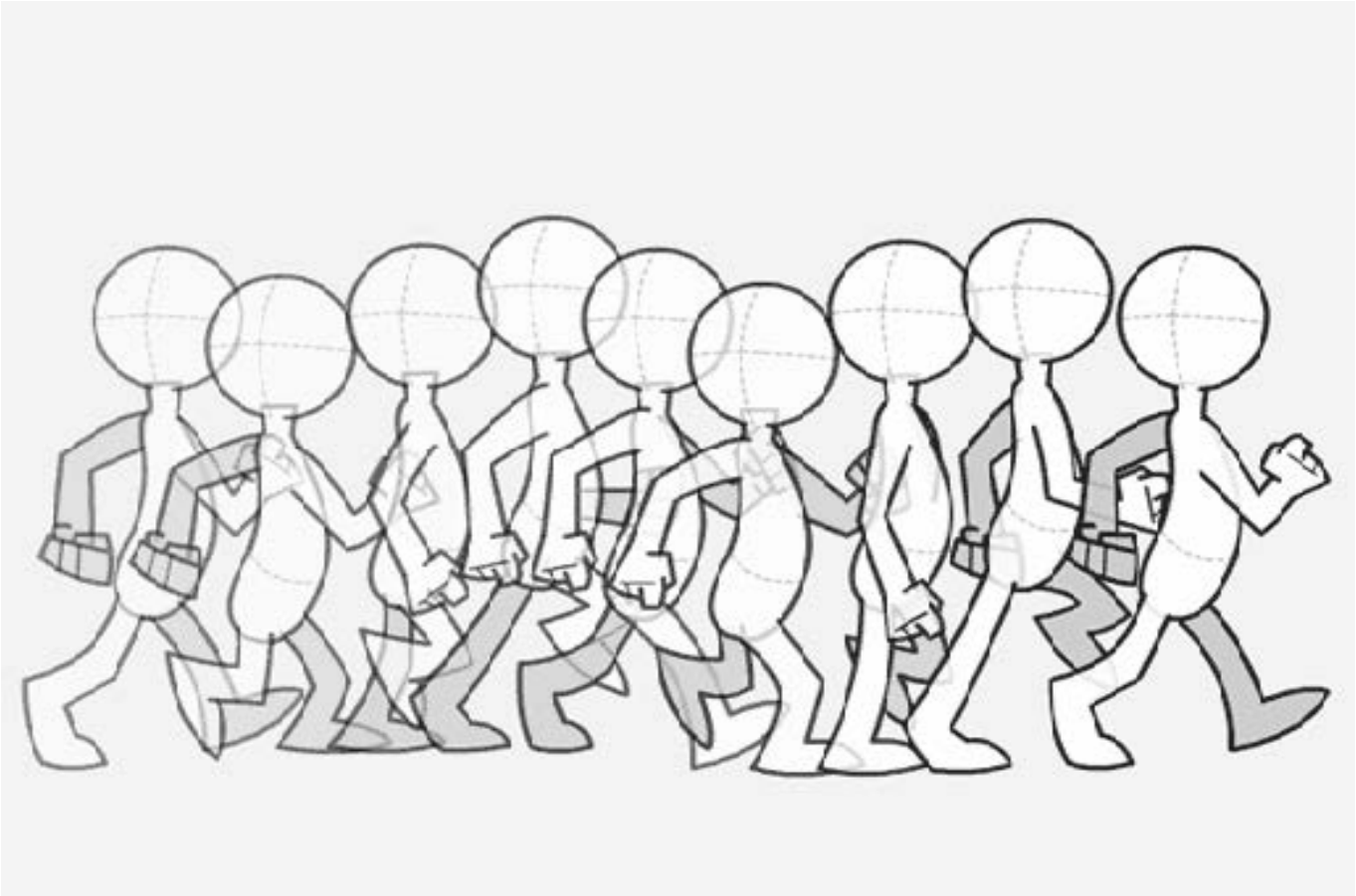
Qualification Pack



Animator

QP Code: PWD/MES/Q0701

Version: 2.0

NSQF Level: 4

Skill Council for PwD || 501, City Centre, 5th Floor, 12/5, Plot 5, Sector 12, Dwaraka
New Delhi 110076

Adoption of Job Role for PwD : Job mapping is critical for skill training of PwD so that the livelihood opportunity looks at him/ her not because he/ she is having a disability but because of the skill. Mapping with a disability involves research with subject matter experts (SMEs) with a view on the industry requirement without compromising on performance outcome. In cases, mapping is also supported by the use of assistive tools/ technology.

Expository Mapped Parameters

Sector	PwD
Originating SSC	Media & Entertainment
Original QP code	MES/Q0701
QP Version	2.0
Expository NSQF Level	4
Disability Type	Locomotor DisabilityLeprosy Cured PersonDwarfismAcid Attack Victims
Disability Category	Physical Disability/Physically Handicapped
Expository NSQC Approval Date	31/01/2023
Expository Reference code on NQR	QG-04-PD-00160-2023-V1-SCPWD
Expository NQR Version	2.0
Expository Next Review Date	31/01/2024

Qualification Pack

Expository Code	Expository Version	Expository Name	Minimum Entry Criteria	Expository Linked On
E001	1.0	Locomotor Disability	12th Class (12th grade pass OR 11th grade pass with 1 year experience OR Completed 2nd year of 3-year diploma (after 10th) and pursuing regular diploma OR 10th grade pass plus 1-year NTC/ NAC plus 1 year experience OR 10th Grade pass with 2 year NTC (after 10th) OR 10th Grade Pass with 2 year relevant experience OR 8th grade pass plus 2-year NTC (after 8th) plus 1 Year NAC/CITS with 1 year of relevant experience OR 10th grade pass and pursuing continuous schooling OR Previous relevant Qualification of NSQF Level 3.0 with minimum education as 8th Grade pass with 3 year of relevant experience Minimum Job Entry Age: 18 years),	N/A

Contents

MES/Q0701: Animator

Brief Job Description

Individuals at this job need to refer to concept artwork prepared by animation artists to produce animated sequence of 2D/3D images using animation software.

