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1 Terms & Definitions

Few terms are used very frequently in this manual. They are clarified from NCVT point of view.

- a) **Competence** means the proven ability to use acquired knowledge, skills and personal and social abilities, in discharge of responsibility roles in a given environment/situation.
- b) **Learning Outcomes** represent what a learner knows, understands and is able to do on completion of a learning process, and which would be expressed in terms of knowledge, skills, and competence.
- c) **Assessment criteria** state what is to be assessed and the required level of performance of the activities. These are defined against each Learning Outcome.

2 INTRODUCTION

Government of India has notified establishment of National **Skill Qualification Framework (NSQF)** through Gazette of India Extraordinary, Part 1, Section 2 Ministry of Finance (Department of Economic Affairs) Notification New Delhi, the 27th December, 2013.

The NSQF shall be anchored by the National Skill Development Agency (NSDA) and will be implemented through the National Skills Qualification Committee (NSQC). NSQC shall approve qualifications and maintain Qualification Register.

2.1 WHAT IS THE NATIONAL SKILLS QUALIFICATION FRAMEWORK?

The National Skills Qualification Framework (NSQF) organizes qualifications according to a series of levels of knowledge, skills and core skills and responsibility. This implies performance competence (deliverables) at work place. These levels are represented in terms of learning outcomes which the learner must possess regardless of whether they were acquired through formal, non-formal or informal learning.

The levels of a framework indicate different degrees of complexity of the learning outcomes. The lowest level often define the basic generic or vocational skills for people who can work effectively under supervision, the central levels typically define the expected requirements for professional who can act independently, whilst the highest levels emphasize the capacity to analyses and innovate, create new knowledge and may include the ability to lead and manage people and processes. Levels relate to factors such as:

- ✓ Complexity and depth of knowledge and understanding.
- ✓ Range and sophistication of practical and intellectual skills.
- ✓ Degree of integration, independence and creativity required.
- ✓ Degree of complication and predictability of the context.
- ✓ Role(s) taken in relation to colleagues/fellow workers.

2.2 LEVEL DESCRIPTORS:

Each level of the NSQF is described by a statement of learning outcomes in five domains, known as level descriptors. These five domains are:

- a. Process
- b. Professional knowledge
- c. Professional skill
- d. Core skill
- e. Responsibility.

2.3 THE NSQF LEVEL DESCRIPTORS ALONG WITH EXPLANATION ARE DETAILED IN ANNEXURE-I.

2.4 HOW THESE LEVELS WERE DECIDED FOR OUR COURSES/ TRADES:

Following standard procedure was adapted for assigning level to different courses:

Existing course curricula was transformed into learning outcome/competency based curricula. The learning outcomes of particular trade defined were mapped with level descriptor of specific level. For mapping also standard format was adopted as formulated by expert bodies. Initially, based on complexity & depth of knowledge and understanding, range & sophistication of practical and intellectual skills, etc. an expected level demarcated against the specific trade by the trade experts. It is not mandatory that all learning outcomes defined for a specific trade will match/align with expected level. Some learning outcome may be at higher or below the expected level. However if most of the learning outcomes match/align with expected level, then the specified trade is assigned the level where majority learning outcomes are matched.

3 NSQF IMPLEMENTATION IN ITI / CTS

It has been decided to introduce NSQF in all courses under CTS. The details of NSQF aligned curricula are available at www.cstaricalcutta.gov.in/syllabi.aspx.

The training activities will be outcome based. It is the responsibility of the concerned trainer, principal, State Directorate/ Management to ensure that students achieve the learning outcomes and demonstrate competency according to assessment criteria. Assessment would be carried out according to minimum assessment criteria as prescribed. Assessment criteria shall evolve with learning, must be transparent and known to trainees in advance. Indicative role & responsibilities of the stake holders are given below:

A. NCVT:

- 1. Facilitate Horizontal and Vertical mobility by interacting with other regulatory institutions/organizations.
- 2. Monitor & Coordinate with the State Govt. the implementation of courses
- 3. Ensure timely fair, valid, reliable assessment and certification.
- 4. Formulation and updating testing procedure on continuous basis.
- 5. Promote conducive & competitive environment in ITIs.
- 6. Notification to all stake holders and govt. agency, prospective employers about the implementation of NSQF alignment of NCVT courses for market acceptability.

