NSDA Reference
To be added by NSDA

QUALIFICATION FILE – CONTACT DETAILS OF SUBMITTING BODY

Name and address of submitting body:

Healthcare Sector Skill Council

C/o Confederation of Indian Industry, 23, Institutional Area Lodi Road New Delhi – 110 003

Name and contact details of individual dealing with the submission

Name: Mr. Ashish Jain

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List of documents submitted in support of the Qualifications File (attached in following order)

1. Qualification Pack- Annexure1
2. Occupational Mapping Report-Annexure 2
3. Functional Analysis Report-Annexure 3
4. RFP for development of occupational standards-Annexure 4
5. Validation group and industry consultations- Annexure 5
6. The Brief Report on the whole process of the development, validation and notification of these qualification packs along with list of companies and Industry associations involved -Annexure 6
7. Human Resource & Skills Requirement in Healthcare Sector accessible on below given link: http://healthcare-ssc.in/images/Human%20Resource%20&%20Skills%20Requirement%20in%20Healthcare%20sector.pdf
8. Quality Assurance Strategy of Assessment in HSSC-Annexure 7
9. Assessment criteria/framework-Annexure 8

QUALIFICATION FILE SUMMARY

Qualification Title	Dialysis Technician HSS/ Q 2701
Body/bodies which will assess candidates	Healthcare Sector Skill Council Accredited assessing bodies
Body/bodies which will award the certificate for the qualification.	Healthcare Sector Skill Council
Body which will accredit providers to offer the qualification.	Healthcare Sector Skill Council
Occupation(s) to which the qualification gives access	Operate machines and perform dialysis on patients with acute or chronic kidney failure. They are responsible for the operation, cleaning, and sterilisation of the dialysis machines.
Proposed level of the qualification in the NSQF.	Level 4
Anticipated volume of training/learning required to complete the qualification.	1400 hrs.
Entry requirements / recommendations.	Class XII
Progression from the qualification.	Progression will be possible in both academic as well as professional area as: Level 5- Team Leader/ Supervisor – Dialysis Department or Level 5: Specialization in Advanced Dialysis Techniques through bridge course
Planned arrangements for RPL.	HSSC has developed RPL policy to conduct pre assessment of students for gap analysis as per NOS, sharing the gap & final assessments of students and certification. It is explained in section 1 under Assessment, Point 2
International comparability where known	While writing the NOSs the UK NOSs were also referred to and an effort was taken to maintain comparability in the technical part of the NOSs.

Formal structure of the qualification

Title of unit or other component (include any identification code used)	Mandatory/ Optional	Estimated size (learning hours)	Level
HSS / N 2701 : Collect and assess the patient's chart and vitals	**Mandatory**	**Class Room and Skill Lab Training = 800 hours** **Clinical/Laboratory Training (OJT) = 600 hours**	**4**
HSS / N 2702 : Manage dialysis machine set up and assemble the extracorporeal circuit	**Mandatory**		**4**
HSS / N 2703 : Prepare and position the patient for treatment	**Mandatory**		**4**
HSS / N 2704 : Connect patient to the dialysis	**Mandatory**		**4**

machine			
HSS / N 2705 : Monitor technical/ clinical vitals during the treatment	**Mandatory**		**4**
HSS/ N 2706: Unhook patient from the machine	**Mandatory**		**4**
HSS / N 2707 : Record the treatment	**Mandatory**		**4**
HSS/ N 2708: Conduct pre and post dialysis evaluation	**Mandatory**		**4**
HSS/ N 2709: Maintain and disinfect the delivery system	**Mandatory**		**4**
HSS/ N 2710: Evaluate and prepare the site for cannulation	**Mandatory**		**4**
HSS/ N 2711: Respond to dialysis related emergencies in patient and equipment	**Mandatory**		4
HSS/ N 2712: Reprocess dialysers	**Mandatory**		4
HSS/ N 2713: Operate and maintain water treatment plant	**Mandatory**		4
HSS/ N 9604: Work effectively with others	**Mandatory**		4
HSS/ N 9603 (Act within the limits of one's competence and authority)	**Mandatory**		4
HSS/ N 9606: Maintain a safe , healthy and secure working	**Mandatory**		4
HSS/ N 9610: Follow infection control policies and procedures	**Mandatory**		4
HSS/ N 9609: Follow biomedical waste disposal protocols	**Mandatory**		4
HSS/ N 96011: Monitor and assure quality	**Mandatory**		4

Please attach any document giving further detail about the structure of the qualification – eg a Curriculum or Qualification Pack.
Give details of the document here:

Qualification pack is attached as Annexure 1

SECTION 1

ASSESSMENT

Name of assessment body:
If there will be more than one assessment body for this qualification, give details.

