**NSDA Reference**

To be Added by NSDA

CONTACT DETAILS OF THE AWARDING BODY FOR THE QUALIFICATION

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| 1. **Name and address of awarding body:**

**National Academy of RUDSETI****Chitrapur Bhavan****15th Cross, 8th Main****Malleswaram****Bengaluru- 560 055****Ph: 080- 2346 2875****Email:** **info@rudsetacademy.org**1. **Name and contact details of the Individual dealing with the submission:**

**Name: Sri. R. R. Singh****Position in the Organization**: **Director General****Address:** Same as above**Email:** **dg@rudsetacademy.org**1. **List of Documents submitted in support of the Qualifications file (Annexure)**
2. **About National Academy of RUDSET**
3. **RUDSETI Model of Entrepreneurship Development**
4. **Curriculum document /Syllabus**
5. **Session Plan**
6. **Bank wise list of RSETIs**
7. **Research Studies regarding RUDSETI/RSETI**
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#  SUMMARY

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| **Qualification Title: Plumbing and Sanitary Works**  |
| **Qualification Code: NARQ40040-PROCESS** |
| **Nature and purpose of the qualification:** Qualification enables the trainee to set up their own enterprise or to work in wage employment in the area of plumbing and sanitary works to acquire the knowledge and skills that will enable them to pursue a career in engineering construction.  According to NSSO Data (2013) among workers in rural areas, 54.2% are self-employed and 38.6% work as casual labor, where as only 7.2% have regular wage employment. Most of the self employed are engaged in agriculture and have very little formal skills both in farm and non-farm occupations. Hence, the need to skill rural youth so that the next generation of workers become skilled, productive and contribute positively for the growth of the economy.   On gaining technical skills and skills in entrepreneurship, the candidates trained in this qualification can start their own agency for providing computerized accounting services and related services. There is increasing demand for this service especially for private (domestic) and public events in the rural areas and small towns. On becoming an entrepreneur the candidate trained in this qualification will initially promote a micro-enterprise which can gradually grow to become a small and later medium scale enterprise. The Micro, Small and Medium Enterprises (MSME) sector has emerged as a highly vibrant and dynamic sector of the Indian economy over the last five decades. MSMEs are playing a crucial role in providing large employment opportunities at comparatively lower capital cost than large industries. They are also contributing in a significant manner to the industrialization and development of rural and backward areas. This helps to reduce regional disparities and provides for a more equitable distribution of national income and wealth. MSMEs contribute enormously to the socio-economic development of the country. This sector today consists of 36 million units and provides employment to over 80 million persons. The Sector through more than 6,000 products contributes about 8% to GDP besides 45% to the total manufacturing output and 40% to the exports from the country. The MSME sector has the potential to spread industrial growth across the country and can be a major partner in the process of inclusive growth. The Micro, Small and Medium enterprises contribute to over. Entrepreneurship, and resultant creation of employment and wealth, is a major mean for inclusive development. A programme which is conducted with a motive to promote potential entrepreneurs, understanding of motives, motivational pattern, their impact on behavior and entrepreneurial value is termed as entrepreneurial development programme. |

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| **Body/bodies which will award the qualification: National Academy of RUDSETI, Bengaluru** The National Academy of RUDSETI was established in April 2009 in response to an emerging need for capacity building and mentoring of more than 585 Rural Self Employment Training Institutes (RSETIs) established in each district of the country as joint venture between different Banks and the Ministry of Rural Development, Government of India to work as National Level Resource Organization for RUDSETIs and RSETIs and other similar type of Institutes1. To design and conduct training programmes and undertake project in Enterprise Promotion, Rural Development, Technology Transfer and imparting Human Resource Development (HRD) concepts.
2. To conduct research and development work in the field of Entrepreneurship Development
3. To act as a advisory to policy makers relating to Enterprise Promotion and Rural Development (for Government /NGOs/ Other Organizations / Financial Institutions /Corporate Entities / Central Secretariat, RUDSETI)
4. To take up any other activities connected with Rural Development and Entrepreneurship Development and Rural Development.
5. To provide Consultancy and Counseling Services in the field of Entrepreneurship Development and Rural Development.
6. Any other activity aimed at Development of Entrepreneurship, Rural Development and serving the society at large.

