Product Conceptualization Manager

QP Code: ASC/Q5103

Version: 1.0

NSQF Level: 7

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ASC/Q5103: Product Conceptualization Manager

Brief Job Description

Is responsible for conceiving of the idea as per the designated timelines, ensure understanding the customer needs in consultation with the marketing department, CFT and further using various parameters to ensure it is in direct correlation with customer needs. The role is further responsible for ensuring that external/ internal benchmarking is conducted, creation of SQFD (Simplified Quality Function Definition) and formation of cross functional teams etc. Manage the team of product conceptualization engineers and train them on various product conceptualization activities are also part of this role.

Personal Attributes

The individual should have ability to co-relate technical knowledge with market data and material, cost, time estimates for different reports and design specifications, Marketing Product SOR (statement of requirements). Ability to apply different operational parameters/ principles to resolve engineering problems and finding appropriate solutions. The individual should further have customer orientation, market awareness, out of box thinking, problem solving, analytical skills, latest technologies knowledge, ability to visualize the final product, team management, decision making, proactive ness, strategic orientation etc.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. ASC/N0006: Maintain a safe and healthy working environment

2. ASC/N0019: Managing the project delivery as a team lead within the cross functional team

3. ASC/N0020: Managing the team on a day to day basis

4. ASC/N5106: Conceptualize the new product by using different analytical and decision making tools, conducting analysis and ensuring all types of compliance

Qualification Pack (QP) Parameters

Sector	Automotive
Sub-Sector	Research & Development
Occupation	Product Conceptualization
Country	India
NSQF Level	7

Aligned to NCO/ISCO/ISIC Code	NCO-2015/NIL
Minimum Educational Qualification & Experience	B.E./B.Tech (Preferably automobile/mechanical/electronics/electrical engineering) with 5-10 Years of experience In R&D automobile product conceptualization
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	Effective Data Collection for market, economic, trend analysis Economic, regulatory & environmental scenarios as applicable Problem solving techniques Team Management Finance & Costing Project Management
Minimum Job Entry Age	18 Years
Last Reviewed On	20/01/2014
Next Review Date	30/06/2020
Deactivation Date	30/06/2020
NSQC Approval Date	20/07/2015
Version	1.0

ASC/N0006: Maintain a safe and healthy working environment

Description

This NOS is about creating a Safe and Healthy work place, adhering to the safety guidelines in the working area, following practices which are not impacting the environment in a negative manner and training team members on health and safety related issues

Scope

The role holder will be responsible for identifying and reporting of risks creating and sustaining a safe, clean and environment friendly work place This NOS will be applicable to all Automotive sector manufacturing job roles

Elements and Performance Criteria

Identify and report the risks identified

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

PC1.. Identify activities which can cause potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals ,loud noise

PC2. Inform the concerned authorities about the potential risks identified in the processes, workplace area/ layout, materials used etc

PC3. Inform the concerned authorities about machine breakdowns, damages which can potentially harm man/ machine during operations

PC4. Create awareness amongst other by sharing information on the identified risks

Create and sustain a Safe, clean and environment friendly work place

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

PC5.. Follow the instructions given on the equipment manual describing the operating process of the equipments

PC6.. Follow the Safety, Health and Environment related practices developed by the organization

PC7. Operate the machine using the recommended Personal Protective Equipments (PPE)

PC8. . Maintain a clean and safe working environment near the work place and ensure there is no spillage of chemicals, production waste, oil, solvents etc

PC9. Maintain high standards of personal hygiene at the work place

PC10. Ensure that the waste disposal is done in the designated area and manner as per organization SOP.

PC11. Inform appropriately the medical officer/ HR in case of self or an employees illness of contagious nature so that preventive actions can be planned for others

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. relevant standards, procedures and policies related to Health, Safety and Environment followed in the company

KU2. basic knowledge of Safety procedures(fire fighting, first aid) within the organization

KU3. knowledge of various types of PPEs and their usage

KU4. basic knowledge of risks/hazards associated with each occupation in the organization

KU5. how to safely operate various tools and machines and risksassociated with the tools/ equipment

KU6. knowledge of personal hygiene and how an individual an contribute towards creating a highly safe and clean working environment

Generic Skills (GS)

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

GS1. write basic level notes and observations

GS2. read safety instructions put up across the plant premises

GS3. read safety precautions mentioned in equipment manuals and panels to understand the potential risks associated

GS4. effectively communicate information to team members

GS5. informemployees in the plant and concerned functions about events, incidents & potential risks observed related to Safety, Health and Environment.

GS6. question operator/ supervisor in order to understand the safety related issues

GS7. attentively listen with full attention and comprehend the information given by the speaker during safety drills and training programs

GS8. use common sense and make judgments during day to day basis

GS9. use reasoning skills to identify and resolve basic problems

GS10. use common sense and make judgments during day to day basis

GS11. use reasoning skills to identify and resolve basic problems

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Identify and report the risks identified	**8**	**23**	**-**	**-**
PC1.. Identify activities which can cause potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals ,loud noise	3	6	-	-
PC2. Inform the concerned authorities about the potential risks identified in the processes, workplace area/ layout, materials used etc	2	6	-	-
PC3. Inform the concerned authorities about machine breakdowns, damages which can potentially harm man/ machine during operations	2	6	-	-
PC4. Create awareness amongst other by sharing information on the identified risks	1	5	-	-
Create and sustain a Safe, clean and environment friendly work place	**17**	**52**	**-**	**-**
PC5.. Follow the instructions given on the equipment manual describing the operating process of the equipments	3	7	-	-
PC6.. Follow the Safety, Health and Environment related practices developed by the organization	3	8	-	-
PC7. Operate the machine using the recommended Personal Protective Equipments (PPE)	3	8	-	-
PC8. . Maintain a clean and safe working environment near the work place and ensure there is no spillage of chemicals, production waste, oil, solvents etc	2	8	-	-
PC9. Maintain high standards of personal hygiene at the work place	2	7	-	-
PC10. Ensure that the waste disposal is done in the designated area and manner as per organization SOP.	3	8	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. Inform appropriately the medical officer/ HR in case of self or an employees illness of contagious nature so that preventive actions can be planned for others	1	6	-	-
NOS Total	**25**	**75**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	ASC/N0006
NOS Name	Maintain a safe and healthy working environment
Sector	Automotive
Sub-Sector	Manufacturing
Occupation	Maintenance
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	15/09/2013
Next Review Date	15/09/2015
NSQC Clearance Date	20/07/2015