Manipal City & Guilds
IRIS corporate solutions pvt ltd
Aspiring Mind
CII

Will the assessment body be responsible for RPL assessment?

Give details of how RPL assessment for the qualification will be carried out and quality assured.

HSSC conducts QP-NOS based direct three-way assessment for each and every candidate applied for recognition of prior learning (vis. Certifying the un-certified but skilled workforce who acquired skills through experience of years). Here, the candidates may undergo short-term training of gaps identified. The assessment is conducted via HSSC certified assessor. The assessment pattern is as follows:
REGISTRATION
The candidates need to submit registration form online along with uploading of scanned copies of some mandatory documents. Based on screening of the form, the candidates would be registered on conforming following eligibility criteria.

PRE-ASSESSMENT: The purpose of Pre-assessment is to shortlist candidates as per prescribed limit, and also to notify gaps NOS wise to each candidate for their own self-training or opting for short-term training module before final assessment. The pre-assessment also informs about the reliability of information provided by candidates that they have experience working in the given job role. The pre-assessment is Online, Objective type, NOS based, with Each NOS compulsory each carrying 100 marks, No negative marking for incorrect answers, Test venue is kept as may be home/cyber café/institution/HSSC assessment center if the system have google chrome (Version 41.0.2272.101) and a web camera. Timed test link which expires after 90 minutes from the time of starting / writing the test is used for the same. Result is presented with no. of questions allotted and answered correctly for each NOS along with marks scored for each NOS out of 100.

PORTFOLIO SCREENING

Each registered candidate has to prepare and submit the portfolio as per formats given by HSSC. The portfolio may be verified by HSSC/nominated assessor during pre-assessment and scoring card is given for each portfolio.

FINAL ASSESSMENT: The candidates conforming to RPL guidelines based on both pre-assessment and portfolio screening are finally selected for final assessment. Final assessment is conducted through HSSC accredited Assessing body as per HSSC defined assessment criteria and NOS used for assessment of fresh entrants as described above. Final Assessment is conducted at the training site or at working place in case number of enrolled candidate from the site is more than 15. If needed, Assessment centers is arranged for assessment of candidates in cluster

Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, consistent and fair and show that these are in line with the requirements of the NSQF:

QA regarding accreditation of Assessing Body:

The HSSC Accreditation process is divided into two steps:

1) Pre-accreditation process:
   - Apply for Accreditation: Application form with desired documents in prescribed format to be sent.
   - Document Compliance Check: to be done for ensuring the compliance and adherence of applied assessing body according to criteria laid down by HSSC.
   - Presentation on Quality Assurance: to be given by Assessing body highlighting the quality assurance process laid down by AB at the process points
   - Once the assessing body clears the due diligence process, the accreditation is given along with terms and conditions.
2) Post-accreditation process: Post accreditation, the accredited assessing bodies needs to fulfill following minimum eligibility criteria or requisites for implementation:
   - All Empanelled Assessors would have to undergo **"Train the Assessor"** Program conducted by HSSC for each job role time to time.
   - Accredited Assessing Body would have to abide with requisite time-lines, policies and regulations declared by HSSC.
   - Accredited Assessing Body with times would have to contribute in expansion of the questionnaire.

QA Regarding Assessment Criteria & papers:

The emphasis is on 'learning-by-doing' and practical demonstration of skills and knowledge based on the performance criteria. Accordingly, assessment criteria for each job role is set and made available in qualification pack.

The assessment papers for both theory and practical are developed by Subject Matter Experts (SME) hired by Healthcare Sector Skill Council or with the HSSC accredited Assessment Agency as per the performance and assessment criteria mentioned in the Qualification Pack. The assessments papers are also checked for the various outcome based parameters such as quality, time taken, precision, tools & equipment requirement etc.

The assessment sets as well as assessment criteria are then reviewed by panel of experts from Industry as well as HSSC official for consistency and suitability. The assessments are designed so as to assess maximum parts during the practical hands on work. The technical limitations at the training centres are taken care in theory and viva.

All HSSC accredited Assessment Agency follow the "HSSC process of Assessment Framework" and HSSC approved assessment papers. The assessment by assessment agency will be completely based on the assessment criteria as mentioned in the Qualification Pack developed by HSSC.

Each NOS in the Qualification Pack (QP) will be assigned a relative weightage for assessment based on the criticality of the NOS. Therein each Performance Criteria in the NOS will be assigned marks for or practical based on relative importance, criticality of function and training infrastructure.