Personal Attributes

This job requires the individual to know the fundamentals of life drawing including human anatomy, emotions, actions and expressions. The individual must know and keep updated on graphics and animation software and apply principles of design, animation and film-making to create animation sequences. The individual must be able to collaborate and work effectively as a member of a team to deliver work-products within requisite timelines.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. MES/N0701: Understand Animation Requirements
2. MES/N0702: Conceptualize Creative Ideas for Production
3. MES/N0703: Plan Tools and Workflow
4. MES/N0704: Produce 2D Animation
5. MES/N0705: Produce 3D Animation
6. MES/N0706: Produce Stop Motion Animation
7. MES/N0104: Maintain Workplace Health & Safety

Qualification Pack (QP) Parameters

Sector	Media & Entertainment
Sub-Sector	Animation, Gaming
Occupation	Animator
Country	India
NSQF Level	4

Credits	NA
Aligned to NCO/ISCO/ISIC Code	NCO 2015- 2166.0201
Minimum Educational Qualification & Experience	12th Class with 1 Year of experience OR I.T.I (2 years after 10th) with 1 Year of experience
Minimum Level of Education for Training in School	10th Class
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	NA
Next Review Date	27/01/2027
Deactivation Date	31/01/2024
NSQC Approval Date	27/01/2022
Version	2.0
Reference code on NQR	QG-04-PD-00160-2023-V1-SCPWD
NQR Version	2.0

Remarks:

Next Review Date 28/01/2027

MES/N0701: Understand Animation Requirements

Description

This OS unit is about understanding the project brief, product requirements and methodology/technique(s) to be used for production

Elements and Performance Criteria

Understanding production requirements

To be competent, the user/individual on the job must be able to:

PC1. understand, clarify and agree on the project brief from the director, art director and supervisors. this could include the following: creative objectives, as appropriate to the role concept/style of animation and the desired look target audiences project timelines and constraints

Understanding the type of end-product that needs to be produced

To be competent, the user/individual on the job must be able to:

PC2. understand various parameters of the end-product that would influence production requirements (e.g. duration, style, number of characters, subject and storyline, culture and period the story is based in, effects required, format, aspect ratio, music etc.)

PC3. understand the treatment of the output that needs to be produced, the volume of the final output

PC4. understand the shot sequence (high-level) and continuity/consistency required

Selecting the animation technique(s) to be used

To be competent, the user/individual on the job must be able to:

PC5. select an appropriate animation technique based on the output required, which could include: 2d animation: cell animation (e.g. early episodes of tom and jerry (series)) cut out animation (e.g. charlie and lola (series)) limited animation (e.g. south park, empire square (series) 3d animation: realistic 3d animation- motion capture + key frame animation (e.g. in films such as beowulf, avatar and lord of the rings gollum) semi-realistic 3d animation (e.g. films like little krishna and brave) toon 3d animation (e.g. films such as kung-fu panda) simulation of traditional & stop motion techniques (e.g. advertisements such as vineta cucini, amaron battery etc.) stop-motion animation others including vfx, stereo conversion

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. the objective/purpose that the end-product intends to achieve

KU2. the needs and expectations of the producer/project sponsor

KU3. the expectations of the director, art director and supervisor with respect to the process and techniques to be used

KU4. limitations on the time and resources and issues that might arise during production

KU5. the animation process and technical pipeline to be followed for animation

KU6. the format of the end-product and the medium on which it would be exhibited

KU7. the fundamentals and principles of animation

KU8. the principles of animation, posing and character emotion

KU9. the basic rules of animation including squash and stretch, anticipation, staging, straight action, pose-to-pose, follow-through, overlapping action, ease in ease out, exaggeration, timing, appeal and secondary action

KU10. life drawing including human anatomy, emotions, actions and expressions

KU11. production concepts and their applicability to each project

KU12. the various techniques available for animating objects

KU13. how to observe, act and emote

KU14. the technical aspects of the job undertaken by other members of the production team (before and after the work of an animator)

KU15. applicability of various techniques to post production of each project

KU16. intellectual property rights to ensure that the end-product, elements, artwork etc. created is unique and does not infringe upon the rights of other products

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. document the project brief that can serve as a reference document for circulation to the production team (supervisor)

GS2. document decisions on the technique to be used and reasons thereof (supervisor)

GS3. document other areas (e.g. requirements of the target audience, market, end-product, reference links, videos etc.) that may be relevant for the production team

GS4. document notes on the project brief, techniques and other useful information for personal use (team)

GS5. read and understand the script and determine animation requirements (including specifics of the characters, country, culture etc.)

