Model Curriculum

QP Name: Technical artist – AR/VR

QP Code: MES/Q2505
QP Version: 1.0

NSQF Level: 5

Model Curriculum Version: 1.0

Media & Entertainment Skills Council, 522-524, DLF Tower-A, Jasola, New Delhi - 110025

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Training Parameters

Sector	Media and Entertainment
Sub-Sector	Animation, Gaming
Occupation	Game Development
Country	India
NSQF Level	5
Aligned to NCO/ISCO/ISIC Code	NCO-2015/2166.0501
Minimum Educational Qualification and Experience	Graduate with one year of relevant experience OR XII pass and Diploma with 3 years of relevant experience OR NSQF Level-4 Certification as Animator / Modeller / Texturing Artist / Rigging Artist with two year of relevant experience For Bachelor Studies: Pursuing Graduation (B. SC. / B.Voc. in Virtual & Augmented Reality) Minimum job entry age 21 years
Pre-Requisite License or Training	Acquaintance with any one High level Programming Language (Scripting languages)
Minimum Job Entry Age	18 years
Last Reviewed On	05/05/2021
Next Review Date	04/05/2025
NSQC Approval Date	
QP Version	1.0
Model Curriculum Creation Date	25/4/2020
Model Curriculum Valid Up to Date	Next review

Model Curriculum Version	1.0
Minimum Duration of the Course	1020 hrs
Maximum Duration of the Course	1020 hrs

Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills.

- Prepare model and complete the texture as per real-time engines requirement
- Test 3D models in the real-time/game environment
- Artificial intelligence & machine learning
- Deploy Internet of things (IoT)
- Enterprise block chain
- Maintain workplace health and safety

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
Introduction of AR-VR	*05:00*	*10:00*			*15:00*
MES/N0519– Prepare model and complete the texture as per real-time engines requirement NOS Version No. 1.o NSQF Level 5	**40:00**	**80:00**			**170:00**
Creation of models and Texturing	35:00	73:00			**170:00**
MES/N0520– Test 3D models in the real-time/game environment NOS Version No. 1.o NSQF Level 5	**50:00**	**90:00**			**170:00**
Test model performance in game engine	50:00	90:00			170:00
MES/N0521 - Artificial intelligence & machine learning NOS Version No. 1.o NSQF Level 5	**50:00**	**90:00**			**140:00**
Apply Python for data science	10:00	20:00			30:00
Artificial intelligence	12:00	21:00			33:00
Ethics and Law in data and analysis	15:00	15:00			30:00
Compute vision and image Analysis	12:00	15:00			27:00
MES/N0522- Deploy	**50:00**	**90:00**			**140:00**

Internet of things (IoT) NOS Version No. 1.o NSQF Level 5					
IoT solutions	10:00	25:00			35:00
Customize the remote monitoring solutions	13:00	23:00			36:00
Digital transformation with IoT	15:00	17:00			32:00
Device management	12:00	25:00			37:00
MES/N0523 -Enterprise block chain **NOS Version No. 1.o NSQF Level 5**	**40:00**	**70:00**			**110:00**
Foundation of blockchain and its application	20:00	30:00			50:00
Configuration of hyper ledger fabric	20:00	40:00			60:00
MES/N2502- Prepare computer generated models **NOS Version No. 1.0 NSQF Level 5**	**20:00**	**40:00**			**60:00**
Preparation of computer generated 3D models (including characters machines, sets and props, game modeling, objects, locations/ background elements such as environment, architecture,landscapes, interiors and blend shapes)	20:00	40:00			60:00
MES/N2506- Add textures to models **NOS Version No. 1.0 NSQF Level 5**	**20:00**	30:00			**50:00**
Creation of textures (Character and features - human, animal, character, location, set and props which may include organicand inorganic surfaces such as: Bones, wrinkles, bricks, ground, rust,	20:00	30:00			50:00

wood,tiles, plastic, paper, metal,food, water, fire, skin, hairand eyes, cloth, walls and ceiling, imaginary)					
MES/N0104 Maintain workplace health and safety **NOS Version No. 1.o** **NSQF Level 5**	**15:00**	**21:00**			**50:00**
understanding the health, safety and security risks prevalent in the workplace	05:00	06:00			17:00
knowing the people responsible for health and safety and the resources available	04:00	05:00			14:00
identifying and reporting risks	03:00	05:00			13:00
complying with procedures in the event of an emergency	03:00	05:00			13:00
Total Duration	**260:00**	**620:00**	**140:00**		**1020:00**