ASC/N0019: Managing the project delivery as a team lead within the cross functional team

Description

This NOS is about handling the project management and project delivery activities within the R&D team such as managing team budgets and costs, institutionalizing process improvement, process excellence and quality management within the team and manage project timelines, project quality, team resourcing and management of stakeholders related to the Product Development project

Scope

The role holder will be responsible for: managing end to end project delivery activities within an R&D vertical including budgeting and costing for the team deploy procedures and processes to support the NPD delivery team managing the R&D team and motivate and engage them to increase the overall productivity of the team

Elements and Performance Criteria

Manage Costs and Budgets for the team

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

PC1.. ensure timely creation of item wise/ head wise budget for the team on a year on year basis

PC2. . ensure that all major and minor cost elements related to equipment, tools, raw material, manpower, consumables and marketing activities are considered during finalization of the budgets for the given financial period/ project delivery period

PC3. . conduct effective negotiations along with the commercial team with suppliers and vendors during procurement of equipment, tools and raw material required for delivery of the new product

PC4. . support the process wise r&d lead/ head in conducting periodic tracking of planned vs. actual expenditure (variance analysis) for the team

PC5. . act upon the outcomes of the variance analysis and keep the overall process/ product cost within the specified ranges

PC6. . escalate any budgetary exigencies to process wise R&D lead/ head in a timely manner so that the project delivery does not suffer because of budgetary reasons

Process Excellence and Process Improvement

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

PC7. . ensure detailed self-understanding of all the requisite processes to be adopted for completing the development job

PC8.. ensure drafting and finalizing of process manuals, work instructions, control plans, process flow charts to enable the team to easily understand and implement the process

PC9. . ensure that work instructions/ process steps are displayed in key areas like test labs, CA/CAD centres etc.

PC10. . ensuring recording and reporting procedures and systems are in place and shared with the team members

PC11.. ensure 5s implementation in the r&d function especially in data management and data storage (knowledge management)

PC12. . identify areas of improvement in the existing processes/systems and take measures to adhere to the identified kaizen/ process improvement initiatives

PC13. . ensure team has understanding of basic analytical tools like why whyanalysis, brainstorming, 7 QC tools, TQM principles to analyse variousproblems and design process improvement activities

PC14.. ensure that the development team regularly engages with the analytical tools during the various product development team

PC15.. implement various business excellence techniques like kaizen, 5S initiatives and safety interventions to enhance productivity of the team

Project Delivery Management

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

PC16.. support the process wise r&d lead/ head in creating the project plan for the individual product development team and ensure linkage with the overall npd plan of the organization

PC17.. identify critical areas/ activities which need detailed monitoring and effective implementation to prevent any negative impact on the project process

PC18. . ensure tracking of key activities and milestones given in the individual project plan

PC19. . support the process wise r&d lead/ head in monitoring of individual project timelines, work quality, development & delivery costs, team contribution and knowledge management activities

PC20.. support the process wise r&d lead/ head in creating time bound mitigation plan to deal with project plan variances

PC21.. ensure timely setup of design centres, laboratories, testing beds as required by the npd delivery process mentioned in the overall project plan

PC22. . in case new equipment/ procedures are required, ensure that the responsible team is contacted well before the execution time in order to prevent delays in the development process

PC23. . create required project status reports and share the same the relevant stakeholders in the format finalized by the cross functional project Team

PC24. . manage stakeholder relationship and ensure closure of open items needing feedback or approvals from the relevant stakeholders

PC25.. ensure effective collaboration and information sharing with other members of the cross functional npd delivery team

PC26.. escalate any pertinent issues to the process wise r&d head which need immediate attention

Human Resource Management

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

PC27. . finalize along with the individual process head in the cft, the manpower planning and manpower deployment for the delivery team

PC28.. identify the competencies required for the project delivery team

PC29.. ensure identification and deployment of right skilled people at the right places on the delivery process

PC30.. track the performance of the team during the various stages of the project and provide timely feedback for course correction

PC31.. share knowledge of processes , inputs and outputs with the team members to enhance their skill levels

PC32. . other than technical trainings, support the team by delivering trainings related to quality and safety for the operators and helpers

PC33. . drive a culture of creativity and innovation in the team by given the team members opportunity to think out of box and express their thoughts

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. different types of products manufactured by the company

KU2. overall R&D strategy for the organization

KU3. knowledge of functional processes like Procurement, Store management, inventory management, quality management, HR and key contact points for query resolution

KU4. 5S and Safety norms practiced in the organization

KU5. project management techniques and usage of different project management tools like primavera, MS Office etc.

KU6. various problems solving tools like 7QC, Why Why Analysis, Brain stormingetc.

KU7. fundamental of financial and budgeting process

KU8. different type of tools , processes and infrastructure required for the development process

KU9. different types of communication channels practiced by the organization

KU10. the method of noting observations, maintaining records and sharing them with the concerned in the required format how to share feedback with team members

KU11. various data entry tools and formats used in the organization

KU12. ability to visualize the final product output and hence decide on the key steps and parameters to be followed

KU13. usage of various business correspondence tools like Email, MS Office tools (Word, Excel, Power Point), ERP tools etc.

KU14. about the various hazards related to various chemicals, load, power , heat sources/ tools as used in the processes, the hazards involved in the process operations and usage of PPEs

Generic Skills (GS)

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

GS1. document information from the manuals, discussion notes, process charts etc.

GS2. create small notes/ work documents/ diagrams for team members to help them understand the process

GS3. use emails and other business correspondence methods (internal memos, circular etc.) for communicating with other team members/ vendors/ suppliers etc.