GS6. read about emerging techniques in animation and update skills accordingly

GS7. read and understand the comments given by the supervisor, director or customer

GS8. research the various types of end-products that have been produced and are available in the public domain

GS9. understand, clarify and agree on the project brief and parameters of the end-product with the producer and director

GS10. discuss and agree on the technique to be used with the director and art director

GS11. communicate the project brief effectively to team members, other animators and members from various departments involved in the animation process (supervisor)

GS12. clarify needs and communicate with clients (knowledge of english is preferred)

GS13. document creative and production requirements, for oneself or the wider team, in an organized manner

GS14. work effectively as a member of the team and help realise overall timelines

GS15. prioritise work-products and tasks based on requirements

GS16. understand the perspective of client, director, art director and supervisors so as to critically evaluate and select appropriate animation techniques

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Understanding production requirements	**20**	**15**	**-**	**-**
PC1. understand, clarify and agree on the project brief from the director, art director and supervisors. this could include the following: creative objectives, as appropriate to the role concept/style of animation and the desired look target audiences project timelines and constraints	20	15	-	-
Understanding the type of end-product that needs to be produced	**25**	**30**	**-**	**-**
PC2. understand various parameters of the end-product that would influence production requirements (e.g. duration, style, number of characters, subject and storyline, culture and period the story is based in, effects required, format, aspect ratio, music etc.)	10	15	-	-
PC3. understand the treatment of the output that needs to be produced, the volume of the final output	10	10	-	-
PC4. understand the shot sequence (high-level) and continuity/consistency required	5	5	-	-
Selecting the animation technique(s) to be used	**5**	**5**	**-**	**-**
PC5. select an appropriate animation technique based on the output required, which could include: 2d animation: cell animation (e.g. early episodes of tom and jerry (series)) cut out animation (e.g. charlie and lola (series)) limited animation (e.g. south park, empire square (series) 3d animation: realistic 3d animation- motion capture + key frame animation (e.g. in films such as beowulf, avatar and lord of the rings gollum) semi-realistic 3d animation (e.g. films like little krishna and brave) toon 3d animation (e.g. films such as kung-fu panda) simulation of traditional & stop motion techniques (e.g. advertisements such as vineta cucini, amaron battery etc.) stop-motion animation others including vfx, stereo conversion	5	5	-	-
NOS Total	**50**	**50**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	MES/N0701
NOS Name	Understand Animation Requirements
Sector	Media & Entertainment
Sub-Sector	Animation, Gaming
Occupation	Animator
NSQF Level	4
Credits	1
Version	1.0
Last Reviewed Date	30/07/2013
Next Review Date	24/02/2027
NSQC Clearance Date	24/02/2022

MES/N0702: Conceptualize Creative Ideas for Production

Description

This OS unit is about detailing the creative and design aspects of production

Elements and Performance Criteria

Gathering visual references to serve as aids during the animation process

To be competent, the user/individual on the job must be able to:

PC1. research and find character references that aid and inspire designs, including: previously executed animation work-products animations products available in the public domain artwork and other human, animal and creature behavioral videos

Conceptualising creative ideas for animation

To be competent, the user/individual on the job must be able to:

PC2. generate creative concepts and ideas for production using the concept art-work prepared by the designers, including: characters look, colors, dressing, attitude and behavior character expressions, emotions, poses character movement (e.g. walk, run, jump) and timing (body mechanics) costume designs color, lighting concepts and shadow placement, environment

PC3. present and discuss concepts with the director, art director or supervisors

PC4. agree on the style of the work-product that would most appeal to the target audience, taking into account production timelines and requirements

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. the guidelines provided by the director, animation supervisor and the producer with respect to characters and look and feel of the end-product

KU2. the elements/concept artwork (prepared by the character designers and the background/layout designers) and the colour/lighting/shadow keys (prepared by the art director, colour key artists)

KU3. the resources that are going to be used for production

KU4. the trends in animation and reference work-products produced before that closely relate to the style and technique that needs to be produced

KU5. how to observe and study human behavior and expressions to help visualise concepts

KU6. how to enact and emote

KU7. how to create hook up poses and animation

KU8. how to use camera angles to emphasize performance

KU9. new media technology including what is good for the web, mobile, tablets

KU10. how to evaluate the strengths and weaknesses of the hardware, software being used in the production pipeline

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. document links, animation videos, artwork etc. that can be used as references during the production process

GS2. document character profiles and background descriptions, to help present to directors and supervisors, and guide the production process

GS3. interpret the storyboard/animatic correctly and understand the mood of the sequence/shot

GS4. research visual and written content to find appropriate references to be used during animation

GS5. keep apprised of the trends and work-products that are being produced in the market

GS6. suggest creative ideas to the director and animation supervisor

GS7. communicate clearly and collaborate effectively with colleagues from various departments

GS8. document creative ideas and concepts in an organized manner

GS9. work effectively as a member of the team and help realise overall timelines

GS10. prioritise work-products and tasks based on requirements

GS11. critically evaluate visual and written content/products during concept conceptualization

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Gathering visual references to serve as aids during the animation process	**20**	**20**	**-**	**-**
PC1. research and find character references that aid and inspire designs, including: previously executed animation work-products animations products available in the public domain artwork and other human, animal and creature behavioral videos	20	20	-	-
Conceptualising creative ideas for animation	**30**	**30**	**-**	**-**
PC2. generate creative concepts and ideas for production using the concept art-work prepared by the designers, including: characters look, colors, dressing, attitude and behavior character expressions, emotions, poses character movement (e.g. walk, run, jump) and timing (body mechanics) costume designs color, lighting concepts and shadow placement, environment	15	10	-	-
PC3. present and discuss concepts with the director, art director or supervisors	10	10	-	-
PC4. agree on the style of the work-product that would most appeal to the target audience, taking into account production timelines and requirements	5	10	-	-
NOS Total	**50**	**50**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	MES/N0702
NOS Name	Conceptualize Creative Ideas for Production
Sector	Media & Entertainment
Sub-Sector	Animation, Gaming
Occupation	Animator
NSQF Level	4
Credits	2
Version	1.0
Last Reviewed Date	30/07/2013
Next Review Date	24/02/2027
NSQC Clearance Date	24/02/2022