**(See Annexure I for a complete profile of NAR and Annexure II for RUDSETI model of Entrepreneurship Development)** |
| **Body which will accredit providers to offer courses leading to the qualification:**National Academy of RUDSETI, Bengaluru |

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|  **Body/bodies which will be responsible for assessment:** National Academy of RUDSETI, Bengaluru |
| **Occupation(s) to which the qualification gives access:** This qualification will enable the trainee to establish their business in construction business of his own for undertaking Entrepreneurship on Plumbing & Sanitary Works Management and setup a own unit or work under wage employ in due course and employing some more people to attend to the demands of both indoor and outdoor assignments. The skills that will enable them to pursue a career in Construction and Maintenance services. Besides skills in this field the qualification will give access to the trainee to:1. Acquire and internalize the required Entrepreneurial Competencies (skill as well as attitude).
2. Knowledge and techniques for identifying the business opportunities, selection of an entrepreneurial activity, launching of the venture and skills for managing a Micro Enterprise.
3. Build confidence in one’s own abilities
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| **Proposed level of the qualification in the NSQF:** Level 3 |
| **Anticipated volume of training/learning required to complete the qualification:**240 Hours |
| **Entry requirements / recommendations:** Male Candidates in the age group of 18 to 45 years having inclination for taking up Entrepreneurship on Plumbing & Sanitary Works Management as a self-employment occupation. |
| **Progression from the qualification:** This qualification will enable the trainees to become Self Employed / Wage Employed by providing service in the field of Plumbing & Sanitary Works Management. He/she will be able to set up his own business in consultancy on Plumbing & Sanitary Works Management or else wage employee. In due course they will graduate to become an entrepreneur through expansion thereby providing employment to others also. |
| **Planned arrangements for the Recognition of Prior learning (RPL):** Not applicable |
| **International comparability where known:**  **------** |

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| **Formal structure of the qualification** |
| **Plumbing & Sanitary Works** | **Mandatory/****Optional** | **Estimated Size (learning hours)** | **Level** |
| **Professional Knowledge****A - Entrepreneurship**1. Knowledge of self-confidence , attitude
2. Entrepreneurial competencies
3. Banking, insurance , financial accountancy and management
4. Legal aspects ,regulatory aspects of SMEs
 | Mandatory | 34 hours | Level 3 |
| **Professional / Technical Knowledge**1. Role of Plumber, Description of trade
2. Different types of tools and equipments used in plumbing work.
3. Safety precautions

- While using different hand tools - While using raw materials - On the machines & equipments 1. Study of various types of plumbing materials used in plumbing work Knowledge of measurements and its conversion to other system
2. Working principles and methods of testing. Use of basic tools and bench vice.
3. Safe handling of tools and fittings.
4. Types of gland packing, Cutting / Threading / Bending of G.I. and PVC Pipes
5. Use of Hand tools, Measuring & Mark out tools, Cutting Tools, Bending Machine, Stock & Dies, Pipe Vice, Lubrication, Interpreting basic sketches & drawings
6. Knowledge of various types of pipes with color code and selection of pipe as per work specific uses
7. Pipe fittings, methods of joint. Types of pipe and fittings. Chain Wrench.
8. . Use of blowlamp and flame control. Uniform heating. Avoidance of burning. Bending on former.
9. Use of hand tools, beveling reamer, applying heat with blow lamp.
10. Preparation of Socket, Cleanliness. Application of solvent cement assembly methods.
11. Leveling and joining methods.
12. Handling and lifting sanitary fixtures. Care in fitting & leveling.
13. Working principles of water pump and foot valve. Methods of connection.
14. By – laws in local authority
 | Mandatory | 74 Hours | Level 3 |
| **Technical Skills**1. Identification of tools and equipments used in plumbing work
2. Use of protective clothing, boots, goggles and equipment as applicable to a task. Safety precautions and safety belts while working at site.
3. Good housekeeping practices, proper handling of materials and waste disposal.
4. Ability to do measurement in different systems and as per ISI standards
5. Able to assemble and disassemble Taps and Valves
6. Is to able to do all kinds of Pipe Fittings - G.I. and PVC
7. Is able to do P.V.C. Jointing
8. S.W. Pipe Laying / Jointing - working with another trainee in his group, from a given sketch and with necessary tools, lay and join S.W. Pipes to correct fall and alignment. Remove surplus materials and test to meet local custom & practice.
9. Fixing Sanitary Fixtures - Fix low level water closet and connect to solid stack, seal connections and test to meet By – laws in local authority.
10. Installing Water Pump, Connecting Supply Pipe Position, level, fix and secure pump to pump base. Connect supply pipes, foot valves etc to ensure air tight connections.
11. Test to meet by-laws in local authority.
12. Industry and construction site visit
 | Mandatory | 92 Hours | Level 3 |
| **Core Skills** 1. Business Opportunity Identification
2. Market Survey and Business Plan Development
3. Planning and Risk Assessment
4. Problem solving
5. Time management
6. Communication
7. Business Management skills
 | Mandatory | 34 hours | Level 3 |
| **Admission & Examination** | Mandatory | 6 hours | - |
| **Total Duration of the Course** |  **240 hours** |