GS4. read internal information memos send by internal customers (other functions within the organization)

GS5.   articulate the thoughts in ones mind into the written format and communicate with the team members

GS6.   discuss task lists, schedules, and work-loads with the operative team members

GS7.   answer the queries raised by team as well as intercompany departments

GS8.   articulate the thoughts in ones mind into the written format and communicate with the team members

GS9.   effectively communicate with the team members and make them aware of work expectations, targets, policies, processes etc.

GS10.   attentively listen with full attention the queries and grievances raised by the team and comprehend the information given by the speaker

GS11.   identify the strengths and weaknesses of the subordinate team members

GS12.   provide constructive and genuine feedback

GS13.   motivate the team to take independently responsibilities in their work areas

GS14.   provide training to team members for technical and behavioural areas

GS15.   create a culture of innovation and out of box thinking/ risk taken

GS16.   communicate effectively to the team members

GS17.   identify conflicts in the team and try to resolve them at the earliest

GS18.   interact and engage with the team members on a day to day basis

GS19.   counsel and coach the team members and help them resolve issues

GS20.   timely highlight to the management about any good work/ achievement by the team members

GS21.   display empathy for the problems faced by the team and act on the concerns

GS22.   break the problem into smaller issues and tasks to arrive at a solution

GS23.   understand inter process relationship and establish relationship between various parts of the problem

GS24.   leverage experience to find effective solutions to problems

GS25.   use basic analytical tools to arrive at solutions

GS26.   develop alternate solutions and resolves problems in early stages

GS27.   work tireless in spite of repeat activities in a diligent manner to resolve problems on a day to day basis

GS28.   collaborate with cross functional teams to resolve problems

GS29.   use common sense and make judgments during day to day basis

GS30.   use reasoning skills to identify and resolve problems

GS31.   use intuition to detect any potential problems which could arise during operations

GS32.   critically analyse solutions/ recommendations shared by operatives and supervisors for implementation gather information skilfully from multiple sources

GS33.   analyse information in depth and identifies the problem in a timely manner

GS34.   accept additional responsibility for self and the team

GS35.   encourage self and other to take greater responsibilities

GS36.   ensure that the work allocated to the team is completed as per timelines and quality norms

GS37.   identify obstacles and bottlenecks in the process and on own find basic level solutions for removing these obstacles

GS38. motivate and provide support for the team on the shop floor

GS39. encourage collaboration between team members

GS40. resolve team issues and grievances to manage conflicts within the team

GS41. create an environment of approachability, trust and openness within the team

GS42. ensure role clarity for all operators and helpers on the line/ shift

GS43. escalate any team related issues to the concerned person at the right time

GS44. use previous experience in resolving problems and taking decisions

GS45. make timely and independent decisions on the line/ shift within the boundaries of the delegation matrix of the organization

GS46. exhibit objectivity & openness to others views

GS47. collaborate with stakeholders to achieve the desired state of final result

GS48. familiarise with leading practices available in the market

GS49. think independently on new approaches to manufacturing process, material management, data management and team management

GS50. represent any new ideas/ approaches on process improvement and productivity improvement to the seniors in the team

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Manage Costs and Budgets for the team	**6**	**12**	**-**	**-**
PC1.. ensure timely creation of item wise/ head wise budget for the team on a year on year basis	1	2	-	-
PC2. . ensure that all major and minor cost elements related to equipment, tools, raw material, manpower, consumables and marketing activities are considered during finalization of the budgets for the given financial period/ project delivery period	1	2	-	-
PC3. . conduct effective negotiations along with the commercial team with suppliers and vendors during procurement of equipment, tools and raw material required for delivery of the new product	1	2	-	-
PC4. . support the process wise r&d lead/ head in conducting periodic tracking of planned vs. actual expenditure (variance analysis) for the team	1	2	-	-
PC5. . act upon the outcomes of the variance analysis and keep the overall process/ product cost within the specified ranges	1	2	-	-
PC6. . escalate any budgetary exigencies to process wise R&D lead/ head in a timely manner so that the project delivery does not suffer because of budgetary reasons	1	2	-	-
Process Excellence and Process Improvement	**9**	**22**	**-**	**-**
PC7. . ensure detailed self-understanding of all the requisite processes to be adopted for completing the development job	1	2	-	-
PC8.. ensure drafting and finalizing of process manuals, work instructions, control plans, process flow charts to enable the team to easily understand and implement the process	1	3	-	-
PC9. . ensure that work instructions/ process steps are displayed in key areas like test labs, CA/CAD centres etc.	1	3	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. . ensuring recording and reporting procedures and systems are in place and shared with the team members	1	3	-	-
PC11.. ensure 5s implementation in the r&d function especially in data management and data storage (knowledge management)	1	3	-	-
PC12. . identify areas of improvement in the existing processes/systems and take measures to adhere to the identified kaizen/ process improvement initiatives	1	2	-	-
PC13. . ensure team has understanding of basic analytical tools like why whyanalysis, brainstorming, 7 QC tools, TQM principles to analyse variousproblems and design process improvement activities	1	2	-	-
PC14.. ensure that the development team regularly engages with the analytical tools during the various product development team	1	2	-	-
PC15.. implement various business excellence techniques like kaizen, 5S initiatives and safety interventions to enhance productivity of the team	1	2	-	-
Project Delivery Management	**10**	**22**	**-**	**-**
PC16.. support the process wise r&d lead/ head in creating the project plan for the individual product development team and ensure linkage with the overall npd plan of the organization	1	2	-	-
PC17.. identify critical areas/ activities which need detailed monitoring and effective implementation to prevent any negative impact on the project process	1	2	-	-
PC18. . ensure tracking of key activities and milestones given in the individual project plan	1	2	-	-
PC19. . support the process wise r&d lead/ head in monitoring of individual project timelines, work quality, development & delivery costs, team contribution and knowledge management activities	1	2	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC20.. support the process wise r&d lead/ head in creating time bound mitigation plan to deal with project plan variances	1	2	-	-
PC21.. ensure timely setup of design centres, laboratories, testing beds as required by the npd delivery process mentioned in the overall project plan	1	2	-	-
PC22. . in case new equipment/ procedures are required, ensure that the responsible team is contacted well before the execution time in order to prevent delays in the development process	0.5	2	-	-
PC23. . create required project status reports and share the same the relevant stakeholders in the format finalized by the cross functional project Team	1	2	-	-
PC24. . manage stakeholder relationship and ensure closure of open items needing feedback or approvals from the relevant stakeholders	1	2	-	-
PC25.. ensure effective collaboration and information sharing with other members of the cross functional npd delivery team	1	2	-	-
PC26.. escalate any pertinent issues to the process wise r&d head which need immediate attention	0.5	2	-	-
Human Resource Management	**5**	**14**	**-**	**-**
PC27. . finalize along with the individual process head in the cft, the manpower planning and manpower deployment for the delivery team	0.5	2	-	-
PC28.. identify the competencies required for the project delivery team	1	2	-	-
PC29.. ensure identification and deployment of right skilled people at the right places on the delivery process	0.5	2	-	-
PC30.. track the performance of the team during the various stages of the project and provide timely feedback for course correction	0.5	2	-	-

