



APPENDIX-VI: GUIDE FOR COMPETENCE RATING SCALE AND SCORES

1. RATING SCALE

Competencies are assessed on a five-point scale with a score of 1 to 5. The person as an expert is assigned a score of 5 and a beginner or non-performer is assigned a score of 1. This scale helps professionals to differentiate levels of their own proficiency and identifying learning stages for the professional development. This scale is valuable for tracking growth over time, identifying those ready for leadership roles, and pinpointing specific areas for professional development, helping to align individual capabilities with organizational needs. General guide to this scale is described as below.

Table 1: Competence rating scale for **Knowledge and understanding of engineering in the field of own profession**

Rating Scale	Score	Description
Expert	5	• Demonstrating in-depth expertise, mastery, and consistently outstanding performance, • Ability to mentor others, solve complex issues independently, and innovatively contributing to organizational goals,
Proficient	4	• Presenting strong knowledge and skill. • Applying fundamental concepts to solve problems independently, • He/she needs the minimal guidance, reliably produces high-quality work, and can assist others.
Competent	3	• He/she meets expected performance standards, proving knowledge and ability. • He/she performs reliably and independently on routine tasks, requiring occasional guidance
Beginner	2	• He/she illustrates foundational knowledge and limited ability; • He/she perform basic tasks but needs more efforts to deal with complex ones. • He/she requires regular guidance and is progressing toward competency achievement
Novice/non-performer	1	• He/she lacks fundamental skills or knowledge; unable to perform tasks independently.

Rating Scale	Score	Description
		• He/she requires continuous support and training to achieve minimum competency standards.

Table 2: Competence rating scale for **Design, development and solving engineering problems**

Rating Scale	Score	Description
Expert	5	• Demonstrating in-depth expertise, mastery, and consistently outstanding performance in design and development, • Ability to mentor others, solve complex issues independently, and innovatively contributing to resolve issues in design, develop and implementing complex projects
Proficient	4	• Presenting strong skill in design and implementing projects • Applying fundamental concepts to solve problems independently, • He/she needs the minimal guidance, reliably produces high-quality work, and can assist others.
Competent	3	• He/she meets expected performance standards, solving problems related to the design, development and implementing projects • He/she performs reliably and independently on routine tasks, requiring occasional guidance
Beginner	2	• He/she illustrates foundational design skills and limited ability for development and implementation, • He/she perform basic tasks but needs more efforts to deal with complex ones.
Novice/non-performer	1	• He/she lacks fundamental skills in design, development and implementation of engineering projects. • He/she requires continuous support and training to achieve minimum competency standards.

Table 3: Competence rating scale for responsibility, management and leadership

Rating Scale	Score	Descriptions
Outstanding	5	• He/she uses a broad range of leadership styles to achieve results • He/she takes responsibility for the delivery of the service outcomes

Rating Scale	Score	Descriptions
		• He/she produces an integrated plan by engaging all stakeholders and establish intra and inter organizational coordination mechanism
Very good	4	• He/she promotes the work of the team and plays an active part in supporting the organization's value and behavior • He/she navigates planning and coordination or organizational activities, delegates to achieve sustainable enabling environment • He/she responses and harmonizes the need and priorities of different interest groups considering the bigger picture, • He/she generates conducive environment for subordinates to be able to use their full capabilities
Good	3	• He/she contributes to set goals, objectives and activities clearly, • He/she makes other act to realize their responsibility, • He/she organizes priorities, and schedules tasks so they can be performed within budget with the efficient use of time and resources • He/she enables others to grow through delegating responsibility, clarifying exceptions and giving autonomy in important areas of their work
Below average	2	• He/she makes work plan and understand responsibility • He/she make it clear who are responsible for what and how their performance can be enhanced
Poor	1	• He/she contributes to the development of the organization's annual work plan, • He/she achieves goals established • He/she build positive relationship with staff members to achieve the organizational goals

Table 4: Competence rating scale for **evaluation of outcomes of the engineering projects and systems**

Rating Scale	Score	Descriptions
Expert	5	• Carrying out activities of advanced scope and complexity related to the evaluation of the project outcomes, • Independently coordinating with team members to complete the assignments, • Making independent decisions for devising practical and economical solutions to problems, • Possessing superior skills in this competence; provides mentorship or supervision,
Proficient	4	• Carrying out responsibility for given competence, dealing with assigned problems by devising new approaches, applying existing criteria in new ways, • providing guidance to junior engineers, technologists, • Possessing strong skills in this competency above-average ability is apparent,
Competent	3	• Carrying out activities of moderate scope and complexity related to the evaluation of the project outcomes, • Providing significant assistance to more senior engineers in carrying out tasks, • Being ready to assume professional engineering responsibilities.
Beginner	2	• Carrying out activities of limited scope, and competence usually relying on predetermined standards and techniques • Assisting more senior engineers in carrying out tasks for project evaluation • Having marginal skills, requires training to bring skills to professional level
Novice	1	• Receiving training on-the-job assignment, at the beginner's level, • Not performing any supervisory roles related to this competence