**SECTION 1 - ASSESSMENT**

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| **Body/Bodies which will carry out assessment:**This qualification will be used by 585 RSETIs (list is furnished in Annexure IV) across the country which has been established in each district. These RSETIs are controlled by commercial banks (both Government owned and Private). NAR is a separate body and there is no linkage in management and control between the RSETIs offering the training and NAR which will conduct the assessment. The assessment of outcome of the qualification will be done by NAR which is an independent organization. It is run by professionals who are expert in rural entrepreneurship development. In NAR there will be a separate vertical similar to ‘Controller of Examinations’ in Universities, which will conduct the assessment through its empanelled assessors at the RSETI level. The empanelled assessors will be provided training by NAR.**How will RPL assessment be managed and who will carry out?**Not Applicable**Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, reliable and fair and show that these are in line with the requirements of NSQF.** Assessment tools for the Qualification are decided on the basis of composition of knowledge and skill in that particular Course. All assessments shall have at least two tools viz.1. Practical test and 2. Written test and/or Viva.1. **Assessment process:**

 The assessment will be primarily carried out by collecting evidence of competence gained by the trainees by observing them at work, asking questions and initiating formative discussions to assess understanding and by evaluating their practical work. The question papers for the theory Examinations contain objective/descriptive type questions, drawings etc.**Minimum pass mark:** Overall 50% of marks allotted1. **Testing and certifications for the course:**

Arrangements will be made by NAR to ensure that the evidence on which assessment / judgments made are comparable for all trainees and that the judgments made does not vary from assessor to assessor. Arrangements relating to the conduct and monitoring process of assessment are as follows:* Questions papers will be prepared by NAR in consultation with vocation experts in the field.
* Structured tests at the Institute level will be administered in the presence of the assessors.
* The tests will be supervised and monitored at every Centre
* Theory and practical Examinations will be carried out with invigilators/examiners with the overall supervision of the certified assessors.
* Examiners called for evaluation of practical will have technical expertise in the field
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**ASSESSMENT EVIDENCE**

**Assessment & Evaluation:**

The trainees will be assessed through a structured test process. The test will comprise of both written, practical and viva voce. Standard question paper will be devised keeping in view the expected outcome of the training. The test will be administered by certified and empanelled assessors at RSETI level. The technical skill component will be tested through practical examination. Both of these tests will be followed by personal interview wherein the entrepreneurial competencies will be tested. The extent of internalization of the inputs given will be tested. The face-to-face interview will assess the overall ability of the trainee concerned to perform the defined job role including behavioral aspects of entrepreneurial competencies. On getting the results of these tests from the assessors at ground level, a senior expert in entrepreneurship at NAR, Bengaluru will review the marks and on his validation, system generated certificates will be issued to the successful candidates online.

