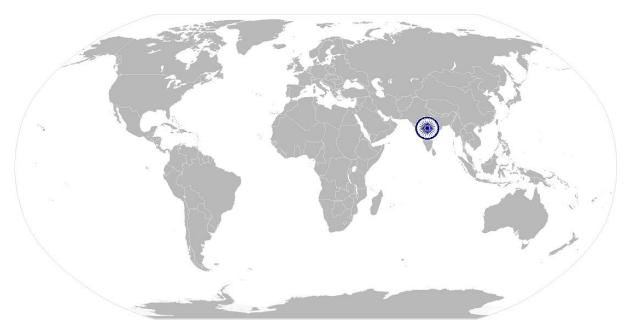




Record/mix sound

NOS Version Control

NOS Code	MES / N 3407		
Credits (NSQF)	TBD	Version number	1.0
Sector	Media and Entertainment	Drafted on	10/11/14
Sub-sector	Film, Television, Radio, Animation, Gaming, Advertising	Last reviewed on	21/11/14
Occupation	Sound	Next review date	20/11/16

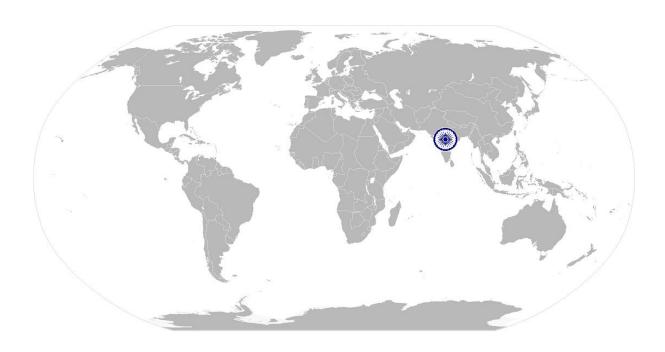








National Occupational Standard



Overview

This unit is about contributing towards maintaining a healthy, safe and secure working environment







Maintain workplace health and safety

Unit Code	MES/ N 3409
Unit Title	WES/ N 5405
(Task)	Maintain workplace health and safety
Description	This OS unit is about contributing towards maintaining a healthy, safe and secure working environment
Scope	 This unit/task covers the following: Understanding the health, safety and security risks prevalent in the workplace Knowing the people responsible for health and safety and the resources available Identifying and reporting risks Complying with procedures in the event of an emergency
Performance Criteria (F	PC) w.r.t. the Scope
Element	Performance Criteria
Understanding the risks prevalent in the workplace	To be competent, the user/individual on the job must be able to: PC1. Understand and comply with the organisation's current health, safety and security policies and procedures PC2. Understand the safe working practices pertaining to own occupation PC3. Understand the government norms and policies relating to health and safety including emergency procedures for illness, accidents, fires or others which may involve evacuation of the precises PC4. Participate in organization health and safety knowledge sessions and drills
Knowing the people responsible for health and safety and the resources available Identifying and reporting risks	PC5. Identify the people responsible for health and safety in the workplace, including those to contact in case of an emergency PC6. Identify security signals e.g. fire alarms and places such as staircases, fire warden stations, first aid and medical rooms PC7. Identify aspects of your workplace that could cause potential risk to own and others health and safety PC8. Ensure own personal health and safety, and that of others in the workplace though precautionary measures PC9. Identify and recommend opportunities for improving health, safety, and security to the designated person PC10. Report any hazards outside the individual's authority to the relevant person in line with organisational procedures and warn other people who may be affected
Complying with procedures in the event of an emergency	PC11. Follow organisation's emergency procedures for accidents, fires or any other natural calamity in case of a hazard PC12. Identify and correct risks like illness, accidents, fires or any other natural calamity safely and within the limits of individual's authority
Knowledge and Unders	standing (K)
A. Organizational Context (Knowledge of the company / organization and	The user/individual on the job needs to know and understand: KA1. Organisation's norms and policies relating to health and safety KA2. Government norms and policies regarding health and safety and related emergency procedures KA3. Limits of authority while dealing with risks/ hazards