MES/N0703: Plan Tools and Workflow

Description

This OS unit is about selecting the most appropriate software tool(s) for production and planning the workflow for animation

Elements and Performance Criteria

Understanding the software tools to be used for production

To be competent, the user/individual on the job must be able to:

PC1. stay apprised of the various types of software tools available for production in the market including: 2d animation: toon boom harmony, adobe flash, hand-drawing 3d animation: autodesk maya, xsi, motion builder, 3d studio max, blender other custom and in-house tools

PC2. research and recommend the most appropriate tools for the production

Understanding and following the work plan

To be competent, the user/individual on the job must be able to:

PC3. Understand the workplan including production schedule, workflow, timelines, department wise output targets and technical specifications for the show

PC4. evaluate timelines for workflow, for oneself or the wider animation team, in accordance with the production schedule

PC5. read, follow and update the production workflow/schedule, deliverables and timelines with the director, art director and supervisors

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. the production process followed by the organization

KU2. the production team and their individual roles and capabilities

KU3. the standards for quality set by the organization

KU4. the production process and creative brief

KU5. the software tools and equipment available in-house and/or through third-party providers

KU6. the nuances of various tools and how to suggest the best tool suitable for the production

KU7. traditional drawing tools and techniques

KU8. how to plan a shot-break-up

KU9. how to prepare a production schedule, including a break-up of activities that would need to be performed and deliverables that would need to be produced (supervisor)

KU10. how to estimate the expected effort, expected time for production and delivery keeping in mind the delivery dates, quality standards and project schedule (supervisor)

KU11. the principles of project management like project planning, scheduling, effort estimation, resource requirements (right from people to machines, space and communication tools)

KU12. risk and mitigation planning

KU13. rework and review management (efficiency and effectiveness)

KU14. techniques to identify trends in rework and propose/implement corrective action

KU15. cpm and pert techniques

KU16. configuration management

KU17. the technical aspects of the job undertaken by other members of the production team (before and after the work of an animator)

KU18. how to prepare a detailed work plan and demarcate roles and responsibilities to members of the production team (supervisor)

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. prepare the work-plan (production plan and schedule) in an appropriate format that can be used as a reference point for planning workflow and assigning responsibilities(supervisor)

GS2. track the workflow on a regular basis and document deviations from timelines (supervisor)

GS3. create and present project status reports

GS4. write in english (added advantage)

GS5. keep apprised of the various software tools that are being used to produce animation

GS6. read and understand the software manuals and help tools, where required

GS7. read and understand the production and creative brief prepared by the director and art director

GS8. read and understand notes, instructions and inputs from clients

GS9. read in english (added advantage)

GS10. clarify the production and creative brief from the director, art director and supervisors

GS11. understand the production specifications and quality standards to be maintained

GS12. discuss and agree upon the software tools to be used for production

GS13. discuss and agree upon the production schedule and work plan

GS14. communicate effectively with team members to demarcate workflow and responsibilities

GS15. seek clarifications on the work plan from supervisors

GS16. assess the effort, duration and cost involved for each work activity

GS17. plan the production workflow, timelines and deliverables

GS18. agree on the roles and responsibilities of the team members

GS19. foresee any risks, issues and challenges that might arise during the production environment and plan accordingly

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Understanding the software tools to be used for production	**20**	**20**	**-**	**-**
PC1. stay apprised of the various types of software tools available for production in the market including: 2d animation: toon boom harmony, adobe flash, hand-drawing 3d animation: autodesk maya, xsi, motion builder, 3d studio max, blender other custom and in-house tools	10	10	-	-
PC2. research and recommend the most appropriate tools for the production	10	10	-	-
Understanding and following the work plan	**30**	**30**	**-**	**-**
PC3. Understand the workplan including production schedule, workflow, timelines, department wise output targets and technical specifications for the show	10	10	-	-
PC4. evaluate timelines for workflow, for oneself or the wider animation team, in accordance with the production schedule	10	10	-	-
PC5. read, follow and update the production workflow/schedule, deliverables and timelines with the director, art director and supervisors	10	10	-	-
NOS Total	**50**	**50**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	MES/N0703
NOS Name	Plan Tools and Workflow
Sector	Media & Entertainment
Sub-Sector	Animation, Gaming
Occupation	Animator
NSQF Level	4
Credits	2
Version	1.0
Last Reviewed Date	30/07/2013
Next Review Date	24/02/2027
NSQC Clearance Date	24/02/2022

MES/N0704: Produce 2D Animation

Description

This OS unit is about producing a set of 2D animated images, based on the storyboard, which would create an illusion of movement once played back in a sequential manner.

Elements and Performance Criteria

Preparing a prototype 2D work product/pre-visualisation

To be competent, the user/individual on the job must be able to:

PC1. follow the storyboard for composition i.e. positioning of the character with respect to the background and camera to create the desired animation

PC2. draw/source key frame drawings to establish reference points for poses

Preparing 2D animation end-products

To be competent, the user/individual on the job must be able to:

PC3. incorporate audio/music assets

PC4. create shadows for animation using pre-defined lighting keys

PC5. bring assets together to produce sequences and scenes/shots as per requirements and ensuring continuity

PC6. ensure that the hook-up/transition from one scene to another is done properly

PC7. how to work with layers and get a good perspective view

Using 2D animation tools

To be competent, the user/individual on the job must be able to:

PC8. work effectively within the team and with other departments, namely,assets, lighting and effects

Reviewing, refining and storing end-products

To be competent, the user/individual on the job must be able to:

PC9. critically review animation produced, keeping in mind creative and design specifications and the production brief

PC10. refine the output based on deviations observed and/or modifications required within requisite timelines

PC11. ensure that work-products meet quality standards (so that they can be approved with minimum iterations) and are delivered in requisite timelines