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| **Entrepreneurship Development**  |
| **Assessable Outcomes** | **Performance Criteria** | **Assessment Criteria**  |
| **Total** | **Theory** | **Practical** |
| 1. Candidate is clearly able to differentiate between Wage employment, Self-employment and Entrepreneurship
2. Understand, appreciate and develop the self-confidence for embarking on self-employment / entrepreneurship.
3. Understand and internalize entrepreneurial competencies and know their importance for becoming a successful entrepreneur.
4. Trainee is able to understand the legal and regulatory aspects of launching an enterprise.
5. Trainee is able to appreciate need for continuous growth and expansion of an enterprise
6. Trainee is able to analyze major trends in a given economic sector / sub-sector and identify Business Opportunities
7. Trainee is able to conduct market survey and develop sound Business Plans based on obtained data.
8. Develop effective personal management skills like time management and communication skills.
9. Knows to maintain simple books of accounts and prepare financial statement for small business
10. Trainees able to devise a simple marketing and sales strategies and plan for a small business
11. Trainees able to manage small team of workers required for managing a small business
 | **PC 1** – Understanding the Context and Need for Rural Entrepreneurship Development, Role of RSETIs | 1 | 1 | 0 |
| **PC 2** – Developing Self Confidence and Positive Attitude (Micro Lab & Tower Building) | 2 | 1 | 1 |
| **PC 3** – Comparative Advantages of Entrepreneurship and Self Employment over Wage Employment | 1 | 1 | 0 |
| **PC 4** – Understanding and self evaluation of Achievement Motivation and ways and improve motivation (SRQ) | 6 | 2 | 4 |
| **PC 5** - Understanding and internalizing entrepreneurial competencies | 5 | 3 | 2 |
| **PC 6** - Understanding the Concept of Risk Taking and Ability to do Risk Assessment (Ring Toss Game) | 3 | 1 | 2 |
| **PC 7** - Understanding the importance of Systematic Planning and Efficiency Orientation (Boat Building) | 2 | 1 | 1 |
| **PC 8** - Being able to understand the importance of Quality Assurance and Improvement in Business | 2 | 1 | 1 |
| **PC 9** - Understanding the process of steps in Problem Solving  | 3 | 2 | 1 |
| **PC 10 –** Time Management – Understanding of Basic Concepts and ability to manage time | 3 | 2 | 1 |
| **PC 11 –** Effective Communication Skills – Understanding of Basic Concepts and ability | 2 | 1 | 1 |
| **PC 12** – Ability to assess market conditions and indentify appropriate business opportunities | 3 | 3 | 0 |
| **PC 13** - Ability to Conduct Market Survey on a limited scale in a given area of Business | 7 | 3 | 4 |
| **PC 14** – Understanding of Banking & Insurance and how it can help a start up enterprise | 6 | 3 | 3 |
| **PC 15** – Ability to Prepare Business Plan based on data obtained from Market Survey | 16 | 6 | 10 |
| **PC 16** – Understanding licensing and regulatory aspects of launching an enterprise.  | 3 | 3 | 0 |
|  **PC 17** – Ability to Maintain Books of Accounts and Develop Financial Statements for a Small Business | 8 | 6 | 2 |
| **PC 18** – Understanding and ability for Inventory and Materials Management | 5 | 3 | 2 |
|  **PC 19** – Understanding and ability for Sales and Marketing | 7 | 4 | 3 |
| **PC 20** – Human Resource Management – Understanding of Concepts & ability to manage a team | 5 | 3 | 2 |
| **PC 21** - Understanding of Basic Laws relating to MSMEs | 5 | 5 | 0 |
| **PC 22** – Growth and Strategic Planning - Understanding of Concepts | 5 | 5 | 0 |
| **Total EDP** | **100** | **60** | **40** |
| **Assessable Outcomes** | **Performance Criteria** | **Assessment Criteria** |
| **Total** | **Theory** | **Practical** |