B. ROLE OF THE STATE:

- 1. Creation of NSQF implementation cell in the state and intra-regional level for effective and timely implementation
- 2. Providing infrastructure (if already short) and man power support to go ahead with the scheme for effective implementation
- 3. Effective monitoring by suitable MIS mechanism
- 4. Organizing and supporting of training of trainers and officials through various programmes in coordination with DGT.

C. ROLE OF CFIs:

- 1. All the Principals/Directors/HODs must ensure that their faculty is clear in concept and understanding of NSQF. They are equipped to support the implementation of NSQF if any state Directorate/ ITI approach them.
- 2. All the ITOT programs, which are starting from August 2018, will be run and evaluated in NSQF format.
- 3. Each CFI located in the particular region shall identify the entire requirement for initiating the implementation.

- 4. A nodal officer and a team of officials at every CFI will coordinate with the concerned State Directorate to provide all possible support to all the stake holders in the region.
- 5. CFI shall conduct awareness training programme to all stake holders like ITIs, industries, industry association, and State govt. officials through special training methodology including DLP.
- 6. CFIs in which studios and hubs are located viz. NSTI Chennai and Mumbai shall organize and coordinate with others hubs and spokes in support with CSTARI and NIMI for dissemination of all information connected with NSQF.

4 INSTRUCTIONS FOR TRAINERS

The Principal of the concerned ITI shall act as the chief coordinator of the training programme and will ensure effective implementation of the course. He/ She shall ensure that trainers/ faculty are able to deliver the learning objectives. The Trainer/ Instructor will impart knowledge of the Professional Knowledge, Professional Skill and Core Skill in their respective trades. The performance appraisal of Trainer/ Instructor shall be linked to delivery of quality output.

As on date the training were input based and only skill and knowledge component mentioned in the curricula were taught to the trainees. Under the NSQF level the training will be output based and all Learning Outcome defined must be carried out by the trainers during training. Hence, the training to be imparted based on Learning Outcome and Assessment criteria.

The Learning Outcomes of each trade are broadly categorized in two parts. They are Generic Learning Outcome and Specific Learning Outcome. The Generic Learning Outcomes are generic in nature covering components of Workshop Science & Calculation, Engineering Drawing & Employability Skill and are not trade specific whereas Specific Learning Outcomes are trade specific. Trainers must explain and apply in trade context. All the Generic Learning Outcomes may be given due weightage throughout the course. However, specific learning outcome must be completed during the defined training period only.

The lesson plan/ demonstration plan may be drawn with respect to the each Learning Outcome. The training on skill and knowledge components must be planned and imparted in such way that the trainees are able to execute each Learning outcome as per defined Assessment Criteria. The trainees must be informed in advance about the Learning Outcome with Assessment Criteria and it must be confirmed that trainees understood the learning outcome corresponding to Assessable Outcome and assessment criteria. Trainers must explain the application of learning outcome in context of employment.

The delivery of the training shall be planned in such a way that at the end of the training all the trainees are in a position to demonstrate competencies as per assessment criteria defined. The assessment of trainees shall be continuous process and on completion of each learning outcomes necessary records / evidence to be preserved by the concern instructor. The trainer must be in position to explain the reason for awarding specific marks for defined activity, to anyone concerned. The detailed guidelines of the assessment and certification are given in *Item no. 5* of this manual.

Both formative and summative assessments are critical elements of the learning process to ascertain the acquisition of learning by the trainees and also evaluate the training plan accordingly. In the context of learning outcome, the assessment must measure the performance of the skill with respect to predetermined assessment criteria. A learner must demonstrate competence by successfully performing the task defined in Learning Outcome.