The following tools are proposed to be used for final assessment:

1 Practical Assessment: This will comprise of a creation of mock environment in the skill lab which is equipped with all equipment's required for the qualification pack.
Candidate's soft skills, communication, aptitude, safety consciousness, quality consciousness etc. will be ascertained by observation and will be marked in observation checklist. The end product will be measured against the specified dimensions and standards to gauge the level of his skill achievements.
2 Viva/Structured Interview: This tool will be used to assess the conceptual understanding and the behavioural aspects as regards the job role and the specific task at hand. It will also include questions on safety, quality, environment and equipment's etc.
3 Written Test: Under this test few key items which cannot be assessed practically will be assessed. The written assessment will comprise of

i. True / False Statements
ii Multiple Choice Questions
iii Matching Type Questions.
iv) Fill in the blanks

QA Regarding Assessors:

Assessors are selected as per the "eligibility criteria" laid down by HSSC for assessors for each job role. The assessors selected by Assessment Agencies are scrutinized and made to undergo training and introduction to HSSC Assessment Framework, competency based assessments, assessors guide etc. HSSC conducts "Training of Assessors" program time to time for each job role and sensitize assessors regarding assessment process and strategy which is outlined on following mandatory parameters:

1) Guidance regarding NSQF
2) Qualification Pack Structure
3) Guidance for the assessor to conduct theory, practical and viva assessments
4) Guidance for trainees to be given by assessor before the start of the assessments.
5) Guidance on assessments process, practical brief with steps of operations practical observation checklist and mark sheet
6) Viva guidance for uniformity and consistency across the batch.
7) MOCK assessments
8) Sample question paper and practical demonstration

HSSC also conduct telephonic orientation of the assessors before each assessment for the given job role to assure quality, fairness and timely conduct of assessment.

The assessment agencies are instructed to hire assessors with integrity, reliability and fairness. Each assessor shall sign a document with its assessment agency by which they commit themselves to comply with the rules of confidentiality and conflict of interest, independence from commercial and other interests that would compromise impartiality of the assessments.

QA before, during and after Assessments:

HSSC ensures pre-requisites of Assessment needed by training institute regarding ARTICLES like Mannequins, Mock Ward Infrastructure, Transferring Equipment, Job role related equipment; INFRASTRUCTURE like Class rooms, Skill Lab, Aids like board/marker/logistics, Furniture like display tables, chairs; STAFF like Co-ordinator from training institute, Peon, Some additional members(for simulated situations, if required); DOCUMENTS like Admit Card, Govt. validated ID proof, Record Books like attendance, log book, internal evaluation sheets, Student Enrollment details; for CO-ORDINATION one full time co-ordination point for co-ordination with assessment coordinator before, during and after assessment.

HSSC ensures the three Phases of Assessment to be assured by assessing body and assessor for fair, consistent and quality assessment. The three phases of assessment is enlisted below:

PREPARATORY PHASE: **Documents ensured to be packed, sent and received:** Seal Pack of Sets of Papers, Invigilation Sheet/Covering letter, OMR/Answer sheet; Well **Co-ordination needs to be assured between** Assessment Co-ordinator of assessing body, HSSC official, Co-ordinator from skill center and assessor.

PHASE OF CONDUCT:

1) **Written Examination:**

- Assessor should reach the VTP 30 minutes before the assessment and ensure that all the arrangements are as per the HSSC rules and regulation
- He should make seating arrangement to students leaving minimum 3 feet space between candidates.
- He should make the students sit in the order of seating arrangements.
- The enrolment numbers are to be written on the desks before the arrival of students.
- The details to be filled like assessor name , date and Qualification name should be written on the board
- Learners should keep all their belongings outside the classroom. All mobiles should be switched off and kept on the desk in front of the invigilator

- The seal of the assessment materials is opened in front of the students.
- OMR sheets to be distributed to all learners
- Assessors should instruct the learners on the rules and regulation of the assessment
  - No. of questions
  - Duration of paper
  - Disciplinary rules
  - Administrative rules

2) **Attendance:**

- The assessor/assessment co-ordinator needs to get signature of all candidates while theory as well as practical examination on invigilation sheet. The sheets are signed and stamped by the In-charge /Head of the Training Centre.
- The assessor/assessment co-ordinator needs to verify the authenticity of the candidate by checking the photo ID card issued by the institute as well as any one Photo ID card issued by the Central/Government. The same needs to be mentioned in the attendance sheet. In case of suspicion, the assessor should authenticate and cross verify trainee's credentials in the enrolment form.
- The assessor/assessment co-ordinator needs to punch the trainee's roll number on all the test pieces.
- The assessor/assessment co-ordinator needs to take a photograph of all the students along with the assessor standing in the middle and with the centre name/banner at the back as evidence.
- The assessor/assessment co-ordinator needs to carry a camera to click photograph of the trainees working on the job and giving theory exam as evidence.
- The assessor/assessment co-ordinator also needs to carry a photo ID card.
- The assessor/assessment co-ordinator also needs to take the photographs as evidence from appropriate angels/sides of the final work piece/job submitted by the trainee. This evidence is signed by the trainee at the time of submission of the job piece.
- The assessor/assessment co-ordinator needs to measure the dimensions and finish of the submitted job piece as per the tolerance or standards mentioned in the assessment guide.