| **B. Technical Knowledge**1. Knows about the scope and functions of the plumbing trade and role of plumber
2. Knows the principles and methods of testing, use of tools.
3. Has knowledge of safety issues in handling tools and fittings
4. Knows about different types of packing materials and cutting, threading and bending of GI and PVC pipes
5. Knows how to use hand tools, marking and measuring tools
6. Knows the use of cutting tools, bending tools vice etc.
7. Knows how to read the plumbing engineering drawing.
8. Knows about different types of pipes ISI standards, codes etc.
9. Knows about pipe fittings, wrench etc.
10. Knowledge of operations with G I Pipes selection, cutting, threading Use of hand tools, marking out for bending
11. Know how regarding blow lamp and heat application for bending etc.
12. Knowledge regarding preparation of sockets, and assembly of sockets
13. Know how regarding how to increase/decrease pressure of liquid depending on selection of fitting material.
14. Knowledge of drain gradients and how to use proper tools to test the design
15. Knowledge regarding different types of sanitary fittings
16. Knowledge regarding functions of different types of fittings their costs etc.
17. Knows about water pump, foot valve, sump, tank etc.
18. Knows about local the plumbing bye-laws and rules of the local authorities
 | **PC1** - Is able to describe fully the roles and functions of a Plumber | 4 | 4 | Nil |
| **PC2** – Is able to tell about the basic principles and methods of plumbing | 4 | 4 | Nil |
| **PC3** – Knows the tools used in plumbing and its maintenance and calibration. | 5 | 5 | Nil |
| **PC4** – Knows about the safety issues in handling tools and fittings and in various procedures | 4 | 4 | Nil |
| **PC6** – Knows about different materials used in plumbing, especially pipes and fittings. | 5 | 5 | Nil |
| **PC7** – Knows about the different measuring tools used in plumbing works and how to use them | 5 | 5 | Nil |
| **PC8** – Has good knowledge of cutting and bending tools | 5 | 5 | Nil |
| **PC9** – Is able to read engineering drawing related to pluming | 4 | 4 | Nil |
| **PC10** – Knows about the different types of standards, national and international regarding materials and processes used in plumbing  | 4 | 4 | Nil |
| **PC11 –** Is able to identify the correct tools for the given/required procedure. | 5 | 5 | Nil |
| **PC12 –** Is able to tell about/describe clearly about pipe sections, (both G.I. and PVC) and pipe cutting. | 5 | 5 | Nil |
| **PC13 –** Knows how to do pipe bending in G.I. pipes using blow lamp. | 5 | 5 | Nil |
| **PC14 –** Knows how to prepare various types of sockets. | 4 | 4 | Nil |
| **PC15 –** Knows how to assemble pipes in sockets of different types. | 4 | 4 | Nil |
| **PC16 –** Is able to select the proper materials for pipe fittings. | 5 | 5 | Nil |
| **PC17 –** Is able to clearly describe how to increase/decrease pressure of water/liquid in pipe | 5 | 5 | Nil |
| **PC18 –** Is able to design small drainage systems and practically test the design | 5 | 5 | Nil |
| **PC19 –** Knows about the different sanitary fittings, kitchen, bathroom, and toilet | 5 | 5 | Nil |
| **PC20 –** Knows about different accessories and latest trends. | 4 | 4 | Nil |
| **PC21 –** Knows how to fix water pump (non electrical aspects), foot valve etc. | 5 | 5 | Nil |
| **PC22 –** Knows about the laws of the local authorities regarding plumbing and sanitation rules.  | 3 | 3 | Nil |
| **Total** | **100** | **100** | **Nil** |
| **Technical Skills**1. Is able to identify the tools and equipment used for plumbing works.
2. Is able to use the correct protective clothing, boots, equipment etc to ensure safety.
3. Is able to practice good housekeeping practices for proper disposal of waste materials
4. Is able to do measurements as per ISI standards