Assessment of competence should be conducted after trainee has achieved the competency. The summative assessment relies on the learner's ability to provide evidence of his or her ability to execute each Learning outcome. Each assessment may have certain Assessment Criteria attributed to it and same should be taken care while assessing. The ITI will maintain *trainee portfolio* and the same should be produced before external assessor or any other authority as & when sought for. The instructor must ensure that the evidence against each learning outcomes are preserved with proper documentation/ marking so as to verify the same by external assessor or any other authority as and when required. The total internal assessment mark is 100 and based on different parameters internal assessment marks to be allotted against each learning outcomes considering assessment criteria (As per annexure-II). The evidence should be sufficient to prove that the job was performed and competency achieved by the trainee. Verification of same evidence by external assessor or any other competent authority is allowed, if necessary.

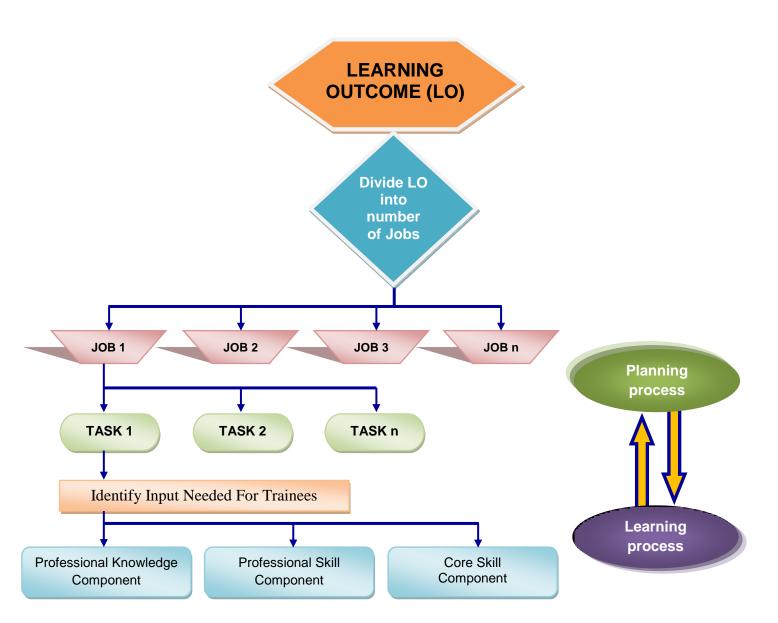
Internal assessment of the performance of students will be done by the instructor of concern ITI in a continuous comprehensive manner. The NCVT will conduct external competency based assessment/examination of skills & knowledge of the trainees. The examination will be conducted by NCVT to test basic skills on Workshop Science & Calculation, Engineering Drawing and Employability Skills as per NCVT guidelines apart

from Professional Skill and Professional Knowledge. However, their applications will also be assessed during execution of specific learning outcome.

Conducting Training:

In order to achieve defined Learning outcome by the trainee, the trainers may adopt following flow chart:

ANALYSIS OF TRAINING PROCESS



Note: As indicated by arrow lesson plans would be developed from top to bottom but training will be conducted from bottom to top.

5 | ASSESSMENT GUIDELINES

5.1 PRINCIPLES OF ASSESSMENT

As assessment is central to the recognition of achievement and the quality of the assessment is therefore important to provide credible certification. Credibility in assessment is assured through assessment procedures and practices being governed by certain principles.

> Objectivity	All decisions related to Assessment should be objective.
> Validity	It refers to accuracy of the evidence. A valid test is one that assesses what is supposed to assess.
> Reliability	It refers to consistency of the information and evidence collected. Technically, reliability refers to the consistency of results. In practical terms:
	 A person, who is declared competent, should be competent, if tested again on the same test. If an equivalent test is given to a competent person, he should be declared competent again. Whosoever carries out assessment, competent persons will be declared competent and incompetent persons will be declared not yet competent.
> Sufficiency	It collects adequate and appropriate evidence to make an accurate assessment.
> Currency	The evidence collected is recent and still relevant.
> Authenticity	The evidence collected and presented for assessment is of the candidate being assessed.
> Transparency	The candidate is kept informed of assessment criteria at all times and provided accurate and timely feedback.
> Fairness	Assessment should be fair to the candidates in terms of contents, difficulties, tasks to be performed, time allocation and Administration. An assessment should be fair to the society in the sense that: - Highly competent person should be identified and certified - Persons found to be not yet competent are not allowed to
	practice

5.2 TYPES OF ASSESSMENT TO BE ADOPTED:

- A. Formative Assessment
- B. Summative Assessment

A. Formative Assessment:

This will be done by the Trainer for every Learning Outcome. The Trainer will carry out the Assessment on the basis of Assessment Criteria and same must be explained to the trainees in advance. The trainers shall maintain a Portfolio of evidence (*trainee portfolio*) for every Trainee.