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Transforming the skill landscape

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC31.. share knowledge of processes , inputs and outputs with the team members to enhance their skill levels	1	2	-	-
PC32. . other than technical trainings, support the team by delivering trainings related to quality and safety for the operators and helpers	1	2	-	-
PC33. . drive a culture of creativity and innovation in the team by given the team members opportunity to think out of box and express their thoughts	0.5	2	-	-
NOS Total	**30**	**70**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	ASC/N0019
NOS Name	Managing the project delivery as a team lead within the cross functional team
Sector	Automotive
Sub-Sector	Research & Development
Occupation	Prototyping
NSQF Level	7
Credits	TBD
Version	1.0
Last Reviewed Date	20/01/2014
Next Review Date	20/01/2014
NSQC Clearance Date	

ASC/N0020: Managing the team on a day to day basis

Description

This NOS is about managing the team of on day to day basis, ensuring their deployment, motivating them by involving them in various engagement initiatives helping them improve the skills levels and managing their grievances in the best possible manner in order to maximize the people productivity

Scope

The person is responsible for ensuring Engaging the team through employee communication and employee engagement Finalizing manpower deployment Employee Performance Measurement and Employee Development Ensuring the proper culture and facilities for R&D

Elements and Performance Criteria

Engaging the team through employee communication and employee engagement

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

PC1. . ensure engineer and team are aware of the job expectations on a monthly/weekly/daily basis

PC2. . involve engineer and team for the daily work meeting/brain storming sessions / staff meetings to communicate information intended for them

PC3.. ensure communication to team on any changes in policies/ processes by the organization through required verbal/ written mechanisms

PC4.. ensure participation of employees in various engagement initiatives organized at the engineering centre and other place by the organization

PC5.. involve engineer and team in TQM & kaizen meets, brainstorming sessions, safety drills etc. to increase their involvement in R&D operations

PC6.. escalate issues to concerned staff in case of any issue related to team management and engagement

Finalizing manpower deployment

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

PC7.. finalize along with the engineer the shiftplanning and manpower deployment for the month/week as per the proposed prototype development plan

PC8. . ensure that the engineer maintains the information on leaves share the information with the concerned as and when required

PC9. . ensure that the engineer identifies the skilled manpower for the process and ensure periodic up - dation of skill matrix/ skill chart

PC10. . ensure identification and deployment of right skilled people at the right places on the prototype shop

Employee Performance Measurement and Employee Development

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

PC11. . ensure that the engineer tracks the daily performance of the team and note the achievement levels in an online IT enabled system

PC12.. provide feedback to engineer pertaining to performance appraisals of team

PC13. . ensure that the team is trained and are aware of the processes which need to be followed on the shop floor during the proto type process

PC14. . other than technical trainings, support the team by delivering trainings related to quality and safety for them

PC15. . drive a culture of creativity and innovation in the team by given the team members opportunity to think out of box and express their thoughts

Ensuring the proper culture and facilities for R&D

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

PC16. . ensure that the engineer maintains a cordial and open culture in the team so that maximum new ideas are generated

PC17.. ensure a culture of intelligent market benchmarking for different types of design, prototypes and testing methodologies in the company

PC18. . ensure development of effective design and test centres where different types of prototype models could be build and tested to have maximum conversion of new ideas to product in a cost effective manner

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. relevant standards and procedures followed in the company

KU2. different types of products manufactured by the company

KU3. quality management practices of the organization

KU4. different types of R&D processes

KU5. various grievance management tools available in the organization

KU6. various problems solving tools like 7QC, Why Why Analysis, Brain storming

KU7. different types of communication channels practiced by the organization

KU8. the method of noting observations, maintaining records and sharing them with the concerned in the required format

KU9. knowledge of shift roster norms and guidelines

KU10. how and when to measure performance of the operators

KU11. how to share feedback with team members

Generic Skills (GS)

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

GS1. document information from the manuals,discussion notes, process charts etc.

GS2. create small notes/ work documents/ diagrams for operators and helpers to help them understand the process

GS3. use emails and other business correspondence methods (internal memos, circular etc.) for communicating with other team members/ vendors/ suppliers etc

GS4. read internal information memos send by internal customers (other functions within the organization)

GS5. discuss task lists, schedules, and work-loads with the operative team members

GS6. answer the queries raised by the operative team as well as intercompany departments

GS7. effectively communicate with the operators and helpers and make them aware of work expectations, targets, policies, processes etc.

