



Life Sciences Sector Skill Development Council

Assessment Guidelines



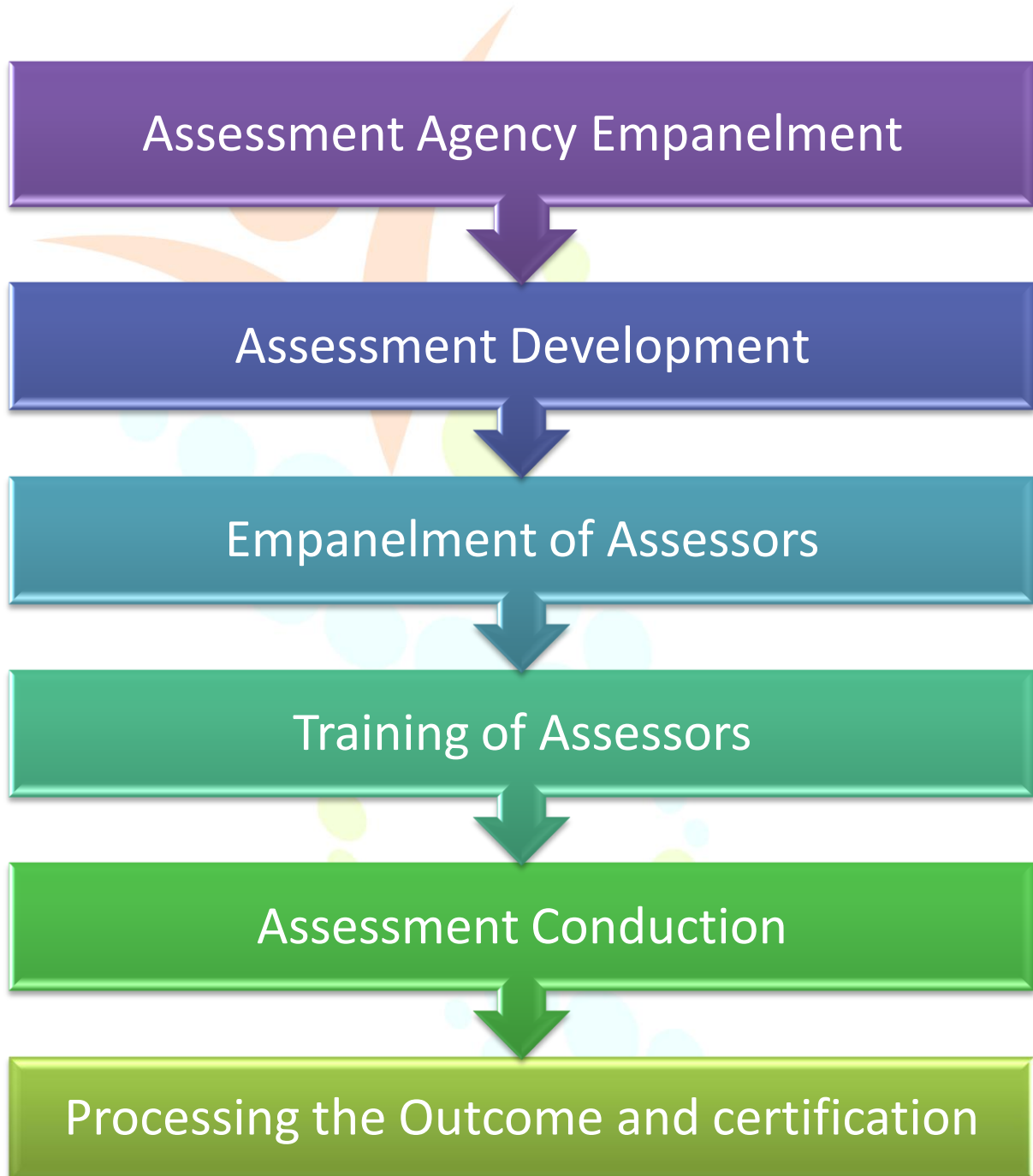
Preface

The Indian Life Sciences Sector (comprising Pharmaceuticals, Bio Technology and Clinical) has been growing rapidly. In the process it has been facing a shortage of skilled work force across functions and levels. With this background, CII, supported by NSDC, decided to set up a Sector Skill Council for Life Sciences namely, the Life Sciences Sector Skill Development Council (LSSSDC).