Module Details

Module 1: Introducing AR-VR

Terminal Outcomes:

- Describe AR
- Describe VR

Duration: *05:00*	Duration: *10:00*
Theory – Key Learning Outcomes **After the successful completion of this module, the Participant will be able to:**	**Practical – Key Learning Outcomes** **After the successful completion of this module, the Participant will be able to:**
- Explain AR concepts and technologies - Explain VR concepts and technologies	- Create a 360 AR design - Create a VR design.
Classroom Aids:	
Laptop, whiteboard, marker, projector	
Tools, Equipment and Other Requirements	
HP Desktop Computer ,Apple M1 Mac Mini Desktop ,Apple IPad Pro Tab ,Oculus Quest 2 (WIth accessories) - VR HMD ,Television ,Vuforia ,AR SDK ,AR Kit ,ARCore ,Wikitude ,Kudan ,Holo Toolkit,Diary / Notebook ,Pen ,Marker	

Module 2: Prepare model and complete the texture as per real-time engines requirement
Mapped to MES/N0519

Terminal Outcomes:

- Creation of models and texturing

Duration: 40:00	Duration: 80:00
Theory – Key Learning Outcomes **After the successful completion of this module, the Participant will be able to:**	**Practical – Key Learning Outcomes** **After the successful completion of this module, the Participant will be able to:**
- Differentiate between 2D, 3D & 2.5D – Learning about axes – the difference between hi-res and low-res object - MC_Cinematographer_L4_V1Explain AR VR environments - Describe design specifications and enterprise system architecture - prepare digital models and asset content as per design specification	- Create a game model for low details - Model a detailed exterior of a dome and texture it - Develop a new texture and apply various mapping on 3D objects. - Explain how to use appropriate texturing and rendering systems to make displays as per design specification - Illustrate and design components of model - Create character design/frame and structure the character as model - Create the visual style of the project, including colour sets, mood, etc. - Demonstrate how to add textures to models to create photo-realistic models, Texture importing – Texture assigning – Baking – types of textures - Demonstrate the Creation of project – Incremental saving – History window – time line window – Attributes window – UV Editor window - Show the Creation of an object and a curve – Move, zoom, pan tool – Move, rotate, scale tools – extrude tool – Insert edge tool – bevel

Classroom Aids:

Laptop, whiteboard, marker, projector

Tools, Equipment and Other Requirements

HP Desktop Computer ,Apple M1 Mac Mini Desktop ,Apple IPad Pro Tab ,Oculus Quest 2 (WIth accessories) - VR HMD ,Television ,Vuforia ,AR SDK ,AR Kit ,ARCore ,Wikitude ,Kudan ,Holo Toolkit,Diary / Notebook ,Pen ,Marker

Module 3: Test 3D models in the real-time/game environment
Mapped to MES/N0520

Terminal Outcomes:

- Test model performance in game engine

Duration: 50:00	Duration: 90:00
Theory – Key Learning Outcomes **After the successful completion of this module, the Participant will be able to:**	**Practical – Key Learning Outcomes** **After the successful completion of this module, the Participant will be able to:**
- Describe how to use AR VR Development tools - Explain platform boundaries and optimisation techniques - Describe how to integrate models in the AR VR Project - Explain production requirements and function as required	- Perform execution of a prepared project and test for art errors. - Carry out the testing of models to ensure that they function correctly and meet the design specifications. - Demonstrate how to check the continuity ofmodels, textures or paintings and makesure they are fit for purpose of for all required camera positions and angles - Evaluate the quality of the assets in relation to others within the same context in which they will be used - Correct any problems or issues that may arise - Accept feedback in a positive way andmake necessary changes.
Classroom Aids:	
Laptop, whiteboard, marker, projector	
Tools, Equipment and Other Requirements	
HP Desktop Computer ,Apple M1 Mac Mini Desktop ,Apple IPad Pro Tab ,Oculus Quest 2 (WIth accessories) - VR HMD ,Television ,Vuforia ,AR SDK ,AR Kit ,ARCore ,Wikitude ,Kudan ,Holo Toolkit,Diary / Notebook ,Pen ,Marker	