GS8. attentively listen with full attention the queries and grievances raised by the operative team and comprehend the information given by the speaker

GS9. identify the strengths and weaknesses of the subordinate team members (operators and helpers)

GS10. provide constructive and genuine feedback

GS11. motivate the team to take independently responsibilities in their work areas

GS12. provide training to the operators and helpers for technical and behavioural areas

GS13. communicate effectively to the team members

GS14. identify conflicts in the team and try to resolve them at the earliest

GS15. interact and engage with the team members on a day to day basis

GS16. counsel and coach the operators and help them resolve issues

GS17. timely highlight to the management about any good work/ achievement by the operators and helpers

GS18. display empathy for the problems faced by the team and act on the concerns

GS19. break the problem into smaller issues and tasks to arrive at a solution

GS20. understand inter process relationship and establish relationship between various parts of the problem

GS21. leverage experience to find effective solutions to problems

GS22. use basic analytical tools to arrive at solutions

GS23. collaborate with cross functional teams to resolve problems

GS24. use common sense and make judgments during day to day basis

GS25. use reasoning skills to identify and resolve problems

GS26. use intuition to detect any potential problems which could arise during operations

GS27. critically analyse solutions/ recommendations shared by operatives and supervisors for implementation

GS28. accept additional responsibility for self and the team

GS29. encourage self and other to take greater responsibilities

GS30. ensure that the work allocated to the team is completed as per timelines and quality norms

GS31. identify obstacles and bottlenecks in the process and on own find basic level solutions for removing these obstacles

GS32. motivate and provide support for the team on the shop floor

GS33. encourage collaboration between team members

GS34. resolve team issues and grievances to manage conflicts within the team

GS35. create an environment of approachability, trust and openness within the team

GS36. ensure role clarity for all operators and helpers on the line/ shift

GS37. escalate any team related issues to the concerned person at the right time

GS38. use previous experience in resolving problems and taking decisions

GS39. make timely and independent decisions on the line/ shift within the boundaries of the delegation matrix of the organization

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Engaging the team through employee communication and employee engagement	**11**	**24**	**-**	**-**
PC1. . ensure engineer and team are aware of the job expectations on a monthly/weekly/daily basis	2	4	-	-
PC2. . involve engineer and team for the daily work meeting/brain storming sessions / staff meetings to communicate information intended for them	2	4	-	-
PC3.. ensure communication to team on any changes in policies/ processes by the organization through required verbal/ written mechanisms	2	4	-	-
PC4.. ensure participation of employees in various engagement initiatives organized at the engineering centre and other place by the organization	2	4	-	-
PC5.. involve engineer and team in TQM & kaizen meets, brainstorming sessions, safety drills etc. to increase their involvement in R&D operations	2	4	-	-
PC6.. escalate issues to concerned staff in case of any issue related to team management and engagement	1	4	-	-
Finalizing manpower deployment	**6**	**18**	**-**	**-**
PC7.. finalize along with the engineer the shiftplanning and manpower deployment for the month/week as per the proposed prototype development plan	2	5	-	-
PC8. . ensure that the engineer maintains the information on leaves share the information with the concerned as and when required	1	4	-	-
PC9. . ensure that the engineer identifies the skilled manpower for the process and ensure periodic up - dation of skill matrix/ skill chart	1	5	-	-
PC10. . ensure identification and deployment of right skilled people at the right places on the prototype shop	2	4	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Employee Performance Measurement and Employee Development	**9**	**18**	**-**	**-**
PC11. . ensure that the engineer tracks the daily performance of the team and note the achievement levels in an online IT enabled system	2	5	-	-
PC12.. provide feedback to engineer pertaining to performance appraisals of team	2	3	-	-
PC13. . ensure that the team is trained and are aware of the processes which need to be followed on the shop floor during the proto type process	2	4	-	-
PC14. . other than technical trainings, support the team by delivering trainings related to quality and safety for them	1	3	-	-
PC15. . drive a culture of creativity and innovation in the team by given the team members opportunity to think out of box and express their thoughts	2	3	-	-
Ensuring the proper culture and facilities for R&D	**4**	**10**	**-**	**-**
PC16. . ensure that the engineer maintains a cordial and open culture in the team so that maximum new ideas are generated	1	3	-	-
PC17.. ensure a culture of intelligent market benchmarking for different types of design, prototypes and testing methodologies in the company	1	3	-	-
PC18. . ensure development of effective design and test centres where different types of prototype models could be build and tested to have maximum conversion of new ideas to product in a cost effective manner	2	4	-	-
NOS Total	**30**	**70**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	ASC/N0020
NOS Name	Managing the team on a day to day basis
Sector	Automotive
Sub-Sector	Research & Development
Occupation	Prototyping
NSQF Level	7
Credits	TBD
Version	1.0
Last Reviewed Date	20/01/2014
Next Review Date	20/01/2014
NSQC Clearance Date	

ASC/N5106: Conceptualize the new product by using different analytical and decision making tools, conducting analysis and ensuring all types of compliance

Description

This NOS unit is about conceptualizing the new product with the support of different tools and analysis to ensure compliance

Scope

The product conceptualization manager will be responsible for: Understanding customer needs Conducting sensitivity analysis Conducting external and internal benchmarking Development of the SQFD Conduct different trend analysis like economic, future, technology and research on alternative fuel Ensure compliance to all regulatory and environmental requirements The role holder will interact with different Centre of Excellence, different CFT's team, Sourcing Team, product design team, HR and Finance

Elements and Performance Criteria

Understanding Customer Needs

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

PC1..	understand and determine the customer preferences
PC2..	clarify understanding pertaining to specification, parameter, constraints on the product design in consultation with the relevant stakeholders
PC3..	understand the relationship between customer needs and satisfaction
PC4..	develop a range of criteria against which to evaluate different options and ideas
PC5..	conceptualize and develop the product on the basis of 'one dimensional attributes', 'indifferent attributes', 'attractive attributes and 'must be attributes'
PC6..	seek both spoken and unspoken needs and translating into action and design
PC7..	brainstorming in initial stages of idea generation
PC8..	translating/ communicating the initial product idea to the product designer in order to design a product that is aesthetically pleasing, ergonomically friendly and appealing

Conducting sensitivity analysis

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

PC9..	select the parameters that need to be verified
PC10..	identify the range of the parameters that is realistically possible
PC11..	design and conduct experiment to check for sensitivity
PC12..	summarize the results for further analysis
PC13..	calculate values of sensitivity index for each of the parts
PC14..	verify if the parts are within the sensitivity range
PC15..	in case, the results are not optimal, new parts need to be designed

Conduct external benchmarking

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

PC16.. identify what parameters need to be benchmarked

PC17.. understand the data shared by the marketing team on competitor analysis

PC18.. develop a plan for benchmarking

PC19.. finalize on the data collection methodology and collect data

PC20.. choose/ finalize on the best in class organizations from which benchmarking need to be completed

PC21.. analyse the external benchmarking data from demand-side perspective in order to determine if they satisfy the same set of customer needs and from supply side perspective to determine if the organization has the same resources and technology to meet these needs

PC22.. analyse data on the product design of the organization in comparison to the competitor design

PC23.. analyse parameters like feel, comfort, handling, efficiency, performance etc.