The Trainer shall prepare a report for every assessment observation and a copy of this will be placed as evidence in the candidate's portfolio. The types of evidence such as:

- Assessor's Observation reports
- ➤ Job piece/ output of the Practical exercise/Assignments/Project Reports along with their appropriate Evaluation documents/Check list.
- Theory written test.
- Result of written or oral Questioning/Viva-voce, conducting interviews and questionnaires.
- Direct Performance Observation
 - At the work place/Laboratory/Workshop
 - Simulated Work Environment
- > Participation in Group activity/competition
- Trainee Portfolio maintained by trainee (to include collection of work samples, written documents, Photograph/video of trainee doing actual work in the institute.)

Every Evaluation sheet should have the Signature of the Trainer & Trainee. It must be verified by the Principal every fortnight. The satisfactory evidences must be produced to external assessor or any official designated to carry out verification as and when required.

Evidence of internal assessment to be preserved until forthcoming examination for audit and verification by examination body.

B. Summative Assessment:

The Summative Assessment is to be carried out for Theory & Practical as prescribed by NCVT. The Trainee will be eligible for summative assessment after completion of all the formative Assessments, in addition to requirement of 80% attendance.

The AITT examination is to take place as per notification issued from NCVT time to time. The each examination encompasses such skills as are listed for that period of training and also includes theoretical knowledge, Core skills & Employability Skills. The Employability Skills will be covered in first year only.

Theory Tests:

Much of theoretical knowledge will be tested in its application in practical. However, the theory test is considered necessary to assess the knowledge, which is essential for a person to do the job. The examination pattern and marks will be as NCVT guidelines issued from time to time.

Practical Tests:

- > Trainees will carry out the assigned exercises as per question papers supplied by NCVT.
- > The External Examiner/assessor will verify the *trainee portfolio* of every Trainee and the Marks Awarded against them.
- Evaluation of the practical test will be carried out by the External Examiner/assessor according to the Marking Instructions/guidelines issued by NCVT.
- Evidence of external assessment would also be preserved by Institute/State Director, which can be verified by NCVT representative.

Broadly candidates are to demonstrate that they are able to:

- 1. Read & interpret technical parameters/documentation, plan and organize work processes, identify necessary materials and tools;
- 2. Perform task with due consideration to safety rules, accident prevention regulations and environmental protection stipulations;
- 3. Apply professional knowledge, core skills & employability skills while performing the task.
- 4. Check the job as per drawing/assembly for functioning, identify and rectify errors in job/assembly.
- 5. Document the technical parameters related to the task undertaken.

For the purposes of determining the overall result, weightage of 100% is applied for six months and one year duration courses and 50 % weightage is applied to each examination for two years courses. The minimum pass percent for Practical is 60% & minimum pass percent for Theory subjects 40%.

5.3 Following course of action to be observed by the Trainer/Assessor while allocation of marks during assessment:

The trainer/ assessor should ensure appropriate arrangements are for assessment and appropriate resources are available for undertaking such assessment. The nature of special needs should be taken into account while undertaking assessment.

Appropriate arrangements should be made to ensure that there will be no artificial barriers to assessment. The nature of special needs should be taken into account while undertaking assessment.

Due consideration to be given while assessing for team work, avoidance/reduction of scrap/wastage and disposal of scarp/wastage as per procedure, behavioral attitude,

sensitive to environment and regularity in training. The sensitivity towards OSHE and self-learning attitude to be considered while assessing competency.

The following marking pattern to be adopted while assessing:

a) Weightage in the range of 60-75% to be allotted during assessment under following performance level:

For performance in this grade, the candidate with occasional guidance and showing due regard for safety procedures and practices, has produced work which demonstrates attainment of an acceptable standard of craftsmanship.