3) **Segregate learners into batches:**

- Assign combination of one critical and one elementary NOS along with the soft skill NOS
- Allocate time to learner
- Ask learners to be present 5 minutes earlier than the time allotted at the lab

4) **Conduct Practical Assessments:**

- Assign practical task to the learners
- Ask the learner to collect articles and be ready for assessments
- Observe learner conducting the assigned task
- Evaluate and Record observations and marks and in the recording sheets
- You may ask learners question on the task being done

5) **Conduct Viva:**

- Ask questions from the learners on the assigned task
- Ask questions prescribed in the assessment guide on non-prescribed tasks to ensure that the learners have complete knowledge on the assessment

6) **Collate Results:**

- Check written answer scripts
- Sum up the practical NOS marks
- Sum up the viva marks
- Remember to sign off on all sheets where scores are mentioned
- Submit the collated result to assessment body representative/project manager

7) **Surprise Visits/Surveillance check** is kept to ensure the quality and fair assessments.

POST-ASSESSMENT PHASE

1) **Verify Result**

- Check for accuracy of names and date of birth
- Check for accuracy of marks against each learner
- Ensure that the pass percentage is correctly applied to the result
- Ensure that the learner has cleared all sections of the assessments in line with the HSSC assessment strategy
- Check if the excel sheet for each learner is accurately filled and is available for cross referencing with the covering result sheet
- Each and every result has to get cross-verified by HSSC official

2) **Upload/Sharing of Results**

- Once the results are ready it is uploaded on the SDMS website/portal and verified on the same
- Or the results are shared to Training institute only by HSSC.
- In case of any query or issue raised for assessment, the assessments are subjected to re-evaluation as per protocol laid down by HSSC.

3) **Documentation**

- Question papers are kept in secure cupboard with limited and controlled access.
- Used OMR sheets are to be stored for the next ten years
- QP should be always current version

Assessment process and guidelines are attached as Annexure 7

Please attach any documents giving further information about assessment and/or RPL.
Give details of the document(s) here:

1. **Quality Assurance Strategy of Assessment in HSSC attached as Annexure 7**
2. **Assessment Criteria attached as Annexure 8**

ASSESSMENT EVIDENCE

Complete the following grid for each grouping of NOS, assessment unit or other component as per the assessment criteria. Insert the required number of rows.

Job Role	Dialysis Technician
Qualification Pack Code	HSS/Q2701
Sector Skill Council	Healthcare Sector Skill Council

Guidelines for Assessment

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below)
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criteria
5. To pass the Qualification Pack, every trainee should score as per assessment grid.
6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack

Skills Practical and Viva (80% weightage)					
		Marks Allotted			
Grand Total-1 (Subject Domain)		400			
Grand Total-2 (Soft Skills and Communication)		100			
Grand Total-(Skills Practical and Viva)		500			
Passing Marks (80% of Max. Marks)		400			
Theory (20% weightage)					
		Marks Allotted			
Grand Total-1 (Subject Domain)		80			
Grand Total-2 (Soft Skills and Communication)		20			
Grand Total-(Theory)		100			
Passing Marks (50% of Max. Marks)		50			
Grand Total-(Skills Practical and Viva + Theory)		600			
Overall Result		Criteria is to pass in both theory and practical individually. If fail in any one of them, then candidate is fail			
Detailed Break Up of Marks		Skills Practical & Viva			
Subject Domain		Pick any 2 NOS each of 200 marks totaling 400			
Assessable Outcomes	Assessment Criteria for the Assessable Outcomes	Total Marks (400)	Out Of	Marks Allocation	
				Viva	Skills Practical
1.HSS / N 2701 : Collect and assess the patient's chart and vitals	PC1. Read and understand the patients' reports	200	40	20	20
	PC2. Take measurements of non-invasive blood pressure, body temperature, body weight, breathing rate and/or other vital parameters, as appropriate		40	20	20
	PC3. Recognise the levels of vital parameters under which dialysis can be performed safely		50	20	30