Module 4: Artificial intelligence & machine learning

Mapped to

Terminal Outcomes: After the successful completion of this module, the Participant will be able to:

- Explain the application of Python for data science
- Describe and apply Artificial intelligence
- Recall the ethics and Law in data and analysis
- Describe computer vision and image analysis

Duration: **50***:00:*	**Duration**: *90:00*
Theory – Key Learning Outcomes After the successful completion of this module, the Participant will be able to:	**Practical – Key Learning Outcomes After the successful completion of this module, the Participant will be able to:**
- Apply Python for data science and explain :Python Basics, Python Lists Functions and Packages , Numpy , Matplotlib , Control flow and Pandas - Describe Artificial intelligence	- Demonstrate the application of images using python packages for computer vision - Show how to implement image classification using classical machine learning and deep learning techniques. - Demonstrate the use of data

and discuss and apply

- Recall Ethics and Law in data and analysis

- Recall foundational abilities in applying ethical and legal frameworks for the data profession

- Explain Practical approaches to data and analytics problems, including Big Data and Data Science and AI

- Applied data methods for ethical and legal work in Analytics and AI

- Explain Computer vision and image analysis

- Explore, manipulate, and analyze images using Python packages for computer vision.

augmentation and transfer learning to create highly-effective convolutional neural networks (CNNs)

- Show how to use the classification of images to use object detection and semantic segmentation models. approach to data and analytics problems including big data, data science and AI

- Demonstrate the technical parameters and operational settings of the version control.

- Perform the operations and techniques of the tool.

- Demonstrate image classification using classical machine learning and deep learning techniques.

- Apply the usage of data augmentation and transfer learning to create highly-effective convolutional neural networks (CNNs)

- Demonstrate image classification to use object detection and semantic segmentation models.

- Demonstrate the technical specifications and operational limitations of version control.

Classroom Aids:
Laptop, whiteboard, marker, projector

Tools, Equipment and Other Requirements
HP Desktop Computer ,Apple M1 Mac Mini Desktop ,Apple IPad Pro Tab ,Oculus Quest 2 (WIth accessories) - VR HMD ,Television ,Vuforia ,AR SDK ,AR Kit ,ARCore ,Wikitude ,Kudan ,Holo Toolkit,Diary / Notebook ,Pen ,Marker

Module 5: Deploy Internet of Things (IoT)
Mapped to MES/N0522

Terminal Outcomes: After the successful completion of this module, the Participant will be able to:

- Explain IoT solutions
- Describe Customization of remote monitoring solutions
- Describe Digital transformation with IoT
- Describe Device management

Duration: *50:00*	Duration: *90:00*
Theory – Key Learning Outcomes **After the successful completion of this module. The user will be able to:**	**Practical – Key Learning Outcomes** **After the successful completion of this module. The user will be able to:**

• Describe IoT solutions and discuss how to interpret IoT solution for dummies, apply principles to followfor a successful deployment and analyse IoT connectivity and related technologies
 	
• Discuss the process of selecting aboard for prototyping
 	
• Describe the use of digital signagesolutions for windows IoT platform
 	
• Explain how to run environmentlocally
 	
• Describe the application of IoT Central, maps and an IoT SaaSsolution
 	
• Describe the Customization of : Remote monitoring solutions, UXand redeploy a microservice
 	
• Explain   Edge   intelligence   in   aConnected Factory
 	
   • Recall the reaction to critical device lifecycle events and trigger Actions
 	
   • Explain cold path storage and hot path analytics
 	
   • Describe the Customization of the Remote Monitoring solution accelerator
 	
   • Discuss Digital transformation with IoT, host IoT solution accelerator , scale IoT solution, IoT data and extract insights
 	
      • Describe Edge intelligence in a Connected Factory Discuss sequence IoT Hub primitives and Hub messaging
	• Perform the hosting of IoT solution accelerator
	
	• Show how to scale IoT solution, IoTdata and extract insights
	
	• Perform the sequencing of IoT Hubprimitives and Hub messaging
	
	• Perform the hosting of device management with IoT Hub andprimitives
	
	• perform the examining of automatic device management
	
	• Apply IoT SDKs and developer tools
	
	• Demonstrate technical parameters and operational settings of the version control.
	
	• Perform operations and techniques of the tool.
	
	• Show how to integrate with visualization tools, analyse Hub deviceprovisioning service.
	
	• Demonstrate Device management.
	