PC12. how to achieve the required output targets

Working effectively within the animation team

To be competent, the user/individual on the job must be able to:

PC13. organise, store and manage work-products into file formats using standard file naming conventions and maintain assets for further use

PC14. train junior animators to improve their output quality and skills, if appropriate to the role

PC15. apply principles of design, 2d animation and film-making to create sequences and scenes/shots

PC16. apply varied techniques and styles based on the requirement

PC17. use graphics and animation software to produce in-between poses for animation

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. the objective/purpose that the end-product intends to achieve
KU2. responsibilities and scope of work for various departments
KU3. the expectations of the client, director, animation supervisor and the producer with respect to the process, techniques to be used and guidelines with respect to characters and look and feel of the end-product
KU4. limitations on the effort, schedule, resources and issues that might arise during production
KU5. the production requirements and quality that needs to be reflected in the final output
KU6. the timelines within which the product needs to be delivered
KU7. the fundamentals and principles of animation and film-making
KU8. life drawing including human anatomy, emotions, actions and expressions
KU9. how to enact and emote; and thereby animate characters in accordance to the demands of the script and animatic
KU10. principles of movement and timing
KU11. how to work with graphics and animation software including adobe flash, harmony and understand their specifics
KU12. design standards and specifications that needs to be complied with to produce the final output
KU13. the interaction between various characters in a given scene and bring out that dynamic in the animation
KU14. applicable health and safety guidelines

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. report output, efforts and schedule taken to complete the allotted task
GS2. read and understand the script and character descriptions
GS3. read the work plan and production schedule to ensure that progress is in line
GS4. suggest creative ideas to the director and animation supervisor
GS5. communicate clearly and collaborate effectively with colleagues who are working with the previous or next scenes/shots
GS6. understand the modifications required from the director, animation supervisor and producer
GS7. discuss the challenges faced during production and discuss ways to address
GS8. such challenges in future projects
GS9. make decisions in order to be able to work collectively and independently, where required
GS10. understand shot break up and plan effort and time required for each element of the shot
GS11. how to plan and prioritise individual timelines and deliver on schedule
GS12. work effectively as a member of the team and help realise overall timelines
GS13. prioritise work-products and tasks based on requirements
GS14. address comments and make changes

GS15. seek assistance and guidance from the director, art director and supervisors, where required

GS16. improve work-products and performance based on feedback received and through self-appraisal

GS17. understand the perspective of client, director, art director and supervisors and apply it to the animation being produced

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Preparing a prototype 2D work product/pre-visualisation	**10**	**10**	**-**	**-**
PC1. follow the storyboard for composition i.e. positioning of the character with respect to the background and camera to create the desired animation	5	5	-	-
PC2. draw/source key frame drawings to establish reference points for poses	5	5	-	-
Preparing 2D animation end-products	**13**	**12**	**-**	**-**
PC3. incorporate audio/music assets	3	2	-	-
PC4. create shadows for animation using pre-defined lighting keys	2	3	-	-
PC5. bring assets together to produce sequences and scenes/shots as per requirements and ensuring continuity	3	2	-	-
PC6. ensure that the hook-up/transition from one scene to another is done properly	2	3	-	-
PC7. how to work with layers and get a good perspective view	3	2	-	-
Using 2D animation tools	**2**	**3**	**-**	**-**
PC8. work effectively within the team and with other departments, namely,assets, lighting and effects	2	3	-	-
Reviewing, refining and storing end-products	**10**	**10**	**-**	**-**
PC9. critically review animation produced, keeping in mind creative and design specifications and the production brief	3	2	-	-
PC10. refine the output based on deviations observed and/or modifications required within requisite timelines	2	3	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. ensure that work-products meet quality standards (so that they can be approved with minimum iterations) and are delivered in requisite timelines	2	3	-	-
PC12. how to achieve the required output targets	3	2	-	-
Working effectively within the animation team	**15**	**15**	**-**	**-**
PC13. organise, store and manage work-products into file formats using standard file naming conventions and maintain assets for further use	2	3	-	-
PC14. train junior animators to improve their output quality and skills, if appropriate to the role	2	3	-	-
PC15. apply principles of design, 2d animation and film-making to create sequences and scenes/shots	5	5	-	-
PC16. apply varied techniques and styles based on the requirement	3	2	-	-
PC17. use graphics and animation software to produce in-between poses for animation	3	2	-	-
NOS Total	**50**	**50**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	MES/N0704
NOS Name	Produce 2D Animation
Sector	Media & Entertainment
Sub-Sector	Animation, Gaming
Occupation	Animator
NSQF Level	4
Credits	3
Version	1.0
Last Reviewed Date	30/07/2013
Next Review Date	24/02/2027
NSQC Clearance Date	24/02/2022

MES/N0705: Produce 3D Animation

Description

This OS unit is about animating 3D models using relevant techniques, based on the storyboard

Elements and Performance Criteria

Preparing a prototype 3D work product/pre-visualisation

To be competent, the user/individual on the job must be able to:

PC1. follow the storyboard for composition (eg: positioning of the character with respect to the background/camera to create the desired animation)

PC2. prepare prototype work product/pre-visualisation

Preparing 3D animation end-products

To be competent, the user/individual on the job must be able to:

PC3. apply principles of design, 3d animation and film-making to create sequences and scenes/shots

PC4. animate expressions and lip movements to match dialogues and sound

PC5. communicate requirements to camera and lighting for motion capture, where required

PC6. work with motion capture data received from the motion/ performance capture studio (clean up the data and map animation data to 3d models)

Applying 3D animation techniques

To be competent, the user/individual on the job must be able to:

PC7. apply 3d animation techniques, including: realistic 3d animation- motion capture + key frame animation (e.g. in films such as beowulf, avatar and lord of the ringss gollum) semi-realistic 3d animation (e.g. in films such as little krishna and brave) toon 3d animation (e.g. films such as kung-fu panda) simulation of traditional & stop motion techniques (e.g. advertisements such as vineta cucini, amaron battery etc.)