In this work there is evidence of:

- demonstration of good skill in the use of hand tools, machine tools and workshop equipment
- below 70% tolerance dimension / accepted limit achieved while undertaking different work with those demanded by the component/job.
- a fairly good level of neatness and consistency in the finish
- occasional support in completing the project/job.
- b) Weightage in the range of above 75% 90% to be allotted during assessment under following performance level:

For this grade, the candidate, with little guidance and showing due regard for safety procedures and practices, has produced work which demonstrates attainment of a reasonable standard of craftsmanship.

In this work there is evidence of:

- good skill levels in the use of hand tools, machine tools and workshop equipment
- 70-80% tolerance dimension / accepted limit achieved while undertaking different work with those demanded by the component/job.
- a good level of neatness and consistency in the finish
- little support in completing the project/job
- c) Weightage in the range of above 90% to be allotted during assessment under following performance level:

For performance in this grade, the candidate, with minimal or no support in organization and execution and with due regard for safety procedures and practices, has produced work which demonstrates attainment of a high standard of craftsmanship.

In this work there is evidence of:

- high skill levels in the use of hand tools, machine tools and workshop equipment
- above 80% tolerance dimension/ accepted limit achieved while undertaking different work with those demanded by the component/job.
- a high level of neatness and consistency in the finish.
- minimal or no support in completing the project

Recording the Assessment: All the relevant evidence to be preserved till the examination is over and marks allotted to each trainee against the Learning Outcomes are to be recorded as per Annexure-II.

ANNEXURE – I

The NSQF level descriptors are given below:

Level	Process Required	Professional Knowledge	Professional Skill	Core Skill	Responsibility
Level 1	prepares person to/carry out process that are repetitive on regular basis require no previous practice	familiar with common trade terminology, instructional words meaning and understanding	routine and repetitive, takes safety and security measures.	Reading and writing, addition subtraction personal financing, familiarity with social and religious diversity, hygiene and environment	No responsibility always works under continuous instruction and close supervision
Level 2	prepares person to/carry out process that are repetitive on regular basis with little application of understandin g, more of practice	Material tools and application in a limited context, understands context of work and quality	limited service skill used in limited context, select and apply tools, assist in professional works with no variables differentiate s good and bad quality	receive and transmit written and oral messages, basic arithmetic personal financing understanding of social political and religious diversity, hygiene and environment	No responsibility works under instruction and close supervision
Level 3	person may carry out a job which may require limited range of	Basic facts, process and principle applied in trade of employment	recall and demonstrate practical skill, routine and repetitive in narrow range of	Communication written and oral, with minimum required clarity, skill of basic	Under close supervision Some Responsibility for own work within defined

	activities routine and predictable		application	arithmetic and algebraic principles, personal banking, basic understanding of social and natural environment	limit.
Level 4	work in familiar, predictable, routine, situation of clear choice	factual knowledge of field of knowledge or study	recall and demonstrate practical skill, routine and repetitive in narrow range of application, using appropriate rule and tool, using quality concepts	language to communicate written or oral, with required clarity, skill to basic arithmetic and algebraic principles, basic understanding of social political and natural environment	Responsibility for own work and learning
Level 5	job that requires well developed skill, with clear choice of procedures in familiar context	knowledge of facts, principles, processes and general concepts, in a field of work or study.	a range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information	Desired mathematical skill, understanding of social, political and some skill of collecting and organizing information, communication .	Responsibility for own work and learning and some responsibility for other's works and learning
Level 6	demands wide range of specialized technical skill,	factual and theoretical knowledge in broad contexts	a range of cognitive and practical skills required to	Reasonably good in mathematical calculation,	Responsibility for own work and learning and full