	• Show how to use IoT Hub and connect MX Chip, connect a Pi simulator to IoT Hub, visualize time-series data with Time Series Insights.

	- Conduct load test using Device Simulator and configure and monitor IoT devices at scale - Perform host device managementwith IoT Hub and primitives . - Conduct the examining of automaticdevice management, use IoT SDKs and developer tools. - Conduct Hub device provisioning service - Demonstrate technical specifications and operational limitations of version control. - Demonstrate the process of selecting aboard for prototyping - Demonstrate the use of digital signagesolutions for windows IoT platform - Demonstrate the Customization of the Remote Monitoring solution accelerator

Classroom Aids:
Laptop, whiteboard, marker, projector

Tools, Equipment and Other Requirements
HP Desktop Computer ,Apple M1 Mac Mini Desktop ,Apple IPad Pro Tab ,Oculus Quest 2 (WIth accessories) - VR HMD ,Television ,Vuforia ,AR SDK ,AR Kit ,ARCore ,Wikitude ,Kudan ,Holo Toolkit,Diary / Notebook ,Pen ,Marker

Module 6: Describe Enterprise Blockchain

Mapped to MES/N0523

Terminal Outcomes: After the successful completion of this module the trainee will be able to:

- Describe the Foundations of BlockChain
- Explain Ethereum
- Explain Hyperledger Fabric

Duration: *40:00*	**Duration**: *70:00*
Theory – Key Learning Outcomes After the successful completion of this module the participant will be able to:	**Practical – Key Learning Outcomes** After the successful completion of this module the trainee will be able to :
- Describe Foundation of blockchainand its application,What is Blockchain ,Bitcoin and Cryptography, Cryptocurrencies and risks, Consensus algorithms - Describe the Technologies of Blockchain ,Programmable Blockchains - Smart Contracts, Decentralized Apps and Types ofBlockchain. - Describe Blockchain Synergy withother cutting edge technologies - Explain Business Use cases - Explain Ethereum, Addresses, Keys, Accounts, Wallets, Toolchain Installation, Explain Ethereum - Describe solidity, Remix IDE andOther Tools - Explain Embarking Framework, Code walkthroughs - open sourceprojects - Discuss how to design a DApp, Popular Token Standards - Describe Design of secure upgradable contracts, Design patterns - Describe Security Analysis, Unittesting, IPFS and DApps - Explain the limitations of current Ethereum release, Future of Ethereum - Explain the process of configuration of hyper ledger fabric	- Design block chain - Design network structure of ethereum - Demonstrate how to set up the privatenode - Perform HLF runtime - Demonstrate how to install Hyperledger fabric - Show how to configure HyperledgerFabric - Perform the implementation of Smart Contract / Chaincode - Show how to install and Instantiatechain code - Show how to use Client Application(DApp) - Show how to communicate TransportLayer Security (TLS). - Explain how to Configure Hyperledger Fabric - Explain the Network, Consensus - Recall the role of System components - Describe Chaincode / Smart Contract, Client Applications,Implementing your HLF Solution - Explain how to Use-Case Introduction - Decribe how to Create Hyperledger Fabric Blockchain network - Data Confidentiality and Sharing - Implement Smart Contract / Chaincode - Install and Instantiate chain code - Deploy Client Application (DApp) - Modify or upgrade chaincode - Advance HLF Engineering

	• Demonstrate Access Control Lists (ACL), Transport Layer Security (TLS) – Communication, Kafka and HLF, HLF Security, Security Architecture and Threats & Mitigation

Classroom Aids:

Laptop, whiteboard, marker, projector

Tools, Equipment and Other Requirements

HP Desktop Computer ,Apple M1 Mac Mini Desktop ,Apple IPad Pro Tab ,Oculus Quest 2 (WIth accessories) - VR HMD ,Television ,Vuforia ,AR SDK ,AR Kit ,ARCore ,Wikitude ,Kudan ,Holo Toolkit,Diary / Notebook ,Pen ,Marker

Module 7: Prepare computer generated models

Mapped to MES/N2502

Terminal Outcomes:

- Preparation of computer generated 3D models (including characters machines, sets and props, game modeling, objects, locations/ background elements such as environment, architecture, landscapes, interiors and blend shapes)