Maintain workplace health and safety

its processes) KA4. The importance of maintaining high standards of health and s workplace B. Technical The user/individual on the job needs to know and understand:	safety at a				
R Technical The user/individual on the job needs to know and understand:					
D. Iccillical I file asci/iliaiviadai off the lob fleeds to know and anacistana.					
Knowledge KB1. The different types of health and safety hazards in a workplace	:e				
KB2. Safe working practices for own job role	C				
KB3. Evacuation procedures and other arrangements for handling	ricks				
KB3. Evacuation procedures and other arrangements for manding KB4. Names and contact numbers of people responsible for health					
·	and Salety in a				
workplace					
KB5. How to summon medical assistance and the emergency servi	ces, where				
necessary					
KB6. Vendors' or manufacturers' instructions for maintaining healt	th and safety				
while using equipments, systems and/or machines					
Skills (S) (Optional)					
A. Core Skills/ Writing Skills					
Generic Skills The user/individual on the job needs to know and understand how to	o:				
SA1. How to write and provide feedback regarding health and safe	ety to the				
concerned people	,				
SA2. How to write and highlight potential risks or report a hazard t	to the concerned				
people					
Reading Skills					
The user/individual on the job needs to krowand understand how to	o: \				
SA3. Read instructions, policies, procedures and norms relating to	SA3. Read instructions, policies, procedures and norms relating to health and				
safety					
Oral Communication (Listening and Speaking skills)	Oral Communication (Listening and Speaking skills)				
	The user/individual on the job needs to know and understand how to:				
SA4. Highlight potential risks and report hazards to the designated	people				
SA5. Listen and communicate information with all anyone concern	ed or affected				
B. Professional Skills Decision making					
The user/individual on the job needs to know and understand how to):				
SB1. Make decisions on a suitable course of action or plan					
Plan and Organize					
The user/individual on the job needs to know and understand how to):				
SB2. Plan and organize people and resources to deal with risks/ has					
within the scope of one's individual authority	Edi do triat lic				
Problem Solving					
The user/individual on the job needs to know and understand how to	ı:				
SB3. Apply problem solving approaches in different situations					
Critical Thinking					
The user/individual on the job needs to know and understand how to):				
SB4. Understand hazards that fall within the scope of individual au	thority and				
report all hazards that may supersede one's authority	-				



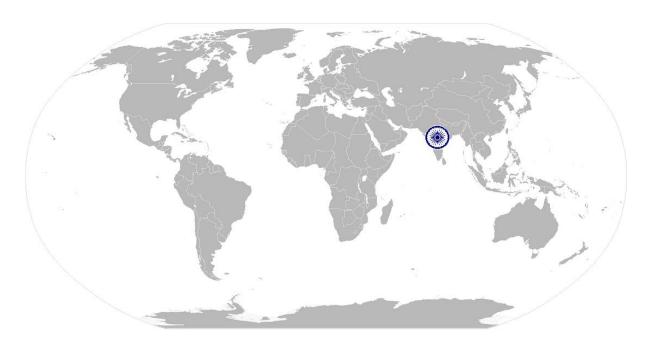




Maintain workplace health and safety

NOS Version Control

NOS Code	MES / N 3409			
Credits	TBD	Version number	1.0	
Sector	Media and Entertainment	Drafted on	10/11/14	
Sub-sector	Film, Television, Radio, Animation, Gaming, Advertising	Last reviewed on	21/11/14	
Occupation	Sound Effects / Audio Engineers & Technicians	Next review date	20/11/16	



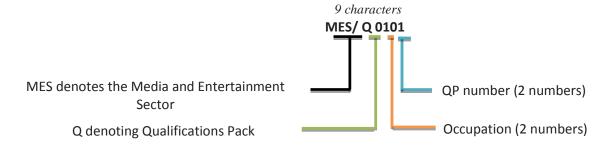




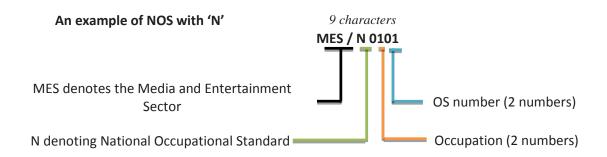
Annexure

Nomenclature for QP and NOS

Qualifications Pack



Occupational Standard



Back to top...