	clarity of knowledge and practice in broad range of activity involving standard non- standard practices	within a field of work or study	generate solutions to specific problems in a field of work or study	understanding of social, political and, reasonably good in data collecting organising information, and logical communication	responsibility for other's works and learning
Level 7.	Requires a command of wide ranging specialized theoretical and practical skill, involving variable routine and ncoroutine context.	wide ranging, factual and theoretical knowledge in broad contexts within a field of work or study	wide range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	good logical and mathematical skill understanding of social political and natural environment good in collecting and organising information, communication and presentation skill	full responsibility for output of group and development
Level 8	creative solu Undertakes	nd practical ski tions, to abs self-study, ependence, ana	tract problem. demonstrates	supervision in work/study havi	nanagement and the context of ng unpredictable sponsible for self and others.
Level 9.	understanding mastery and	Knowledge and of the subject, innovation, earch and dissert	_	mplex technical ing unpredictable	
Level 10.	solving skill to	lized knowledge provide original ough research and	contribution to	Responsible decisions complex work/study.	for strategic in unpredictable situations of

Explanation/ Reading Level Descriptors:

NSQF LEVEL 1

- 1. This is the most basic level of employment in the framework.
- 2. Work at level 1 will be routine, repetitive, and focused on limited tasks carried out under close supervision. People carrying out these job roles may be described as "helpers".
- 3. Individuals employed to carry out these job roles **may** be expected to be able to read, write, add and subtract, but will not normally be required to have any previous knowledge or skills relating to the work¹.
- When employed, they will be instructed in their tasks and expected to learn and use the common terminology of the trade and acquire the basic skills necessary for the work.
- 5. Job holders at this level will be expected to carry out the tasks they are given safely and securely and to use hygienic and environmentally friendly practices. This means that they will be expected to take some responsibility for their own health and safety and that of fellow workers.
- 6. In working with others, they will be expected to respect the different social and religious backgrounds of their fellow workers.

- Work at level 2 will also be routine and repetitive and tasks will be carried out under close supervision. The individuals will not be expected to deal independently with variables which affect the carrying out of the work. People carrying out these work roles may be described as "assistants" and the range of tasks they carry out will be limited.
- 2. Individuals employed to carry out these job roles will normally be expected to be able to read and write, add and subtract. Their work may involve taking and passing on messages.
- 3. They may also be expected to have some previous experience, knowledge and skills in the occupation. When employed, they will be instructed in their tasks and expected to acquire the practical skills necessary to assist skilled workers and/or give a limited service to customers. They will learn about, and use, the materials, tools and applications required to carry out basic tasks in an occupation. They may have to select the appropriate materials, tools and/or applications to carry out tasks.
- 4. They will be expected to understand what constitutes quality in their job role and distinguish between good and bad quality in the context of the tasks they are given. Job holders at this level will be expected to carry out the tasks they are given safely and securely and to use hygienic and environmentally friendly practices. This

¹In practice many workers at this level will have limited literacy and NOS and qualifications at this levels should reflect this – eg in relation to assessment.

- means that they will be expected to take some responsibility for their own health and safety and that of fellow workers and, where appropriate, customers.
- 5. In working with others, they will be expected to respect the different social and religious backgrounds of their fellow workers, but their contribution to team work may be limited.

NSQF LEVEL 3

- Work at level 3 will be routine and predictable. Job holders will be responsible for carrying out a limited range of jobs under close supervision. Their work may require the completion of a number of related tasks. People carrying out these job roles may be described as "partly-skilled workers".
- 2. Individuals employed to carry out these job roles will be expected to be able to communicate clearly in speech and writing and may be required to use arithmetic and algebraic processes. They will be expected to have previous knowledge and skills in the occupation and should know the basic facts, processes and principles applied in the trade for which they are qualified and be able to apply the basic skills of the trade to a limited range of straightforward jobs in the occupation.
- 3. They will be expected to understand what constitutes quality in their job role and more widely in the sector or sub-sector and to distinguish between good and bad quality in the context of the jobs they are given. Job holders at this level will be expected to carry out the jobs they are given safely and securely. They will work hygienically and in ways which show an understanding of environmental issues. This means that they will be expected to take responsibility for their own health and safety and that of fellow workers and, where appropriate, customers and/or clients.
- 4. In working with others, they will be expected to conduct themselves in ways which show a basic understanding of the social environment. They should be able to make a good contribution to team work.