LSSSDC is a not for profit organisation, registered under the Societies Act, 1860. It's aim, over a 10 year period, will be to map all job roles in the Sector (estimated 100), enlist 339 Training Organisations, train over 39,000 Trainers and certify approx. 3.4 mn skilled workers in this Sector.

Objectives

- To design and conduct outcome based assessments.
- To setup a qualitative and continuous skill based assessments.
- Maintain standards through creation of robust assessment framework.
- To standardise the Assessment process
- Minimising the flaws caused by variations and subjectivity.

Overall Process Flow Chart

Assessment Agency Accreditation Criteria

- All bodies registered to run business process in the relevant area may apply.
- Should have minimum 1 years of experience in assessment of trainees / physical assessment of institutions in Life Science sector or minimum 5 years of experience in assessment of trainees / physical assessment of institutions in non-Life Science sector.
- In case the organization applying for LSSSDC accreditation as Assessing Body, has no prior experience and entering the assessment field for the first time, LSSSDC would consider their candidature on a case-to-case basis.
- Should have offices in the State / Region for which it is applying to be the LSSSDC Accredited Assessing Body.
- The Organization applying for LSSSDC Accreditation as Assessment Body, should have a competent content team to develop assessment. This team must have basic knowledge of developing NSQF level based assessment.
- Assessment body must have empanelled / be ready to empanel ‘Subject Matter Experts’ to the related subject.
- The Organization applying for LSSSDC Accreditation as Assessment Body should have 2 assessment coordinators on their pay-roll / zone.
- The Organization applying for LSSSDC Accreditation as Assessment Body should not be involved in imparting training in the same sector at any stage.
- The Organization, applying for LSSSDC accreditation as Assessing Body, should be able to carry-out the entire assessment process independently along with their empanelled assessors and are not in any circumstances allowed to outsource it to any third party. For this they should have at least 10 employees.
- Application is to be submitted by filling the Application form (refer to Appendix I)

Assessment Development

The Assessment shall be designed to test both knowledge and Skill in a Trainee. All the Assessments shall have different sections to Test different aspects of a Trainee. The Knowledge part shall be tested largely through objective type written test, and Viva etc, while skill element shall be tested through Viva and practical etc.

The assessment development is done with close monitoring and support of LSSSDC at every stage.

Developing the Blue print

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- Development of lay-out of Question paper is such that the entire PCs (Performance Criteria) of that QP are covered.
- The Assessments are designed to map the 5 pillars of NSQF level.
- Every question also maps with the desired NSQF level.
- The overall scheme of marks coincides with the prescribed Assessment criteria and its potential.

Selection of Assessment tools

- Selection of assessment tool(s) depends on
 - ✓ The assessment criteria prescribed in that QP/NOS.
 - ✓ NSQF level of QP
 - ✓ Profile of Candidate to be assessed (eg: differently able, education level etc)
 - ✓ Bandwidth of the Assessment Agency

Creating Question Bank by SME

- Questions are designed by the experts from the industry i.e. SME
- **SME (Subject Matter Expert):** An expert from industry is selected. This SME must have over 13-15 years of experience in the industry, on same job role.
- **SME** is screened and approved by LSSSDC.
- An eligible SME must:-
 - ✓ Currently be working in the same industry
 - ✓ Have more than 12 years of experience
 - ✓ Be handling job at same or higher level of same occupation.
- Once selected he/she is oriented by both LSSSDC and Assessment agency on – creating question Bank, level of questions, end desired outcome of the assessment.
- SME works hand in hand with Assessment agency and LSSSDC.