Using 3D animation tools

To be competent, the user/individual on the job must be able to:

PC8. produce 3d movements and performance with the help of 3d animation tools such as autodesk maya, xsi, 3d studio max, blender, motion capture tools like marker tracking cameras and inertial suits

Reviewing, refining and storing end-products

To be competent, the user/individual on the job must be able to:

PC9. critically review animation produced, keeping in mind creative and design specifications and the production brief

PC10. refine the output based on deviations observed and/or modifications required within requisite timelines

PC11. ensure that work-products meet quality standards (so that they can be approved with minimum iterations) and are delivered in requisite timelines

PC12. organise, store and manage work-products into file formats using standard file naming conventions and maintain assets for further use

Working effectively within the animation team

To be competent, the user/individual on the job must be able to:

PC13. work and communicate effectively within the team and other departments, namely design, modeling/rigging, texturing, editing, rendering, compositing

PC14. train junior animators to improve their output quality and skills, if appropriate to the role

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. the objective/purpose that the end-product intends to achieve

KU2. the profile of the target audience for the end-product

KU3. responsibilities and scope of work expected from the animator

KU4. the expectations of the client, director, animation supervisor and the producer with respect to the process, techniques to be used and guidelines with respect to characters and look and feel of the end-product

KU5. limitations on the effort, duration, schedule and resources and issues that might arise during production

KU6. the production requirements and quality that needs to be reflected in the final output

KU7. the timelines within which the product needs to be delivered

KU8. the typical processes involved 3d animation production i.e. staging, blocking, 1st. level animation, lip-sync and facials, final animation, specialised animation (cloth and hair simulation), secondary animation (accessories), lighting & rendering, sfx and compositing

KU9. applicable health and safety guidelines

KU10. basic/advanced scripting

KU11. the fundamentals and principles of 3d animation, 3d environments and film-making

KU12. art and visual treatment

KU13. fundamentals of motion capture and performance capture technologies

KU14. principles of movement and timing

KU15. principles of human/ animal/ character anatomy and how they can be applied to animation

KU16. how to observe and study human/ animal/ character behavior and expressions to help visualise concepts

KU17. how to enact and emote; and thereby animate characters in accordance to the demands of the script and animatic

KU18. properties of the surfaces that are being used in the animation

KU19. how to work with graphics and animation software including autodesk maya, softimage, xsi, 3d studio max and blender

KU20. design standards and specifications that needs to be complied with to produce the final output

KU21. 3d output and delivery formats

KU22. basics of modeling and rigging (added advantage)

KU23. applicable health and safety guidelines

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. report output, efforts and schedule taken to complete the allotted task

GS2. read and understand the script and character descriptions

GS3. read the work plan and production schedule to ensure that progress is in line

GS4. read and understand the short division, character identification and frames planned during motion / performance capture

GS5. suggest creative ideas to the director and animation supervisor

GS6. communicate clearly and collaborate effectively with colleagues who are working with the previous or next scenes/shots

GS7. understand the modifications required from the director, animation supervisor and producer

GS8. discuss the challenges faced during production and discuss ways to address

GS9. how to plan individual timelines and deliver on schedule

GS10. work effectively as a member of the team and help realise overall timelines

GS11. prioritise work-products and tasks based on requirements

GS12. understand shot break up and plan effort and time required for each element of the shot

GS13. address comments and make changes

GS14. seek assistance and guidance from the director, art director and supervisors, where required

GS15. improve work-products and performance based on feedback received and through self-appraisal

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Preparing a prototype 3D work product/pre-visualisation	**15**	**20**	**-**	**-**
PC1. follow the storyboard for composition (eg: positioning of the character with respect to the background/camera to create the desired animation)	10	15	-	-
PC2. prepare prototype work product/pre-visualisation	5	5	-	-
Preparing 3D animation end-products	**13**	**12**	**-**	**-**
PC3. apply principles of design, 3d animation and film-making to create sequences and scenes/shots	5	5	-	-
PC4. animate expressions and lip movements to match dialogues and sound	2	3	-	-
PC5. communicate requirements to camera and lighting for motion capture, where required	3	2	-	-
PC6. work with motion capture data received from the motion/ performance capture studio (clean up the data and map animation data to 3d models)	3	2	-	-
Applying 3D animation techniques	**2**	**3**	**-**	**-**
PC7. apply 3d animation techniques, including: realistic 3d animation- motion capture + key frame animation (e.g. in films such as beowulf, avatar and lord of the ringss gollum) semi-realistic 3d animation (e.g. in films such as little krishna and brave) toon 3d animation (e.g. films such as kung-fu panda) simulation of traditional & stop motion techniques (e.g. advertisements such as vineta cucini, amaron battery etc.)	2	3	-	-
Using 3D animation tools	**3**	**2**	**-**	**-**
PC8. produce 3d movements and performance with the help of 3d animation tools such as autodesk maya, xsi, 3d studio max, blender, motion capture tools like marker tracking cameras and inertial suits	3	2	-	-
Reviewing, refining and storing end-products	**12**	**8**	**-**	**-**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC9. critically review animation produced, keeping in mind creative and design specifications and the production brief	3	2	-	-
PC10. refine the output based on deviations observed and/or modifications required within requisite timelines	3	2	-	-
PC11. ensure that work-products meet quality standards (so that they can be approved with minimum iterations) and are delivered in requisite timelines	3	2	-	-
PC12. organise, store and manage work-products into file formats using standard file naming conventions and maintain assets for further use	3	2	-	-
Working effectively within the animation team	**5**	**5**	**-**	**-**
PC13. work and communicate effectively within the team and other departments, namely design, modeling/rigging, texturing, editing, rendering, compositing	2	3	-	-
PC14. train junior animators to improve their output quality and skills, if appropriate to the role	3	2	-	-
NOS Total	**50**	**50**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	MES/N0705
NOS Name	Produce 3D Animation
Sector	Media & Entertainment
Sub-Sector	Animation, Gaming
Occupation	Animator
NSQF Level	4
Credits	3
Version	1.0
Last Reviewed Date	30/07/2013
Next Review Date	19/07/2023
NSQC Clearance Date	19/01/2023