- 1. Work at level 4 will be carried out in familiar, predictable and routine situations. Job holders will be responsible for carrying out a range of jobs, some of which will require them to make choices about the approaches they adopt. They will be expected to learn and improve their practice on the job. People carrying out these jobs may be described as "skilled workers".
- 2. Individuals employed to carry out these jobs will be expected to be able to communicate clearly in speech and writing and may be required to use arithmetic and algebraic processes. They will be expected to have previous knowledge and skills in the occupation in which they are employed, to appreciate the nature of the occupation and to understand and apply the rules which govern good practice. They will be able to make choices about the best way to carry out routine jobs where the choices are clear.
- 3. They will be expected to understand what constitutes quality in the occupation and will distinguish between good and bad quality in the context of their job roles. Job

holders at this level will be expected to carry out their work safely and securely and take full account of the health and safety on colleagues and customers. They will work hygienically and in ways which show an understanding of environmental issues.

4. In working with others, they will be expected to conduct themselves in ways which show a basic understanding of the social and political environment. They should be able to guide or lead teams on work within their capability.

NSQF LEVEL 5

- 1. Work at level 5 will also be carried out in familiar situations, but also ones where problems may arise. Job holders will be able to make choices about the best procedures to adopt to address problems where the choices are clear.
- 2. Job holders will be responsible for the completion of their own work and expected to learn and improve their performance on the job. They will require well developed practical and cognitive skills to complete their work. They may also have some responsibility for others' work and learning. People carrying out these jobs may be described as "fully skilled workers" or "supervisors".
- 3. Individuals employed to carry out these jobs will be expected to be able to communicate clearly in speech and writing and may be required to apply mathematical processes. They should also be able to collect and organize information to communicate about the work. They will solve problems by selecting and applying methods, tools, materials and information.
- 4. They will be expected to have previous knowledge and skills in the occupation, and to know and apply facts, principles, processes and general concepts in the occupation.
- 5. They will be expected to understand what constitutes quality in the occupation and will distinguish between good and bad quality in the context of their work. They will be expected to operate hygienically and in ways which show an understanding of environmental issues. They will take account of health and safety issues as they affect the work they carry out or supervise.
- 6. In working with others, they will be expected to conduct themselves in ways which show an understanding of the social and political environment.

- 1. Work at level 6 will require the use of both standard and non-standard practices. Job holders will carry out a broad range of work which will require a wide range of specialized technical skills backed by clear factual and theoretical knowledge.
- 2. Job holders will be responsible for the completion of their own work and expected to learn and improve their performance on the job. They are likely to have full responsibility for others' work and learning. People carrying out these jobs may be described as "master technicians" and "trainers".
- 3. Individuals employed to carry out these job roles will be expected to be able to communicate clearly in speech and writing and may be required to carry out

- mathematical calculations. They should also be able to collect data, organiseinformation, and communicate logically about the work. They will solve problems by selecting and applying methods, tools, materials and information.
- 4. They will be expected to have broad factual and theoretical knowledge applying to practice within the occupation, and a range of practical and cognitive skills. They will be able to generate solutions to problems which arise in their practice.
- 5. They will be expected to understand what constitutes quality in the occupation and to distinguish between good and bad quality in the context of all aspects of their work. They will be expected to work in ways which show an understanding of environmental issues. They will take account of health and safety issues as they affect the work they carry out or manage.
- 6. In working with others, they will be expected to conduct themselves in ways which show an understanding of the social and political environment.

NSQF LEVEL 7

- 1. Work at level 7 will take place in contexts which combine the routine and the non-routine and are subject to variations. Job holders will carry out a broad range of work which require wide-ranging specialized theoretical and practical skills.
- 2. Job holders will be responsible for the output and development of a work group within and organization. People carrying out these job roles are likely to be graduates. They may be described as "managers" or "senior technicians".
- 3. Individuals employed to carry out these job roles will be expected to be able to communicate clearly in speech and writing and are likely to be required to carry out mathematical calculations as part of their work. They should also be skillful in collecting and organizing information to communicate logically about the work.
- 4. They will be expected to have wide-ranging factual and theoretical knowledge of practice within the occupation, and a wide range of specialized practical and cognitive skills. They will be able to generate solutions to problems which arise in their work.
- 5. They will be expected to understand what constitutes quality in the occupation and distinguish between good and bad quality in all aspects of their work. They will be expected to work in ways which show a good understanding of environmental issues. They will take account of health and safety issues as they affect the work they carry out and manage.
- 6. In working with others, they will be expected to conduct themselves in ways which show a good understanding of the social and political environment.