5. Taps and Valves - dismantle taps & Valves, inspect packing glands and washers, replace packing gland and washers, and adjust locking nuts ensuring no leaks when tested.
6. G.I. Pipe Work - calculate and measure length of G.I. / PVC pipe required. Mark out and cut to size. Thread and Bend G.I. Pipes to within given tolerances
7. Pipe Fittings - Assemble G.I. Pipe / PVC pipe with fittings supplied
8. Final assembly to be within a dimensional tolerance of ± 2mm.
9. Excess traces of jointing material to be removed. Surface of pipe & fittings must not be damaged.
10. Calculate and measure length of pipe required, mark out and cut to size. Bending pipes
11. Pipe diameter to be maintained no distortion. Free from abnormal marks
12. P.V.C. Jointing - join P.V.C. pipe with socket joints
13. S.W. Pipe Laying / Jointing - Pipes to correct fall and alignment.
14. Remove surplus materials and test to meet local custom & practice.
15. Is able to fix – assemble and dis-assemble sanitary ware – Indian and Western commode
16. Is able to adhere to all rules and bye-laws of local authorities.
 | **PC1 –** Is able to identify the correct tools and equipment to be used for plumbing works | 4 | Nil | 4 |
| **PC2 –** Is able to use the correct protective clothing, equipment and adhere of safety procedures | 4 | Nil | 4 |
| **PC3 –** Is able to practice good housekeeping practices and ensure proper disposal of waste. | 4 | Nil | 4 |
| **PC4 –** Is able to do measurements as per Indian and select materials as per Indian standards. | 4 | Nil | 4 |
| **PC5** - Assemble pipe sections, tubing and fittings, using couplings, clamps, screws, bolts, caulking tools, or cutting, threading and joining equipment. | 4 | Nil | 4 |
| **PC6** - Establish the sequence of pipe installations  | 4 | Nil | 4 |
| **PC7** - Plan installation around obstructions such as electrical wiring, etc. | 4 | Nil | 4 |
| **PC8** - Locate and mark the position of pipe installations, connections, passage holes, and fixtures in structures, using measuring instruments such as rulers and levels | 4 | Nil | 4 |
| **PC9** - Cut openings in structures to accommodate pipes and pipe fittings, using hand and power tools (if required) | 4 | Nil | 4 |
| **PC10**- Measure, cut, thread, and bend pipe to required angle, using hand and power tools or equipment. | 4 | Nil | 4 |
| **PC11**- Hang steel supports from ceiling joists to hold pipes in place (if required) | 4 | Nil | 4 |
| **PC12** - Install pipe assemblies, fittings, valves, appliances such as dishwashers and water heaters, and fixtures such as sinks and toilets, using hand and power tools | 4 | Nil | 4 |
| **PC13** - Test the joints and fixtures for proper functioning | 4 | Nil | 4 |
| **PC14** - Clear the work area and waste disposal | 4 | Nil | 4 |
| **PC15** - Identify the problem/fault in the system and its cause, establish the sequence of repair  | 4 | Nil | 4 |
| **PC16** - Assemble fittings, fixtures and tools required for the task | 4 | Nil | 4 |
| **PC17** - Locate and mark the position of the component to be replaced / repaired, using measuring instruments such as rulers and levels | 4 | Nil | 4 |
| **PC18** - Cut openings in structures to remove defected pipes and pipe fittings, using hand and power tools | 4 | Nil | 4 |
| **PC19** - Test the joints and fixtures for proper functioning | 4 | Nil | 4 |
| **PC20**- Clear the work area and waste disposal, deliver the task in time  | 4 | Nil | 4 |
| **PC21** - Achieve quality finishing in repair of sanitary fixtures and fittings | 4 | Nil | 4 |
| **PC22** - Ensure minimal wastage of material  | 4 | Nil | 4 |
| **PC23** - Ensure minimal damage to other systems | 4 | Nil | 4 |
| **TOTAL** | **100** | **Nil** | **100** |
| **Total for the Course** | **300** | **160** | **140** |
| **Means of assessment 1: Physical Test** |
| **Means of assessment 2: Written Test & Viva Voce.** |
| **Pass : Overall 50 % and above** |