Table 5: Competence rating scale for **communication and interpersonal skill**

Rating Scale	Score	Descriptions
Excellent	5	• Demonstrating extensive understanding and in-depth knowledge of the technical matter for effective communication in terms of oral/presenting, writing, and scientific publications, • Transferring the acquired knowledge and technology to others (Institutions/ departments/ societies) to the stakeholder in the various medium (e.g. technical publications) • Keeping in mind the project performance (decisions in timely manner) in documentation of high standards with the fulfillment of all aspects of professional issues for this competence
Good	4	• Taking care of the technical communication with high standard in the professional activities • Applying analytical skill on technical and professional matters recognizing new developments in the job-related field • Taking leads to consider team approach to make decisions
Average	3	• Applying analytical skills on technical and scientific research activities in the communication • Supporting to the initiatives for the professional networking, research publication, • Relying on the decisions of others at the critical cases of project implementation
Below average	2	• Understanding and applying ICT effectively • Grasping technical matters quickly to communicate with others
Poor	1	• Taking supports of other for completing the given responsibilities • Being unaware of others' contribution to complete the task • Applying learned techniques

Table 6: Competence rating scale for **professional conduct**

Rating Scale	Score	Descriptions
Excellent	5	• Admitting mistakes and makes efforts to correct it and demonstrating high standard of integrity, • Maintaining desired confidentiality and credibility • Satisfying professional code of conduct with the high standards based on behaviors, • Making project related decisions in considering high integrity of professional career
Good	4	• Performing in truthful, and helpful manner by keeping promises and commitment • Adopting professional practices considering the legal, environmental and social circumstances, • Taking accountability on the decision during the project implementation
Average	3	• Displaying fair, sincere and honest attitude to all people • Presenting the factual information without looking into personal gain
Below average	2	• Respecting the right and values of others, • Acting deliberately and misleading others
Poor	1	• Taking actions which are guided by reward and punishment • Demonstrating certain behavior in front of certain individual/group

Table 7: Competence rating scale for **continual professional development**

Rating Scale	Score	Descriptions
Excellent	5	• Providing and demonstrating leadership in continuing professional development activities, • Analyzing gaps excellently and addressing the areas of weakness and demonstrating superior professional development plan, • Taking lead to transfer knowledge in the emerging technology and best practices in the field of engagement, and demonstrates the specialization in his/her field of job,

Rating Scale	Score	Descriptions
Good	4	• He/she has completed good amount of continuing professional development activities, • He/she has developed the strong professional development plan,
Average	3	• He/she has completed sufficient continuing professional development activities. • He/she has conducted gap analysis adequately, • He/she has specialized the themes/areas of his professional field of practice
Below average	2	• He/she has completed some continuing professional development activities, • He/she has analyzed the gaps marginally, • He/she has developed marginal professional development plan,
Poor	1	• He/she has completed little continuing professional development activities, • He/she has not properly analyzed the gaps in the professional areas, • He/she has to developed professional development plan,

2. DEMONSTRATION OF COMPETENCIES BY THE CANDIDATE

The candidate demonstrating the competencies as mentioned in the Competence Framework (**Appendix-iv**) are required to describe the ability in the same sequence of each standard and indicators. Furthermore, the sequence for the range of indicators (achievement) shall also be maintained in the same way. For example, if the candidate does not possess any relevant indicator of achievement, then he/she shall mention the term '**not performed**' in the respective range of indicator. The description of achievement for each range of indicators shall be linked with the paragraph of Career Report (**Appendix III**).

3. SCORING OF THE RATING SCALES

The candidate shall conduct the self-assessment in the Career Report (CR) (**Appendix III**) for each acquired competencies. The candidate shall assign the rating scale for his achievement of competence indicators and mentioned in the CR. The candidate shall obtain the minimum **competent or good or**

average of rating to be accepted for the next level of evaluation (written examination) for each competence standards. In other words, candidate shall obtain the score of '3' for each competence standards. The scores of the indicators are averaged from the score obtained in the range of indicators. Mathematically the competence score is obtained as mentioned below.

- a. Average Score of Competence Indicators (ASRCI):

$$ASRCI = \frac{\sum RCI_n}{n}$$

- b. Score of Competence Standards (SCS):

$$SCS = \frac{\sum CI_m}{m}$$

- c. Average Score for Competence Standards (ASCS):

$$ASCS = \frac{\sum SCS_p}{p}$$

Where,

ASRCI	Average Score of Competence Indicators
RCI	Range of Competence Indicators
ASCI	Average Score of Competence Indicator
SCS:	Score of Competence Standards
ASCS:	Average Score of Competence Standards
n:	Number of Range of Competence Indicators
m:	Number of Competence Indicators
p:	Number of Competence Standards