	PC4. Identify and manage potential and actual risks to the quality and safety of work		30	10	20
	PC5. Maintain competence within one's role and field of practice		20	10	10
	PC6. Evaluate and reflect on the quality of one's work and make continuing improvements		20	10	10
			200	**90**	**110**
HSS / N 2702 : Manage dialysis machine set up and assemble the extracorporeal circuit	PC1. Needs to know and understand the mechanics and functioning of all parts of the dialysis machine being used		50	20	30
	PC2. Should know how to calibrate the machine without error		50	20	30
	PC3. Should ensure that the dialysis unit has been sterilised after previous use	**200**	40	10	30
	PC4. Should ensure that all the components required are adequately present		30	10	20
	PC5. Should know how to assemble and check the extracorporeal circuit parts i.e. the patient connectors, Dialyzer connectors, Drip chamber and bubble trap, Blood pump segment, Heparin infusion line, and saline infusion line		30	10	20
			200	70	130
3.HSS / N 2703 : Prepare and position the patient for treatment	PC1. Maintain patients' privacy		30	10	20
	PC2. Drape the patient such that it facilitates connecting the patient to the dialysis unit		30	10	20
	PC3. Explain the need to dress and be placed in particular position for dialysis to patient		40	20	20
	PC4. Perform actions gently to avoid causing pain specially taking care to not disturb any catheters, IV lines already present	**200**	50	20	30
	PC5. Keep the patient in a comfortable posture		30	10	20
	PC6. Provide the appropriate linen including covering sheet depending on the patient (male, female, child) and should know from where to obtain the same		20	0	20
			200	70	130

.HSS / N 2704 : Connect patient to the dialysis machine	PC1. Use standard protocols for inserting IV lines and making connections to prevent infection and reduce discomfort to the patient	**200**	50	20	30
	PC2. Understand how to utilise existing catheters for performing dialysis		50	20	30
	PC3. Be aware of the protocol of starting the dialysis		50	20	30
	PC4. Minimise inconvenience and pain for the patient while performing the procedure		50	20	30
			200	80	120
5.HSS / N 2705 : Monitor technical/ clinical vitals during the treatment	PC1. Understand the various indicators, alarms and sensors of the dialysis machine	**200**	50	20	30
	PC2. Know the corrective steps to be taken when a particular alarm goes off		50	20	30
	PC3. Be alert and quick in his/her responses		50	20	30
	PC4. Know whom and how to inform in case of medical emergency		50	30	20
			200	90	110
6.HSS/ N 2706: Unhook patient from the machine	PC1. Know when dialysis is completed	**200**	50	20	30
	PC2. Detach all connections between patient and unit		50	10	40
	PC3. Carefully remove IV cannulas with minimum discomfort to patient		50	10	40
	PC4. Suitably dress the canola/ catheter to keep it sterile and pain- free for future use if the doctor/nurse instructs		30	10	20
	PC5. Understand needs of the patient and help them to be comfortable		20	10	10
			200	60	140
HSS / N 2707 : Record the treatment	PC1. Follow the right format for documenting the dialysis on the patient's chart	**200**	50	20	30
	PC2. Record the components/ constituents and their quantities used		50	20	30
	PC3. Understand the importance of documenting the procedure on the patient's chart		50	30	20
	PC4. Record the quantity and type of constituents like dialysate, acid mixture etc. used during the process		50	30	20
			200	100	100

HSS/ N 2708: Conduct pre and post dialysis evaluation	PC1. Read and understand the patients' reports	**200**	30	10	20
	PC2. Take measurements of non-invasive blood pressure, body temperature, body weight, breathing rate and/or other vital parameters, as appropriate		30	10	20
	PC3. Recognise the levels of vital parameters under which dialysis can be performed safely		40	15	25
	PC4. Be alert in noticing any change or distress in the patient during or after dialysis		40	10	30
	PC5. Communicate effectively with patient, doctors and nurses to enable quick remedial action		30	10	20
	PC6. Document the changes as per protocol		30	15	15
			200	70	130
HSS/ N 2709: Maintain and disinfect the delivery system	PC1. Clean up any spillage	**200**	50	25	25
	PC2. Know when the dialysate, dialyzer or other constituents need to be replaced		50	20	30
	PC3. Follow standard sterilisation and cleaning procedure for the unit		30	10	20
	PC4. Disinfect dialysis machine according to the manufacturer's recommendations		40	20	20
	PC5. The dialysate circuit should be exposed to disinfectant		30	10	20
			200	85	115
HSS/ N 2710: Evaluate and prepare the site for cannulation	PC1. Describe the three main types of vascular access (fistulae, grafts and catheters)	**200**	10	5	5
	PC2. Identify the predialysis assessments for all types of vascular access.		10	5	5
	PC3. Describe the methods of needle insertion for AVFs and grafts.		10	5	5
	PC4. Describe the predialysis assessment, accessing procedure, exit site care, and monitoring of catheters		10	5	5
	PC5. Describe how fistulae are created and the pros and cons of these		10	5	5
	PC6. Assess the maturity of a fistula		5	3	2
	PC7. Describe how grafts are created and the pros and cons of these		10	7	3
	PC8. Describe how catheters are placed and the various methods of catheter placement (both short and long term)		10	5	5