PC24.. benchmark data against the technology being used by competitors

PC25.. benchmark data against competitors working/focusing in the same market (for example, big vs. small car market)

PC26.. analyse data pertaining to the competitive advantage of one organization and compare the same with the competitive advantage for own organization

PC27.. create competitors response profile which captures possible future moves

PC28.. conduct swot, pestle analysis, market segmentation etc.

Conduct internal benchmarking

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

PC29.. benchmark data against previous products design and performance undertaken and analyse the same

PC30.. analyse data on the technologies used previously in comparison to the current one

Collaborate with CFT (Cross Functional Team)

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

PC31.. collaborate with the cross functional team (cft) with diverse knowledge for design and fulfilment of customer needs

PC32.. define the scope of work for the team along with product conceptualization head

PC33.. define the time frame for completion of various activities being undertaken with the various cft teams and link the same with product conceptualization plan

PC34.. define the method of assessment for evaluation of work completed by the cft team

Development of the SQFD (Simplified Quality Function Definition)

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

PC35.. prepare of the sqfd through ensuring maximum satisfaction to the customer by making sure that product design and contents are as per their wishes

PC36.. for the sqfd, analyse the revealed requirements (basic wants), expected /implied requirements (customer fail to mention but wants them), exciting /delight requirements (beyond customers expectations)

PC37.. determine and finalize what segments will be analysed during the process and identify who the customers are

PC38.. identifying the technical attributes in the sqfd

PC39.. classify and assign importance to the requirements of the customer on a scale of 1-5 of as applicable in the respective organization

PC40.. creation of relationship matrix to determine the relationship between customer needs and the companys ability to meet those needs

PC41.. incorporate technical analysis completed for competitors products

PC42.. establishment for target values for each of the technical descriptors/ parameters

PC43.. create a correlation matrix

PC44.. eliminate any negative preferences and maximize only on the positive

PC45.. complete the documentation on the regulatory requirements

PC46.. understand which of the technical descriptors matters the most

Conduct future trend analysis

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

PC47.. analyse the features currently being used in similar products by the company itself as well as competitors

PC48.. analyse the features that customers want/need as well as those that they desire

PC49.. understand data captured through qualitative surveys on customer needs and desires

PC50.. understand data captured through quantitative surveys on customer needs and desires

PC51.. analyse to see the potential production and costs of those new features to see economic viability

PC52.. analyse the sensitivity to change, structural viability and if the features meet emission, safety and other requirements

Conduct economic trend analysis

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

PC53.. check the current economic trends and if the customer has the willingness to pay for the product

PC54.. develop an approximate cost of the new product given the current and future economic trends

PC55.. benchmark the cost of conceptualization and production of current products to the predicted economic trends while making the potential product

PC56.. analyse the fuel cost, mileage parameters, maintenance cost etc.

PC57.. analysis the different government policies, auto sector methods and export and import parameters

PC58.. generate a report to see if the potential customers can afford the product

PC59.. analyse macroeconomic policy, spending reports, key metrics such as cost of fuel etc.

Conduct technology trend analysis and research on alternative fuel

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

PC60.. analyse the current technology that is in use in the industry, internally by the company and by competition

PC61.. analyse the future predicted technology to be used

PC62.. narrow down the type of technology that is the most beneficial

PC63.. develop a cost benefit analysis of the technology to be used with the help of the manager

PC64.. decide whether to deploy the technology presently, to keep in the bench from a commercial viability point of view

PC65.. coordinate on aspects related to different technology/ alternative fuels/ new regulations with other nodal agency/ ministries

Ensure compliance to all regulatory and environmental requirements

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

PC66.. understand and analyse the current environmental and governmental regulations in terms of type of vehicles, size and its segment, utility etc.

PC67.. check to see if the potential product will meet the environmental and government regulations (regulations of both local and global standards)

PC68.. display understanding and orientation towards internal company regulations and if the product meets those

PC69.. display understanding and ensure if the emission regulations of the country and globally to see if the product meets those

PC70.. display understanding and ensure if the safety regulations of the country and globally to see if the product meets those

PC71.. check to see the product is not utilizing a patent of some other organization

PC72.. benchmark the regulations that are already in place to the ones predicted for the future to make sure the product will be meeting both requirements

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. relevant manufacturing standards and procedures followed in the company

KU2. different types of products manufactured by the company

KU3. organization methodology on conducting marketing data analysis, benchmarking,

KU4. quality norms and standards prescribed in the Quality Manual by the organization

KU5. 5S and Safety norms practiced in the organization

KU6. basic working of automobiles

KU7. ability to collect data and conduct basic level analysis such as sensitivity, competitor etc. basis the technical parameters that are defined

KU8. basic fundamentals of machines and mechanics

KU9. application of relevant principles of functionality, ergonomics, aesthetics etc.

KU10. ability to consider relevant social, economic, environmental, sustainable, ethical and cultural issues that may impact in design solutions

KU11. ability to conduct SWOT, PESTLE analysis

KU12. ability to use different data analytics tools

KU13. latest technologies in auto industry

KU14. latest regulations in auto industry

KU15. conduct different financial and macroeconomics analysis

KU16. basic Arithmetic and calculation methods for tolerance limits

KU17. metallurgical properties of metals used for different processes

KU18. the methods of using instruments like Vernier callipers, Micrometres, rulers and other inspection tools

KU19. how to read and interpret sketches and engineering drawings

KU20. how to visually represent the final product output and hence decide on the key steps to be followed

Generic Skills (GS)

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

GS1. document information from the manuals, discussion notes, process charts etc.