# SECTION 2 - EVIDENCE OF LEVEL

Option B: Key Requirements of the Job Role

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| **Title of the Qualification: Plumbing and Sanitary Works** |
| **NSQF LEVEL - 4** |
| **Process Required** | **Professional Knowledge** | **Professional Skills** | **Core Skills** | **Responsibility** |
| **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** |
| Since the qualification is devised for Plumbing, the work situation necessitate in adverse climatic/field conditions as well in indoor conditions. | Factual knowledge of equipment and basic knowledge of surrounding areas for increasing customer base. | Ability to handle all kinds of standard Plumbing & Sanitary Work Procedures duly ensuring quality standards. | Enterprise launching and business management skills to a limited scale. This can be imparted through training.  | Since this training leads to entrepreneurial outcome responsibility for own work and learning is to be present and demonstrated. |

# SECTION 3 EVIDENCE OF NEED

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|  **What evidence is there that the qualification is needed?** Entrepreneurship has been embedded in the Indian genius and is a part of its tradition. India traditionally has been an entrepreneurial society. Traditionally, the entrepreneurship of many communities has been facilitated principally by the successful use of informal ‘entrepreneurial ecosystems’ and interdependent business networks. Further, there is also a rich tradition within the Indian Diaspora, spanning the past several hundred years, whose spirit of enterprise is legion. Entrepreneurship in India occurs in ‘far more encompassing and far reaching ways than in developed countries’, and could therefore be far more complex, for there is so much more that needs to be done. Commentators today celebrate the ubiquitous Indian attitude of ‘*Jugaad’* (a Hindi word roughly translated as ‘creative improvisation) tool to somehow find a solution based on a refusal to accept defeat, and calling on initiative, quick thinking, cunning and resolve to quickly fulfill market demands at the lowest possible prices) as an entrepreneurial trait that has been as much a part of everyday Indian living as its rich tradition of philosophy and speculation. The development and impact of entrepreneurship in India has intensified in recent times, particularly with the rise in knowledge-intensive services. New entrepreneurs who do not belong to traditional business communities have begun to emerge in large numbers. Entrepreneurship has grown rapidly, visibly so, creating wealth and generating employment, especially in the past twenty years. Crucial efforts initiated after economic liberalization – including systematic attempts to reduce the ‘license raj’, greater efforts to make finance more easily accessible to entrepreneurs and other institutional support to ‘techno-preneurs’ – have helped improve the climate for Entrepreneurship. Thus, the opportunities created by today’s global knowledge economy coupled with the ‘unshackling of indigenous enterprise’, have continued to making India a ‘fertile ground’ for Entrepreneurship. Recent surveys, such as those undertaken by Goldman Sachs and Pricewaterhouse Coopers, have estimated that India has the potential to be among the world’s leading economies by 2050. Further India’s economy can potentially gain significantly from the country’s characteristic features – a democratic open society, a strong technology base (with capacity for leapfrogging), unparalleled diversity, vibrant capital markets (including growing private equity and venture capital markets), an increasingly youthful population (50% of India is 25 years and younger), a sizeable market of a large number of customer with vast unmet needs as well as an environment of full and free competition in the private sector. |

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| In order to give impetus to this growing demand of first generation entrepreneurs to gain formal training in entrepreneurship knowledge and skills RSETIs have been established by various Banks. Ministry of Rural Development gives part funding of the training. The RSETIs have been established on the RUDSETI models which have been proved very effective in eradicating the problems of unemployed youth. The trainings by these Institutes are unique in the sense they are demand based. The Institutes have got the experience of conducting these Programmes over the years. The RUDSETI model of developing rural entrepreneurs has been now well researched and documented (please see Annexure VI). These studies have highlighted the following highlights and good practices of the RUDSETI model:1. Training is need and demand based
2. Training is conducted in local language
3. Faculty is drawn from veterans from the industry
4. Training duration is relatively short – enabling the poor to participate actively in the training
5. Training is followed by long duration (2 years) handholding (escort services) for enabling the trained entrepreneur to establish his enterprise
6. Commercial Banks are actively involved in training and settlement of the trainee and assist in availing of credit from the Bank for setting up the enterprise
7. Many of the trainings are linked to Government schemes for promotion of self-employment/entrepreneurship
8. In recent years replication of the RUDSETI model through the RSETIs in every district of India has led to the establishment of a vast network of around 600 training centre.
9. The annual training capacity is 4.00 lakhs of which current capacity utilization is more 80%.
10. Enterprises established by trained candidates have created further wage employment opportunities for thousands of rural poor in the rural areas thereby arresting migration to urban areas.