	PC9. Describe the pros and cons of catheters		5	3	2
	PC10. Describe the types of catheter and port/catheter devices		10	5	5
	PC11. Assess a fistula or graft prior to each treatment by inspecting (looking for infection, steal syndrome, stenosis, etc.), auscultating (listening for bruit and deep access location), and palpating (feeling for skin temperature, thrill, stenosis, vein diameter etc.) the access		10	5	5
	PC12. Assess the blood flow before inserting a needle into the fistula/ graft		5	2	3
	PC13. Assess catheters prior to dialysis treatment		5	2	3
	PC14. Describe the considerations for accessing catheters and cleansing exit sites		5	2	3
	PC15. Describe the various methods for preparing a patient's skin for cannulation		5	2	3
	PC16. Prepare a patient's skin for cannulation using anti-bacterial solutions		10	4	6
	PC17. Apply a tourniquet		5	1	4
	PC18. Select a site for cannulation and insert a needle into the patient's vein		5	1	4
	PC19. Understand the concept of Antegrade and retrograde needle direction		10	8	2
	PC20. Understand how to rotate cannulation sites for fistulae and grafts		10	3	7
	PC21. Secure needles after insertion		10	4	6
	PC22. Describe common complications that occur due to: a. Fistulae, grafts and catheters b) b. Poor needle site rotation, c) c. Dialysis		10	5	5
	PC23. Monitor catheters during the treatments		10	3	7
	PC24. Describe post-dialysis care for fistulae, catheters and grafts		10	5	5
			200	95	105
HSS/ N 2711: Respond to dialysis related emergencies in patient and equipment	PC1. Clean up any spillage	**200**	30	10	20
	PC2. Know when the dialysate, dialyzer or other constituents need to be replaced		50	30	20
	PC3. Follow standard sterilisation and cleaning procedure for the unit		30	10	20

	PC4. Disinfect dialysis machine according to the manufacturer's recommendations		50	20	30
	PC5. The dialysate circuit should be exposed to disinfectant		40	10	30
			200	80	120
HSS/ N 2712: Reprocess dialyserstreatment guidelines.	PC1. Clean up any spillage	**200**	30	10	20
	PC2. Know when the dialysate, dialyzer or other constituents need to be replaced		50	30	20
	PC3. Follow standard sterilisation and cleaning procedure for the unit		30	10	20
	PC4. Disinfect dialysis machine according to the manufacturer's recommendations		50	20	30
	PC5. The dialysate circuit should be exposed to disinfectant		40	10	30
			200	80	120
HSS/ N 2713: Operate and maintain water treatment plant	PC1. Check the incoming water temperature	**200**	10	2	8
	PC2. Look around the RO(reverse osmosis) system for any visible fluid leaks		20	5	15
	PC3. Check and record the pressure gauge		20	5	15
	PC4. Measure and record the pressures before and after the endotoxin filter		10	5	5
	PC5. Record all checks, including time and initials, on the Daily Dialysis Water Equipment Monitoring Log Sheet		20	5	15
	PC6. Check and record the pump, reject, and product pressures		10	5	5
	PC7. Check and record the recycle, waste, and permeate flow rates		10	5	5
	PC8. Check and record the inlet and permeate conductivities		10	5	5
	PC9. Read the RO monitor and record the conductivity and percent rejection		10	2	8
	PC10. Check and record the pump run hours		10	5	5
	PC11. Check the multi-media sediment filter		10	5	5
	PC12. Measure and record the pressures before and after the multi-media filter		10	5	5
	PC13. Check the water softener		10	2	8
	PC14. Measure and record the pressures before and after the water softener		10	5	5
	PC15. Check and record the setting for the regeneration timer. The timer should be set to		20	5	5