Duration: 20:00	Duration: 40:00
Theory – Key Learning Outcomes **After the successful completion of this module, the Participant will be able to:**	**Practical – Key Learning Outcomes** **After the successful completion of this module, the Participant will be able to:**
- Describe the preparing of digital models according to the design brief, specifications and technical needs of the project specified in storyboard. - Explain how to create prototypes/pilots for testing. - Perform analysis of the final display medium and adapt / suggest the model for its poly counts, mesh complexity, movement capability etc. under supervision of the art director and character designers.	- Design and develop models consistent with the creative look of the production and in accordance to the script. - Demonstrate how to use modelling software and tools such as Maya, 3D Studio Max, Blender, Mud-Box, Z-brush, Mari. - Test prepared models using basic phonemes test, basic expression test, simulation tests, grayscale turnarounds.

Classroom Aids:
Laptop, whiteboard, marker, projector

Tools, Equipment and Other Requirements
HP Desktop Computer ,Apple M1 Mac Mini Desktop ,Apple IPad Pro Tab ,Oculus Quest 2 (WIth accessories) - VR HMD ,Television ,Vuforia ,AR SDK ,AR Kit ,ARCore ,Wikitude ,Kudan ,Holo Toolkit,Diary / Notebook ,Pen ,Marker

Module 8: Add Textures to models

Mapped to MES/N2506

Terminal Outcomes:

- Creation of textures (Character and features - human, animal, character, location, set and props which may include organic and inorganic surfaces such as: Bones, wrinkles, bricks, ground, rust, wood, tiles, plastic, paper, metal, food, water, fire, skin, hair and eyes, cloth, walls and ceiling, imaginary)

Duration: *20:00*	**Duration**: *30:00*
Theory – Key Learning Outcomes **After the successful completion of this module, the Participant will be able to:**	**Practical – Key Learning Outcomes** **After the successful completion of this module, the Participant will be able to:**
• Explain possibilities for adding textures to models to create photo-realistic models/images	• Model a house and texture it. • Perform Techniques of texture mapping, projection and managing texture seams. • Demonstrate the use of final exhibitionmedium and adapt the textures accordingly. • Show how to develop and add textures to models in accordance to thedesign brief and concept art for different types of models under the supervision of the art director and character artist. • Show how to manage quality of textures during the animation process and ensure uniformity and consistency in the final output • Carry out the project in appropriateformats for others use.
Classroom Aids:	
Laptop, whiteboard, marker, projector	
Tools, Equipment and Other Requirements	
HP Desktop Computer ,Apple M1 Mac Mini Desktop ,Apple IPad Pro Tab ,Oculus Quest 2 (WIth accessories) - VR HMD ,Television ,Vuforia ,AR SDK ,AR Kit ,ARCore ,Wikitude ,Kudan ,Holo Toolkit,Diary / Notebook ,Pen ,Marker	

Module 9: Maintain Workplace Health and Safety

Mapped to MES/N0104

Terminal Outcomes: After the successful completion of this module, the Participant will be able to:

- Discuss the health, safety and security risks prevalent in the workplace and report health and safety issues to the person responsible for health and safety and the resources available.
- Comply with procedures in the event of an emergency
- Discuss the various safety precautions to be taken.

Duration: 15:00	Duration: 21:00

Theory – Key Learning Outcomes
     After the successful completion of this module, the Participant will be ableto:
	Practical – Key Learning Outcomes
	     After the successful completion of this module, the Participant will be able to:

- Recall health, safety and security-related guidelines and identify the risks involved. - Maintain correct posture while working and maintain and use the	- Identify the different types of health and safety hazards in a workplace - Practice safe working practices for own job role - Perform evacuation procedures and

first aid kit whenever required.

- report health and safety risks/ hazards to concerned personnel
- Recall people responsible for health and safety and able to contact in case of emergency
- Illustrate security signals and other safety and emergency signals
- Explain the process to identify and report risk.
- Enumerate and recommend opportunities for improving health, safety, and security to the designated person
- Describe how to 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
- Explain the impact of the violation of safety procedures.

other arrangements for handling risks

- Perform the reporting of hazard
- identify and document potential risks like sitting postures while using the computer, eye fatigue and other hazards in the workplace
- Demonstrate the use of Personal Protective Equipment (PPE) appropriately.