Developing Question Bank

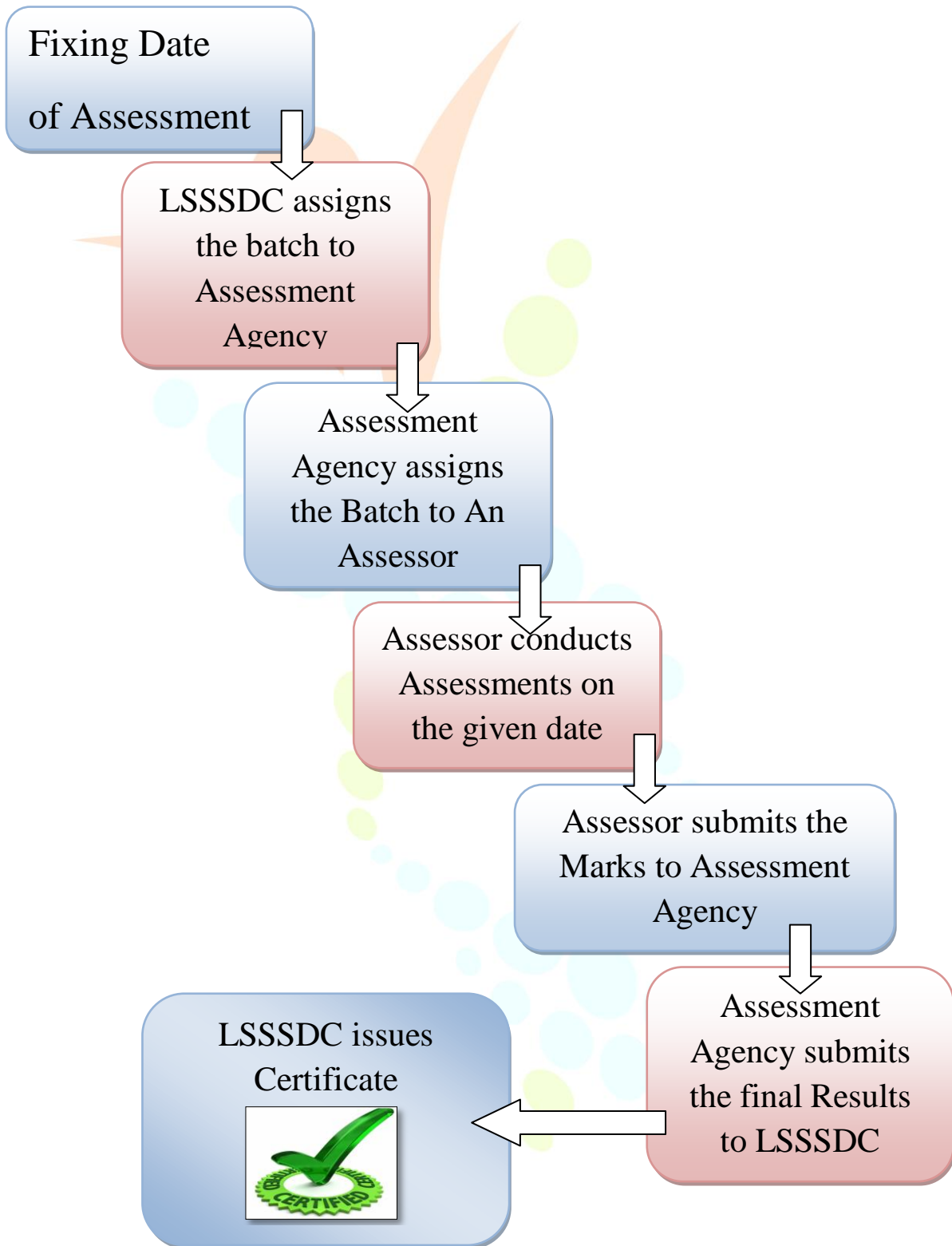
- Number of questions generated is more than number required to create a question paper. Thus, a sufficient pool of questions is created for each NOS/QP
- Questions are then validated for their correctness, difficulty level, relevance, desired outcome by other industry experts.
- The validation of question Bank is to be reviewed every 6 -12 months.
- All Assessments shall be conducted in English.

Score Sheet

- Assessor's observation is recorded in a particular format. Refer Appendix III.
- Score sheet allows assessor to mark his observation in a systematic pattern.
- It guides him to look at knowledge and skill part in a trainee distinctly.
- LSSSDC has the final say on cut offs.

Quality Check

- Training Partner is encouraged to provide feedback after every Assessment. Appendix-6 has been developed and is made available on LSSSDC's website to facilitate the feedback.
- Assessor is encouraged to provide feedback after every Assessment. Appendix-5 has been developed and is made available on LSSSDC's website to facilitate the feedback.