Qualifications Pack For Sound engineer



The following acronyms/codes have been used in the nomenclature above:

Sub-sector	Range of Occupation numbers

Sequence	Description	Example
Three letters	Media and Entertainment	MES
Slash	/	/
Next letter	Whether Q P or N OS	Q
Next two numbers	Sound	34
Next two numbers	QP number	02

Job Ro	le/Qualification Pack	Sound Engineer		
QP- ID		MES Q 3402		
	NOS	NOS NAME	Weightage	
1	MES/ N 3405	Prepare sound equipment	45%	
2	MES/ N 3407	Record/mix sound	50%	
3	MES/ N 3409	Maintain workplace health and safety Description	5%	
			100%	

Guidelines for Assessment:

- 1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
- 2. The assessment for the theory & Practical part will be based on knowledge bank of questions created by the AA and approved by SSC
- 3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below)
- 4. Individual assessment agencies will create unique evaulations for skill practical for every student at each examination/training center based on this criteria

5. To pass the Qualification Pack, every trainee should score a minimum of 70% cumulatively (Theory and Practical)

Job Role	Sound Engineer						
NOS CODE	NOS NAME	Performance Criteria			Marks	Marks Allocation	
			Total Mark	Out Of	Theory	Skills Practical	
MES/ N 3405	Prepare sound equipment	PC1. Align/synchronise the inputs and output interfaces of sound systems to ensure that the sound signals are sent and received at the correct specifications	100	60	20	40	
		PC2. Test sound signals for an appropriate duration to ensure that they meet requirements and are free from disturbances and defects		40	20	20	
			Total	100	40	60	
MES/ N 3407	Record/mix sound	PC1. Develop creative possibilities for producing sound to achieve the requirements set out in the sound concept		30	10	20	
		PC2. Assessing and selecting the sound sources most appropriate for recording/mixing/editing	-	20	10	10	
		PC3. Controlling/manipulating sound sources to the required sound level, quality and balance		30	10	20	

		PC4. Preparing end-products that meet production requirements		20	10	10
			Total	100	40	60
MES/ N 3409	Maintain workplace health and safety Description	PC1. Understand and comply with the organisation's current health, safety and security policies and procedures		10	5	
		PC2. Understand the safe working practices pertaining to own occupation		10	5	50
		PC3. Understand the government norms and policies relating to health and safety including emergency procedures for illness, accidents, fires or others which may involve evacuation of the premises		5	3	
		PC4. Participate in organization health and safety knowledge sessions and drills		5	2	
		PC5. Identify the people responsible for health and safety in the workplace, including those to contact in case of an emergency	100	10	5	
		PC6. Identify security signals e.g. fire alarms and places such as staircases, fire warden stations, first aid and medical rooms		10	5	
		PC7. Identify aspects of your workplace that could cause potential risk to own and others health and safety		10	5	
		PC8. Ensure own personal health and safety, and that of others in the workplace though precautionary measures		10	5	
		PC9. Identify and recommend opportunities for improving health, safety, and security to the designated person		5	3	
		PC10. Report any hazards outside the individual's authority to the relevant person in line with organisational procedures and warn other people who may be affected		10	5	
		PC11. Follow organisation's emergency procedures for accidents, fires or any other natural calamity in case of a hazard		10	5	
		PC12. Identify and correct risks like illness, accidents, fires or any other natural calamity safely and within the limits of individual's authority		5	2	
			Total	100	50	50