	activate when the facility, especially the RO, is not operating				
	PC16. Check the brine tank		10	2	8
	Total		200	70	130
HSS/ N 9610 (Follow infection control policies and procedures)	PC1. Preform the standard precautions to prevent the spread of infection in accordance with organisation requirements	**200**	5	0	5
	PC2. Preform the additional precautions when standard precautions alone may not be sufficient to prevent transmission of infection		5	0	5
	PC3. Minimise contamination of materials, equipment and instruments by aerosols and splatter		5	5	0
	PC4. Identify infection risks and implement an appropriate response within own role and responsibility		20	10	10
	PC5. Document and report activities and tasks that put patients and/or other workers at risk		5	0	5
	PC6. Respond appropriately to situations that pose an infection risk in accordance with the policies and procedures of the organization		5	0	5
	PC7. Follow procedures for risk control and risk containment for specific risks		10	0	10
	PC8. Follow protocols for care following exposure to blood or other body fluids as required		10	0	10
	PC9. Place appropriate signs when and where appropriate		20	10	10
	PC10. Remove spills in accordance with the policies and procedures of the organization		5	0	5
	PC11. Maintain hand hygiene by washing hands before and after patient contact and/or after any activity likely to cause contamination		5	0	5
	PC12. Follow hand washing procedures		5	0	5
	PC13. Implement hand care procedures		5	0	5
	PC14. Cover cuts and abrasions with water-proof dressings and change as necessary		5	5	0
	PC15. Wear personal protective clothing and equipment that complies with Indian Standards, and is appropriate for the intended use		5	0	5
	PC16. Change protective clothing and gowns/aprons daily, more frequently if soiled and where appropriate, after each patient contact		5	0	5
	PC17. Demarcate and maintain clean and contaminated zones in all aspects of health care work		20	10	10
	PC18. Confine records, materials and				

	medicaments to a well-designated clean zone				
	PC19. Confine contaminated instruments and equipment to a well-designated contaminated zone				
	PC20. Wear appropriate personal protective clothing and equipment in accordance with occupational health and safety policies and procedures when handling waste		5	0	5
	PC21. Separate waste at the point where it has been generated and dispose of into waste containers that are colour coded and identified		5	0	5
	PC22. Store clinical or related waste in an area that is accessible only to authorised persons		5	5	0
	PC23. Handle, package, label, store, transport and dispose of waste appropriately to minimise potential for contact with the waste and to reduce the risk to the environment from accidental release		5	0	5
	PC24. Dispose of waste safely in accordance with policies and procedures of the organisation and legislative requirements		5	5	0
	PC25. Wear personal protective clothing and equipment during cleaning procedures		5	0	5
	PC26. Remove all dust, dirt and physical debris from work surfaces		5	0	5
	PC27. Clean all work surfaces with a neutral detergent and warm water solution before and after each session or when visibly soiled		5	0	5
	PC28. Decontaminate equipment requiring special processing in accordance with quality management systems to ensure full compliance with cleaning, disinfection and sterilisation protocols		5	0	5
	PC29. Dry all work surfaces before and after use		5	0	5
	PC30. Replace surface covers where applicable		5	0	5
	PC31. Maintain and store cleaning equipment		5	5	0
Total			200	55	145
Grand Total-1 (Subject Domain)		**400**			
Soft Skills and Communication		**Pick one field from both parts each carrying 50 marks totaling 100**			
Assessable Outcomes	**Assessment Criteria for the Assessable Outcomes**	**Total Marks (100)**	**Out Of**	**Marks Allocation**	
				Viva	**Observation/ Role Play**
Part 1 (Pick one field randomly carrying 50 marks)					
1. Attitude					

HSS/ N 9603 (Act within the limits of one's competence and authority)	PC1. Adhere to legislation, protocols and guidelines relevant to one's role and field of practice	**50**	5	2	3
	PC2. Work within organisational systems and requirements as appropriate to one's role		5	2	3
	PC3. Recognise the boundary of one's role and responsibility and seek supervision when situations are beyond one's competence and authority		10	5	5
	PC4. Maintain competence within one's role and field of practice		5	3	2
	PC5. Use relevant research based protocols and guidelines as evidence to inform one's practice		5	2	3
	PC6. Promote and demonstrate good practice as an individual and as a team member at all times		10	5	5
	PC7. Identify and manage potential and actual risks to the quality and safety of practice		5	3	2
	PC8. Evaluate and reflect on the quality of one's work and make continuing improvements		5	2	3
			50	24	26
Attitude Total		**50**			
Part 2 (Pick one field as per NOS marked carrying 50 marks)					
1. Team Work					
HSS/ N 9604 (Work effectively with others)	PC1. Communicate with other people clearly and effectively	**50**	3	0	3
	PC2. Integrate one's work with other people's work effectively		3	0	3
	PC3. Pass on essential information to other people on timely basis		3	0	3
	PC4. Work in a way that shows respect for other people		3	0	3
	PC5. Carry out any commitments made to other people		6	6	0
	PC6. Reason out the failure to fulfil commitment		6	6	0
	PC7. Identify any problems with team members and other people and take the initiative to solve these problems		16	8	8
	PC8. Follow the organisation's policies and procedures		10	4	6
			50	24	26
2. Safety management					
HSS/ N 9606 (Maintain a safe, healthy, and	PC1. Identify individual responsibilities in relation to maintaining workplace health safety and security requirements	**50**	6	2	4