MES/N0706: Produce Stop Motion Animation

Description

This OS unit is about producing stop motion animation using relevant techniques, based on the storyboard

Elements and Performance Criteria

Preparing a prototype work product/pre-visualisation

To be competent, the user/individual on the job must be able to:

PC1. understand requirements including the way the characters will act/move in accordance to the storyboard

PC2. move characters and construct/compose a shot in accordance to the script and storyboard as a prototype

Preparing stop motion animation end-products

To be competent, the user/individual on the job must be able to:

PC3. animate stop motion characters (puppets or models) in accordance to the script and directors instructions

PC4. contribute creative ideas during the animation process

Applying stop-motion animation techniques

To be competent, the user/individual on the job must be able to:

PC5. apply stop motion animation techniques including traditional frameby-frame capture, claymation and cut-out using computer-generated tools

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. the objective/purpose that the end-product intends to achieve

KU2. the profile of the target audience for the end-product

KU3. responsibilities and scope of work for various departments

KU4. the expectations of the director, animation supervisor and the producer with respect to the process, techniques to be used and guidelines with respect to characters and look and feel of the end-product

KU5. limitations on the time and resources and issues that might arise during production

KU6. the production requirements and quality that needs to be reflected in the final output

KU7. the timelines within which the product needs to be delivered

KU8. the fundamentals and principles of animation and film-making

KU9. stop motion animation techniques

KU10. principles of movement and timing

KU11. how to develop/portray the character in accordance to the script

KU12. principles of human anatomy and how they can be applied to animation

KU13. how to observe and study human behavior and expressions to help visualise concepts

KU14. how to enact and emote; and thereby animate characters in accordance to the demands of the script and animatic

KU15. properties of the characters and materials that are being used in the animation

KU16. how to work with graphics and animation software including autodesk maya, xsi, 3d studio max and blender

KU17. design standards and specifications that needs to be complied with to produce the final output

KU18. applicable health and safety guidelines

KU19. applicable health and safety guidelines

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. read and understand the script and character descriptions

GS2. read the work plan and production schedule to ensure that progress is in line

GS3. suggest creative ideas to the director and animation supervisor

GS4. communicate clearly and collaborate effectively with colleagues who are working with the previous or next scenes/shots

GS5. understand the modifications required from the director, animation supervisor and producer

GS6. discuss the challenges faced during production and discuss ways to address such challenges in future projects

GS7. how to plan individual timelines and deliver on schedule

GS8. work effectively as a member of the team and help realise overall timelines

GS9. prioritise work-products and tasks based on requirements

GS10. address comments and make changes

GS11. seek assistance and guidance from the director, art director and supervisors, where required

GS12. improve work-products and performance based on feedback received and through self-appraisal

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Preparing a prototype work product/pre-visualisation	**20**	**20**	**-**	**-**
PC1. understand requirements including the way the characters will act/move in accordance to the storyboard	10	10	-	-
PC2. move characters and construct/compose a shot in accordance to the script and storyboard as a prototype	10	10	-	-
Preparing stop motion animation end-products	**20**	**20**	**-**	**-**
PC3. animate stop motion characters (puppets or models) in accordance to the script and directors instructions	10	10	-	-
PC4. contribute creative ideas during the animation process	10	10	-	-
Applying stop-motion animation techniques	**10**	**10**	**-**	**-**
PC5. apply stop motion animation techniques including traditional frameby-frame capture, claymation and cut-out using computer-generated tools	10	10	-	-
NOS Total	**50**	**50**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	MES/N0706
NOS Name	Produce Stop Motion Animation
Sector	Media & Entertainment
Sub-Sector	Animation, Gaming
Occupation	Animator
NSQF Level	4
Credits	3
Version	1.0
Last Reviewed Date	30/07/2013
Next Review Date	24/02/2027
NSQC Clearance Date	24/02/2022

MES/N0104: Maintain Workplace Health & Safety

Description

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

Elements and Performance Criteria

Understanding the health, safety and security risks prevalent in the workplace

To be competent, the user/individual on the job must be able to:

PC1. understand and comply with the organizations 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 premises

PC4. participate in organization health and safety knowledge sessions and drills

Knowing the people responsible for health and safety and the resources available

To be competent, the user/individual on the job must be able to:

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

Identifying and reporting risks

To be competent, the user/individual on the job must be able to:

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 individuals authority to the relevant person in line with organizational procedures and warn other people who may be affected

Complying with procedures in the event of an emergency

To be competent, the user/individual on the job must be able to:

PC11. follow organizations 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 individuals authority

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. Organizations norms and policies relating to health and safety