GS2. create small notes/ work documents/ diagrams for operators and helpers to help them understand the process

GS3. write inter departmental notes/ memos or make suitable entries in the online system

GS4. read equipment manuals and process documents to understand the equipment and processes better

GS5. read internal information memos sent by internal customers (other functions within the organization)

GS6. discuss task lists, schedules, and work-loads with the team members

GS7. answer the queries raised by the team as well as intercompany departments

GS8. attentively listen with full attention the queries and grievances raised by the team and comprehend the information given by the speaker

GS9. break the problem into smaller issues and tasks to arrive at a solution

GS10. understand inter process relationship and establish relationship between various parts of the problem

GS11. leverage experience to find effective solutions to problems

GS12. use organizations analytical tools to arrive at solutions

GS13. plan, organize and prioritize the work with Engineering /R & D, Marketing department

GS14. plan support required from CFT /project teams for benchmarking ,testing, feasibility exercises

GS15. organize information, standards manuals etc. so that sorting becomes easy

GS16. reorganize resources in case of change of plans

GS17. use common sense and make judgments during day to day basis

GS18. use reasoning skills to identify and resolve problems

GS19. use intuition to detect any potential problems which could arise during operations

GS20. accept additional responsibility for self and the team

GS21. encourage self and other to take greater responsibilities

GS22. ensure that the work allocated to the team is completed as per timelines and quality norms

GS23. identify obstacles and bottlenecks in the process and on own find basic level solutions for removing these obstacles

GS24. gather information skilfully from multiple sources

GS25. analyse information in depth and identifies the problem in a timely manner

GS26. develop alternate solutions and resolves problems in early stages

GS27. work tireless in spite of repeat activities in a diligent manner to resolve problems on a day to day basis

GS28. use previous experience in resolving problems and taking decisions

GS29. make timely and independent decisions within the boundaries of the delegation matrix of the organization

GS30. clearly establish a goal for self or others to accomplish

GS31. without instructions from the manager, self-manage the work

GS32. take additional responsibilities to make sure that the work is completed on time

GS33. identify the needs of the customer

GS34. ensure that the product designed meets the expectation of the customer

GS35. understands importance of customer feedback and drives customer focus

GS36. familiarise with leading practices available in the market

GS37. think independently on new approaches to manufacturing process, material management, data management and team management

GS38. represent any new ideas/ approaches on process improvement and productivity improvement to the seniors in the team