- 1. Job holders who are qualified at level 8 will normally be responsible for managing the work of a team and developing the team. The work will involve dealing with unpredictable circumstances affecting the work.
- 2. Their work will require the use of comprehensive knowledge and understanding of the occupational field and a commitment to self-development.

3. They will normally need an ability to develop creative solutions to problems requiring abstract thought. They will be required to show intellectual independence and a rigorous analytical ability. They will need to be good communicators.

NSQF LEVEL 9

- 1. Job holders who are qualified at level 9 will normally be responsible for complex decision-making in unpredictable contexts.
- 2. They will have to exercise senior responsibility in an organization and show mastery of the issues in the occupation and the ability to innovate.
- 3. Their work will require the use of advanced knowledge and skill. They may make contributions to knowledge in their field through research.

- 1. Job holders who are qualified at level 10 will normally be responsible for strategic decision-making. The context of their work will be complex and unpredictable.
- 2. They are likely to be responsible for an organization or a significant division of an organization. They will have to provide leadership.
- 3. Their work will require highly specialized knowledge and problem-solving skills. They may make original contributions to knowledge in their field through research, scholarship or innovative practice.

ANNEXURE – II

Format for Internal Assessment

Name & Address of the Assessor :					Year	Year of Enrolment :								
Name & Address of ITI (Govt./Pvt.) :					Date	Date of Assessment :								
Name & Address of the Industry :					Asses	Assessment location: Industry / ITI								
Tra	de Name :		Exami	inatio	n: I / II			Dura	tion of t	the Trad	le/cours	e:		
Lea	rning Outcome:													
	Maximum Marks (Total	100 Marks)		15	10	10	5	10	10	10	15	15		
Sl. No	o Z		er's	Safety consciousness	Workplace hygiene Economical use of materials	Attendance/ Punctuality	Ability to follow Manuals/ Written instructions	Application of Knowledge	Skills to handle tools & equipment	Speed in doing work	Quality in workmanship	VIVA	Total internal assessment Marks	Result (Y/N)
1														
2														

NOTE: - Breakup of marks against each assessment parameters is as per Annexure - III

ANNEXURE – III

Breakup of marks against each Assessment parameters:

(The below assessment parameters are only an indicative for instructors for reference only.)

SI. No.	Assessment	Components of Assessment	Max. marks
SI. NO.	Parameters	Parameters	Break-up
	Safety Consciousness	Dress code	2
1.		Use PPE	5
'-		Apply/practice safety	8
		Total	15
		Maintain personal& workplace	3
	Workplace	cleanliness	
	hygiene&	Dispose scrap as per standard	2
2.	Economical use	practice	
	of materials	Select appropriate material & minimize	5
	Of illaterials	wastage	
		Total	10
	Attendance/ Punctuality	Initiative	3
3.		Accountability	3
J.		Participative in work	4
		Total	10
	Ability to follow Manuals/ Written instructions	Select right manual	1
4.		Search for appropriate topic	2
		Read & interpret the manual	2
		Total	5
		Plan the work	4
5.	Application of Knowledge	Select appropriate tools & equipment	3
		Review the work	3
		Total	10
	Skills to handle	Handle & use tools & equipment	4
6.	Tools & Equipment	Maintain safety in handling	3
		Care & maintain	3
		Total	10

		Properly sequence the work	3
7.	Speed in doing	Use appropriate technique	5
/.	work	Review the work during execution	2
		Total	10
		Achieve work with high accuracy	7
8.	Quality in	Conform to requirement	3
0.	Workmanship	Satisfy the purpose	5
		Total	15
		Response with clarity	5
9.	VIVA	Technical understanding	7
J.		Conscious towards job role	3
		Total	15



Directorate General of Training

Designed by: -

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