KU2. Government norms and policies regarding health and safety and related emergency procedures
KU3. Limits of authority while dealing with risks/ hazards
KU4. The importance of maintaining high standards of health and safety at a workplace
KU5. The different types of health and safety hazards in a workplace
KU6. Safe working practices for own job role
KU7. Evacuation procedures and other arrangements for handling risks
KU8. Names and contact numbers of people responsible for health and safety in a workplace
KU9. How to summon medical assistance and the emergency services, where necessary
KU10. Vendors or manufacturers instructions for maintaining health and safety while using equipment, systems and/or machines

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. how to write and provide feedback regarding health and safety to the concerned people
GS2. how to write and highlight potential risks or report a hazard to the concerned people
GS3. read instructions, policies, procedures and norms relating to health and safety
GS4. highlight potential risks and report hazards to the designated people
GS5. listen and communicate information with all anyone concerned or affected
GS6. make decisions on a suitable course of action or plan
GS7. plan and organize people and resources to deal with risks/ hazards that lie within the scope of ones individual authority
GS8. apply problem solving approaches in different situations
GS9. understand hazards that fall within the scope of individual authority and report all hazards that may supersede ones authority
GS10. apply balanced judgments in different situations
GS11. How to write and provide feedback regarding health and safety to the concerned people
GS12. How to write and highlight potential risks or report a hazard to the concerned people
GS13. Read instructions, policies, procedures and norms relating to health and safety
GS14. Highlight potential risks and report hazards to the designated people
GS15. Listen and communicate information with all anyone concerned or affected
GS16. Make decisions on a suitable course of action or plan
GS17. Plan and organize people and resources to deal with risks/ hazards that lie within the scope of ones individual authority
GS18. Apply problem solving approaches in different situations
GS19. build and maintain positive and effective relationships with colleges and customers
GS20. analyze data and activites
GS21. Understand hazards that fall within the scope of individual authority and report all hazards that may supersede ones authority
GS22. Apply balanced judgments in different situations

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Understanding the health, safety and security risks prevalent in the workplace	**15**	**15**	**-**	**-**
PC1. understand and comply with the organizations current health, safety and security policies and procedures	5	5	-	-
PC2. understand the safe working practices pertaining to own occupation	5	5	-	-
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	3	2	-	-
PC4. participate in organization health and safety knowledge sessions and drills	2	3	-	-
Knowing the people responsible for health and safety and the resources available	**10**	**10**	**-**	**-**
PC5. identify the people responsible for health and safety in the workplace, including those to contact in case of an emergency	5	5	-	-
PC6. identify security signals e.g. fire alarms and places such as staircases, fire warden stations, first aid and medical rooms	5	5	-	-
Identifying and reporting risks	**18**	**17**	**-**	**-**
PC7. identify aspects of your workplace that could cause potential risk to own and others health and safety	5	5	-	-
PC8. ensure own personal health and safety, and that of others in the workplace though precautionary measures	5	5	-	-
PC9. identify and recommend opportunities for improving health, safety, and security to the designated person	3	2	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. report any hazards outside the individuals authority to the relevant person in line with organizational procedures and warn other people who may be affected	5	5	-	-
Complying with procedures in the event of an emergency	**7**	**8**	**-**	**-**
PC11. follow organizations emergency procedures for accidents, fires or any other natural calamity in case of a hazard	5	5	-	-
PC12. identify and correct risks like illness, accidents, fires or any other natural calamity safely and within the limits of individuals authority	2	3	-	-
NOS Total	**50**	**50**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	MES/N0104
NOS Name	Maintain Workplace Health & Safety
Sector	Media & Entertainment
Sub-Sector	Film, Television, Animation, Gaming, Radio, Advertising
Occupation	Ad sales/Account Management/Scheduling/Traffic
NSQF Level	5
Credits	2
Version	1.0
Last Reviewed Date	30/12/2021
Next Review Date	31/03/2027
NSQC Clearance Date	31/03/2022

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Element/ 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 Element/ PC.

2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.

3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.

4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).

5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.

6. To pass the Qualification Pack assessment, every trainee should score the Recommended Pass % aggregate for the QP.

7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

Minimum Aggregate Passing % at QP Level : 70

(**Please note**: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
MES/N0701.Understand Animation Requirements	50	50	-	-	100	20
MES/N0702.Conceptualize Creative Ideas for Production	50	50	-	-	100	10
MES/N0703.Plan Tools and Workflow	50	50	-	-	100	10
MES/N0704.Produce 2D Animation	50	50	-	-	100	10
MES/N0705.Produce 3D Animation	50	50	-	-	100	20
MES/N0706.Produce Stop Motion Animation	50	50	-	-	100	20
MES/N0104.Maintain Workplace Health & Safety	50	50	-	-	100	10
Total	**350**	**350**	**-**	**-**	**700**	**100**

Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training

Glossary

Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
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 (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) 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 (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications 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 a 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 quality of performance required.
Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.

Organisational Context	Organisational context includes the way the organisation 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 (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment 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.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.
ANIMATIC	Animatic is a story-board for animation which includes an series of images edited together with dialogues and sound
BUDGET	Budget is an estimate of the total cost of production that may include a break-up of cost components
COMPOSITING	Compositing is the process of combining layers of images/elements into a single frame
COMPOSITION	Composition is the positioning of the character with respect to the background and camera
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.
KEY FRAME	Key Frames are the key poses, usually the start and end poses for a particular animation sequence
MODELING	Modeling is the process of creating three-dimensional models for animation using a specialised software application.
RENDERING	Rendering is the process of converting three-dimensional models into two-dimensional images with 3D effects

RIGGING	Rigging is the process of adding joints to a static three-dimensional model to aid movement during posing
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.
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.
QUALIFICATION PACK CODE	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
QUALIFICATION PACK	Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A 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 â€˜Nâ€™.
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.