Plumbing and Sanitary Workers have tremendous demand in the construction industry. Civil contractors and builders are the major contributors to provide opportunities for job and self employment, which accounts for more than 90% of the total employment in the sector. At this stage the sector is facing huge challenge due to the lack of sufficient manpower availability in the market because of the reasons includes insufficient training facilities across the country and limited awareness among the potential candidates. The amount of effort going on in this area, the business opportunities available in the construction industry ranges from low start – up capital to capital intensive businesses.  |

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|  In order to identify the potential programmes as per the needs of the unemployed youth, a Committee of General Managers of top 5 RSETI sponsoring Banks has been constituted. The General Managers of State Bank of India, Punjab National Bank, Bank of Baroda, Central Bank of India and Bank of India are the members of this Committee. In addition, Executive Director, RUDSETI, National Director for RSETIs and Director General, National Academy of RUDSETI who got rich field experience also joined this Committee. The above Committee met at Mumbai on 7th November 2016. After thorough discussions and based on the past experience the Committee short listed potential /need based courses for training rural unemployed youth in the RSETIs. The trainingon Plumbing and Sanitary works is one such shortlisted need based training.  |

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| **What is the estimated uptake of this qualification and what is the basis of this estimate?** Presently there are 586 Rural Self Employment Training Institutes (RSETIs) across the country sponsored by various Banks. National Academy of RUDSETI is the anchoring Institution which designs and approves the training programmes being conducted by these RSETIs. The Training Modules are demand driven and are vetted by National Academy of RUDSETI, having experience of running similar programmes by the RUDSETIs since over three decades. Dress Designing for Women is one of the most popular need based training programmes conducted by these Institutes. These programmes are having very good settlement rate. The number of trainees under this qualification during the past three years is as under:

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| --- | --- | --- |
| **FY** | **No. of Training Programmes** | **Number of Candidates** |
| 2013-14 | 42 | 1016 |
| 2014-15 | 34 | 760 |
| 2015-16 | 35 | 842 |

So far, in RSETIs, 3809 candidates have been trained in this Qualification of which 2568 have settled in their chosen trade**.** Cumulative settlement rate for the above training is 67% and observing the above trend, the candidates trained under the above qualification file, the number of candidates to be trained in the next three years is estimated at more than 3,000. |
| **What steps were taken to ensure that the qualification(s) does/do not duplicate already existing or planned qualifications in the NSQF?** The qualification is unique because it develops the capabilities of a youth to start their own work as self employment in Plumbing and Sanitary Works and also simultaneously develop their entrepreneurial knowledge and skills. Such a qualification is currently not offered by NCVT or any of Sector Skill Council. Hence, the activities are unique and the Qualification does not get duplicated. **What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated?** |

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|   **What Arrangements are in place to monitor and review the qualification (s)? What data will be used and at point will the qualification (s) be revised or updated?** National Academy of RUDSETI has put in place a robust MIS for RSETIs. Comprehensive data (Course wise/Bank Wise/State Wise) for all RSETIs is maintained by NAR in the said MIS. Entry level data include the photograph of the candidate other basic details. Course modules are made available in the MIS and the website of NAR. Training logs and Post Programme Reports with action photographs of the training are also made available in the MIS. Details of Settlement and credit linkages are uploaded in the MIS with action photos and documentary proofs. The State Directors of RSETIs are also visiting the RSETIs every quarter for reviewing the quality of training / settlement. Officials from the controlling offices of the Banks and NAR are also making periodic visits to the RSETIs for reviewing the activities. MIS reports are used for viewing the settlement of the trained candidates, their level of income and employment generation by them. Feedback obtained from the trained candidates, RSETI sponsoring bank and other stake holders are used to review/update the course. |

# SECTION 4- EVIDENCE OF RECOGNITION AND PROGRESSION

 **What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?**

 The candidates who are trained in Plumbing & Sanitary Works Management may attend Skill up gradation Programme for the subject qualification, where in specialized inputs are given for enabling the candidates for latest trends and latest technologies in Construction Industry by going in for specialized latest and upgraded versions of Plumbing & Sanitary tools. The Candidates are also eligible for attending the growth Programmes in RSETIs which will help them draw a growth plan for their business and go in for expansion and diversification in the related field of activity.