Classroom Aids:
Laptop, whiteboard, marker, projector, Health and Safety Signs and policy
Tools, Equipment and Other Requirements
Health and Safety Signs and policy

Mandatory Duration: *140:00*	Recommended Duration: *00:00*

Module Name: On-the-Job Training
Location: On Site

Terminal Outcomes

After the successful completion of On-the-Job Training the participant will be able to acquire skills to:

- Prepare model and complete the texture as per real-time engines requirement
- Test 3D models in the real-time/game environment
- Artificial intelligence & machine learning
- Deploy Internet of things (IoT)
- Enterprise block chain
- Maintain workplace health and safety

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	*Specialization*	*Years*	*Specialization*	
Graduate from any other polytechnic/	**Technical artist – AR/VR**	5	**Relevant experience required in AR- VR development in the field of**	3	-	-

reputed institute in the core subject			Game development.	3		

Trainer Certification	
Domain Certification	**Platform Certification**
Certified for Job Role: "Technical artist AR -VR" mapped to QP: "MES/Q0510", version 1.0. Minimum accepted score as per SSC guidelines is 80%.	**Recommended that the Trainer is certified for the Job Role: "Trainer", mapped to the Qualification Pack: "MEP/Q2601, v1.0 Trainer" with the scoring of a minimum of 80%.**

Assessor Requirements

Assessor Prerequisites					
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
Class XII	NA	7	Relevant experience required in AR/VR development in the field of Game development.	4	–	–
OR						
Graduation	AR/VR Developer	6	Relevant experience required in AR/ VR development in the field of Game development.	3		

Assessor Certification	
Domain Certification	Platform Certification
Certified for Job Role: "Technical artist AR -VR" mapped to QP: "MES/Q0510", version 1.0. Minimum accepted score as per SSC guidelines is 80%.	Recommended that the Assessor is certified for the Job Role: "Assessor", mapped to the Qualification Pack: "MEP/Q2701, v1.0 Assessor" with the scoring of a minimum 80%.

Assessment Strategy

Assessment system Overview:-

Assessment will be carried out by MESC affiliated assessment partners. Based on the results of

assessment, MESC certifies the learners. Candidates have to pass online theoretical assessment which is approved by MESC. The assessment will have both theory and practical components in 30:70 ratio. While theory assessment is summative and an online written exam; practical will involve

demonstrations of applications and presentations of procedures and other components. Practical assessment will also be summative in nature.

Testing Environment:-

Training partner has to share the batch start date and end date, number of trainees and the job role. Assessment is fixed for a day after the end date of training. It could be next day or later. Assessment will be conducted at the training venue. Question bank of theory and practical will be prepared by assessment agency and approved by MESC. From this set of questions, assessment agency will prepare the question paper. Theory testing will include multiple choice questions, pictorial question, etc. which will test the trainee on theoretical knowledge of the subject. The theory and practical assessments will be carried out on same day. If there are candidates in large number, more assessors and venue will be organized on same day of the assessment.

Assessment			
Assessment Type	Formative or Summative	Strategies	Examples
Theory	Summative	Written Examination	Knowledge of facts related to the job role and functions. Understanding of principles and concepts related to the job role and functions
Practical	Summative	Structured tasks	Presentation
Viva	Summative	Questioning and Probing	Mock interview on topics

Assessment Quality Assurance framework

Only certified assessor can be assigned for conducting assessment. Provision of 100 % video recording with clear audio to be maintained and the same is to be submitted to MESC. The training partner will intimate the time of arrival of the assessor and time of leaving the venue.

Methods of Validation:-

Unless the trainee is registered, the person cannot undergo assessment. To further ensure that the person registered is the person appearing for assessment, id verification will be carried out. Aadhar card number is required of registering the candidate for training. This will form the basis of further verification during the assessment. Assessor conducts the assessment in accordance with the assessment guidelines and question bank as per the job role. The assessor carries tablet with the loaded questions. This tablet is geotagged and so it is monitored to check their arrival and completion of assessment. Video of the practical session is prepared and submitted to MESC.

Random spot checks/audit is conducted by MESC assigned persons to check the quality of assessment. Assessment agency will be responsible to put details in SIP. MESC will also validate the data and result received from the assessment agency.

Method of assessment documentation and access

The assessment agency will upload the result of assessment in the portal. The data will not be accessible for change by the assessment agency after the upload. The assessment data will be validated by MESC assessment team. After upload, only MESC can access this data. MESC approves the results within a week and uploads it.