Process flow chart on Conduction of Assessment & Certification

Conduction of Assessments

Fixing Date of Assessment

- All the assessments will be routed through SDMS.
- LSSSDC assigns the batch to an Affiliated Assessment Agency.
- Assessment date is decided with common agreement of VTP and Assessment agency.
- Assessment agency ensures the availability of required infrastructure, tools for the assessment.

Assessment agency Assigns the batch to an Assessor

- Only assessors certified by council are eligible to conduct the assessment.
- Assessor is provided with location details of the VTP. He contacts VTP a day prior to the assessment to ensure that all the aspects are well managed.
- VTP is informed about the details of the assigned assessor.

Assessor conducts the Assessment

- Assessor reaches the VTP centre on the pre-fixed time.
- The trainees are scheduled in such a way that an assessor shall not assess more than 20 candidates in a day.
- Assessor and a representative from Assessment agency are present on the day of assessment to manage the process at assessment location.
- They carry an identity card or proof of identity.
- Assessor validates the Training centre by inspecting the infrastructure and at least 3 of the following essential documents –
 - ✓ Attendance records,
 - ✓ formative assessments records,
 - ✓ Student leave application record,
 - ✓ Project work record of the students to be assessed,
 - ✓ Internship records
- Assessor verifies the Trainee's identity through documents (any document issued by GOI, such as Ration card, Adhar Card, Driving Licence, Passport, election card etc)
- Assessor maintains the records of attendance, verified documents, Score sheets, answer sheets and whatever applicable.
- Assessor shall assess the Trainee as per the format prescribed by LSSSDC (refer Appendix III)
- Assessor collects evidences of the assessment in best possible way (videos, pictures, voice recordings etc)
- Assessor maintains complete confidentiality of the score, compiles the data and document and sends it to assessment agency within two days of Assessment.

Assessment Agency submits the result to LSSSDC

- The Assessment Agency validates and tallies various aspects of the documents received from the Assessor.

- The Assessment Agency after processing the results and putting them in standard format hands over to LSSSDC within 7 days of assessment.

LSSSDC issues Certificates

- LSSSDC cross checks and validates the data with all the respect and declares the result to VTP.
- Certificate of passed candidates are generated through Pitney Bowes device.
- Soft copy of the certificate is sent to VTP.
- VTP then gets the Certificate printed (as per the specified standard paper) and distributes to deserving candidates.

Printing Certificate norms

- Paper – 300GSM, Color - White
- Any certificate printed must conform to above standards.

Ascertaining Assessment Tools

Assessment tools for a QP are decided on the basis of composition of knowledge and skill in that particular QP. All assessments shall have at least two tools unless indicated otherwise. All assessments carry time allotment required per trainee, within which the assessment should be completed.

Written test:

Scope – Is used to test the knowledge component of the QP.

Tools – Pen and Paper in form of OMR sheet, computer or tab based online or offline.

Method – objective type questions, match the columns, fill in the blanks, tick the odd man out, choose the correct option, choose the best answer, True or false, Identify the object, tool or machinery, arrange in proper sequence.

Analysis – Question paper is divided in sections. Each Section intends to assess a particular knowledge field of the trainee. Thus section wise calculation of marks gives the clear idea of the areas of improvement or expertise of the trainee. While a consolidated marks gives the overall rating of the trainee.

Viva

Scope – Is used to test the knowledge and understanding and breadth of awareness about the subject.

Some personality traits and generic skills (such as – promptness, sharpness, communication skills, depth of knowledge, comprehension, presentation, patience etc) can also be tested required for the QP.

Tools – Direct dialogue between assessor and Trainee.

Method – Direct questions open and close ended questions, situation based questions, analytical questions, and decision making based questions. Different questions are included to test relevant PCs from the QP

Analysis – Assessor is provided with spectrum of ready answers to be expected from trainee. This reduces effect of subjectivity of the assessor. Comparative quality of trainees within a batch or different institutes can be gauged.

Practical Test

Scope – Is used to test primarily the Skill component of the QP. Trainee's expertise in handling and managing the tools and situation is tested.