GS39. contribute to building a positive team spirit

GS40. identify individual strengths & maximize team performance

GS41. exhibit objectivity & openness to others views

GS42. collaborate with stakeholders to achieve the desired state of final result

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Understanding Customer Needs	**4**	**5.5**	**-**	**-**
PC1.. understand and determine the customer preferences	0.5	0.5	-	-
PC2.. clarify understanding pertaining to specification, parameter, constraints on the product design in consultation with the relevant stakeholders	0.5	0.5	-	-
PC3.. understand the relationship between customer needs and satisfaction	0.5	0.5	-	-
PC4.. develop a range of criteria against which to evaluate different options and ideas	0.5	1	-	-
PC5.. conceptualize and develop the product on the basis of 'one dimensional attributes', 'indifferent attributes', 'attractive attributes and 'must be attributes'	0.5	1	-	-
PC6.. seek both spoken and unspoken needs and translating into action and design	0.5	1	-	-
PC7.. brainstorming in initial stages of idea generation	0.5	0.5	-	-
PC8.. translating/ communicating the initial product idea to the product designer in order to design a product that is aesthetically pleasing, ergonomically friendly and appealing	0.5	0.5	-	-
Conducting sensitivity analysis	**3.5**	**7**	**-**	**-**
PC9.. select the parameters that need to be verified	0.5	1	-	-
PC10.. identify the range of the parameters that is realistically possible	0.5	1	-	-
PC11.. design and conduct experiment to check for sensitivity	0.5	1	-	-
PC12.. summarize the results for further analysis	0.5	1	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13.. calculate values of sensitivity index for each of the parts	0.5	1	-	-
PC14.. verify if the parts are within the sensitivity range	0.5	1	-	-
PC15.. in case, the results are not optimal, new parts need to be designed	0.5	1	-	-
Conduct external benchmarking	**6.5**	**12.5**	**-**	**-**
PC16.. identify what parameters need to be benchmarked	0.5	1	-	-
PC17.. understand the data shared by the marketing team on competitor analysis	0.5	0.5	-	-
PC18.. develop a plan for benchmarking	0.5	1	-	-
PC19.. finalize on the data collection methodology and collect data	0.5	1	-	-
PC20.. choose/ finalize on the best in class organizations from which benchmarking need to be completed	0.5	1	-	-
PC21.. analyse the external benchmarking data from demand-side perspective in order to determine if they satisfy the same set of customer needs and from supply side perspective to determine if the organization has the same resources and technology to meet these needs	0.5	1	-	-
PC22.. analyse data on the product design of the organization in comparison to the competitor design	0.5	1	-	-
PC23.. analyse parameters like feel, comfort, handling, efficiency, performance etc.	0.5	1	-	-
PC24.. benchmark data against the technology being used by competitors	0.5	1	-	-
PC25.. benchmark data against competitors working/focusing in the same market (for example, big vs. small car market)	0.5	1	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC26.. analyse data pertaining to the competitive advantage of one organization and compare the same with the competitive advantage for own organization	0.5	1	-	-
PC27.. create competitors response profile which captures possible future moves	0.5	1	-	-
PC28.. conduct swot, pestle analysis, market segmentation etc.	0.5	1	-	-
Conduct internal benchmarking	**1**	**2**	**-**	**-**
PC29.. benchmark data against previous products design and performance undertaken and analyse the same	0.5	1	-	-
PC30.. analyse data on the technologies used previously in comparison to the current one	0.5	1	-	-
Collaborate with CFT (Cross Functional Team)	**2**	**3.5**	**-**	**-**
PC31.. collaborate with the cross functional team (cft) with diverse knowledge for design and fulfilment of customer needs	0.5	0.5	-	-
PC32.. define the scope of work for the team along with product conceptualization head	0.5	1	-	-
PC33.. define the time frame for completion of various activities being undertaken with the various cft teams and link the same with product conceptualization plan	0.5	1	-	-
PC34.. define the method of assessment for evaluation of work completed by the cft team	0.5	1	-	-
Development of the SQFD (Simplified Quality Function Definition)	**6**	**11.5**	**-**	**-**
PC35.. prepare of the sqfd through ensuring maximum satisfaction to the customer by making sure that product design and contents are as per their wishes	0.5	1	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC36.. for the sqfd, analyse the revealed requirements (basic wants), expected /implied requirements (customer fail to mention but wants them), exciting /delight requirements (beyond customers expectations)	0.5	1	-	-
PC37.. determine and finalize what segments will be analysed during the process and identify who the customers are	0.5	1	-	-
PC38.. identifying the technical attributes in the sqfd	0.5	1	-	-
PC39.. classify and assign importance to the requirements of the customer on a scale of 1-5 of as applicable in the respective organization	0.5	1	-	-
PC40.. creation of relationship matrix to determine the relationship between customer needs and the companys ability to meet those needs	0.5	1	-	-
PC41.. incorporate technical analysis completed for competitors products	0.5	1	-	-
PC42.. establishment for target values for each of the technical descriptors/ parameters	0.5	1	-	-
PC43.. create a correlation matrix	0.5	1	-	-
PC44.. eliminate any negative preferences and maximize only on the positive	0.5	1	-	-
PC45.. complete the documentation on the regulatory requirements	0.5	1	-	-
PC46.. understand which of the technical descriptors matters the most	0.5	0.5	-	-
Conduct future trend analysis	**3**	**6**	**-**	**-**
PC47.. analyse the features currently being used in similar products by the company itself as well as competitors	0.5	1	-	-
PC48.. analyse the features that customers want/need as well as those that they desire	0.5	1	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC49.. understand data captured through qualitative surveys on customer needs and desires	0.5	1	-	-
PC50.. understand data captured through quantitative surveys on customer needs and desires	0.5	1	-	-
PC51.. analyse to see the potential production and costs of those new features to see economic viability	0.5	1	-	-
PC52.. analyse the sensitivity to change, structural viability and if the features meet emission, safety and other requirements	0.5	1	-	-
Conduct economic trend analysis	**3.5**	**7**	**-**	**-**
PC53.. check the current economic trends and if the customer has the willingness to pay for the product	0.5	1	-	-
PC54.. develop an approximate cost of the new product given the current and future economic trends	0.5	1	-	-
PC55.. benchmark the cost of conceptualization and production of current products to the predicted economic trends while making the potential product	0.5	1	-	-
PC56.. analyse the fuel cost, mileage parameters, maintenance cost etc.	0.5	1	-	-
PC57.. analysis the different government policies, auto sector methods and export and import parameters	0.5	1	-	-
PC58.. generate a report to see if the potential customers can afford the product	0.5	1	-	-
PC59.. analyse macroeconomic policy, spending reports, key metrics such as cost of fuel etc.	0.5	1	-	-
Conduct technology trend analysis and research on alternative fuel	**3**	**5.5**	**-**	**-**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC60.. analyse the current technology that is in use in the industry, internally by the company and by competition	0.5	1	-	-
PC61.. analyse the future predicted technology to be used	0.5	1	-	-
PC62.. narrow down the type of technology that is the most beneficial	0.5	1	-	-
PC63.. develop a cost benefit analysis of the technology to be used with the help of the manager	0.5	1	-	-
PC64.. decide whether to deploy the technology presently, to keep in the bench from a commercial viability point of view	0.5	1	-	-
PC65.. coordinate on aspects related to different technology/ alternative fuels/ new regulations with other nodal agency/ ministries	0.5	0.5	-	-
Ensure compliance to all regulatory and environmental requirements	**3.5**	**3.5**	**-**	**-**
PC66.. understand and analyse the current environmental and governmental regulations in terms of type of vehicles, size and its segment, utility etc.	0.5	0.5	-	-
PC67.. check to see if the potential product will meet the environmental and government regulations (regulations of both local and global standards)	0.5	0.5	-	-
PC68.. display understanding and orientation towards internal company regulations and if the product meets those	0.5	0.5	-	-
PC69.. display understanding and ensure if the emission regulations of the country and globally to see if the product meets those	0.5	0.5	-	-
PC70.. display understanding and ensure if the safety regulations of the country and globally to see if the product meets those	0.5	0.5	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC71.. check to see the product is not utilizing a patent of some other organization	0.5	0.5	-	-
PC72.. benchmark the regulations that are already in place to the ones predicted for the future to make sure the product will be meeting both requirements	0.5	0.5	-	-
NOS Total	**36**	**64**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	ASC/N5106
NOS Name	Conceptualize the new product by using different analytical and decision making tools, conducting analysis and ensuring all types of compliance
Sector	Automotive
Sub-Sector	Research & Development
Occupation	Product Conceptualization
NSQF Level	7
Credits	TBD
Version	1.0
Last Reviewed Date	20/01/2014
Next Review Date	20/01/2016
NSQC Clearance Date	

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.

Recommended Pass % : 75

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
ASC/N0006.Maintain a safe and healthy working environment	25	75	-	-	100	15
ASC/N0019.Managing the project delivery as a team lead within the cross functional team	30	70	-	-	100	20
ASC/N0020.Managing the team on a day to day basis	30	70	-	-	100	20

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
ASC/N5106.Conceptualize the new product by using different analytical and decision making tools, conducting analysis and ensuring all types of compliance	36	64	-	-	100	45
Total	**121**	**279**	**-**	**-**	**400**	**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.