Tools – Demonstration, role play.

Method – A situation is narrated or created in front of the trainee and he is asked to react to it. The selected situations are based on real situations. They are predefined and provided to assessor. Assessor is provided with spectrum of reactions to be expected from trainee. Based on these guidelines the assessor fills the score sheet.

Analysis – Practical tests are analysed on knowledge and skill component

Assessor Empanelment**Selection Criteria:**

The selection criteria for selection of Assessors are aligned to the requirement of each Qualification Pack. These criteria are primarily determined in house by Heads of Assessments and Curriculum. Then it is further put under industry validation. Once validated, they become standard.

Criteria for selection

1. Education
2. No of years of experience (relevant)
3. Relevant experience in the Industry
4. Character proof

Selection process:**Step 1**

- LSSSDC defines the criteria for profile of an Assessor (aligning with QP), and gets it validated by Industry. Refer to Appendix II for Assessor Profile.
- Assessor is a person who is currently working in the same industry on same or higher job role and has minimum 5-7 years of experience.

Step 2

- Based on this, Assessment agency locates the right people from the Industry and submits profiles to LSSSDC.
- LSSSDC approves them after screening (they are screened on basis of resume and personal interview in case of local Assessor otherwise a telephonic interview is conducted).

- These candidates are screened on the basis of communication skills, general understanding of assessment conduction, willingness, capability to handle common issues factor during assessment, attitude and patience.

Step 3

- Assessor takes a written test where his knowledge and skills are tested.
- The cut-off is set as per the NSDC guidelines, as follows

NSQF Level	Technical	Non- Technical
1, 2 & 3	50%	50%
4 and above	70%	60%

Step 4

- Once selected, the assessor is oriented by LSSSDC and Assessment agency through TOA (Train The Assessor) program, on various aspects of the assessment and management of assessment, such as
 - Skilling Eco system overview
 - QP and its background.
 - Training on Assessment methodology and how to use Assessment tools.
 - Scoring system
 - Ethics
 - Crisis handling and support system available.
 - Scope of his/her authorities
 - Administrative responsibilities.
 - Confidentiality management

Step 5

- Assessment agency signs the agreement letter with the Assessor.
- LSSSDC certifies the Assessor.

LSSSDC shall need following documents of the assessor to certify and empanel.

1. Complete CV
2. Educational Qualification Certificates (Xth, XIIth, Graduation, Post Graduation etc). Proof must be attached for all the qualifications declared in the CV.
3. Aadhar card copy
4. Photo ID
5. Address proof
6. Proof of relevant experience (Joining letter, promotion letter, relieving letter, letter of appreciation)
7. Reference numbers form current or last company. Reference person's Name, designation, mobile and land line number, his current organisation must be provided.
8. Photograph (one Passport size)

Allocation Strategy for Assessment Agencies

1. Distribution of QP amongst Assessment Agencies

The available QPs are distributed amongst the Accredited Assessment Agencies on the basis of

- a. Geographical spread
- b. Technology / Tools used by them for assessment
- c. Their industry connect and expertise per job role
- d. Past experience in the similar jobs
- e. Projection of Industry demand for the QP

2. Distribution of Batches amongst Assessment Agencies

Allotment of batches is done amongst the pre-decided Assessment Agencies for that QP on the basis of:

- a. Technical capacity of the assessment agency
 - b. Current workload on the Agency
 - c. Availability of Pool of Assessor for that QP
 - d. Geographical presence
 - e. Specific need of a VTP.
3. LSSSDC shall by and large keep a balance of numbers all the Assessment Agencies in QP. LSSSDC shall be fair in distribution of numbers and shall avoid any bias in any case. However the distribution of numbers may get impacted if there is remarkable difference in:
- a. Overall smooth conduct of the Assessment Agency
 - b. Speed of executing the assessment process
 - c. Quality in all the aspects
 - d. Pool of Quality Assessors
 - e. Honesty in conduction of assessment
 - f. Result processing speed.
 - g. Quality of results.
 - h. Feedback from – Students, VTP, Assessors

Reference Documents

1. Assessor's Guide PPT
2. NSQF Notification – By Ministry of Human Resource Development
3. PMKVY Guidelines