secure working environment)	PC2. Comply with health, safety and security procedures for the workplace		4	0	4
	PC3. Report any identified breaches in health, safety, and security procedures to the designated person		4	3	1
	PC4. Identify potential hazards and breaches of safe work practices		6	4	2
	PC5. Correct any hazards that individual can deal with safely, competently and within the limits of authority		6	4	2
	PC6. Promptly and accurately report the hazards that individual is not allowed to deal with, to the relevant person and warn other people who may get affected		6	4	2
	PC7. Follow the organisation's emergency procedures promptly, calmly, and efficiently		6	2	4
	PC8. Identify and recommend opportunities for improving health, safety, and security to the designated person		6	4	2
	PC9. Complete any health and safety records legibly and accurately		6	2	4
			50	25	25
Waste Management					
HSS/ N 9609 (Follow biomedical waste disposal protocols)	PC1. Follow the appropriate procedures, policies and protocols for the method of collection and containment level according to the waste type	**50**	6	2	4
	PC2. Apply appropriate health and safety measures and standard precautions for infection prevention and control and personal protective equipment relevant to the type and category of waste		8	4	4
	PC3. Segregate the waste material from work areas in line with current legislation and organisational requirements		4	0	4
	PC4. Segregation should happen at source with proper containment, by using different colour coded bins for different categories of waste		8	4	4
	PC5. Check the accuracy of the labelling that identifies the type and content of waste		4	2	2
	PC6. Confirm suitability of containers for any required course of action appropriate to the type of waste disposal		4	4	0
	PC7. Check the waste has undergone the required processes to make it safe for transport and disposal		4	4	0
	PC8. Transport the waste to the disposal site, taking into consideration its associated risks		4	4	0

	PC9. Report and deal with spillages and contamination in accordance with current legislation and procedures		4	4	0
	PC10. Maintain full, accurate and legible records of information and store in correct location in line with current legislation, guidelines, local policies and protocols		4	4	0
			50	32	18
4. Quality Assurance					
HSS/ N 9611: Monitor and assure quality	PC1. Conduct appropriate research and analysis	**50**	6	2	4
	PC2. Evaluate potential solutions thoroughly		8	4	4
	PC3. Participate in education programs which include current techniques, technology and trends pertaining to the dental industry		4	0	4
	PC4. Read Dental hygiene, dental and medical publications related to quality consistently and thoroughly		8	4	4
	PC5. Report any identified breaches in health, safety, and security procedures to the designated person		4	2	2
	PC6. Identify and correct any hazards that he/she can deal with safely, competently and within the limits of his/her authority		4	4	0
	PC7. Promptly and accurately report any hazards that he/she is not allowed to deal with to the relevant person and warn other people who may be affected		4	4	0
	PC8. Follow the organisation's emergency procedures promptly, calmly, and efficiently		4	4	0
	PC9. Identify and recommend opportunities for improving health, safety, and security to the designated person		4	4	0
	PC10. Complete any health and safety records legibly and accurately		4	4	0
	Total		50	32	18
Grand Total-2 (Soft Skills and Communication)		**100**			

Detailed Break Up of Marks		**Theory**
Subject Domain		**Pick all NOS totalling 80 marks**
National Occupational Standards (NOS)	**Performance Criteria (PC)**	**Weightage**
1.HSS / N 2701 : Collect	PC1. Read and understand the patients' reports	**5**

and assess the patient's chart and vitals	PC2. Take measurements of non-invasive blood pressure, body temperature, body weight, breathing rate and/or other vital parameters, as appropriate	
	PC3. Recognise the levels of vital parameters under which dialysis can be performed safely	
	PC4. Identify and manage potential and actual risks to the quality and safety of work	
	PC5. Maintain competence within one's role and field of practice	
	PC6. Evaluate and reflect on the quality of one's work and make continuing improvements	
HSS / N 2702 : Manage dialysis machine set up and assemble the extracorporeal circuit	PC1. Needs to know and understand the mechanics and functioning of all parts of the dialysis machine being used	**5**
	PC2. Should know how to calibrate the machine without error	
	PC3. Should ensure that the dialysis unit has been sterilised after previous use	
	PC4. Should ensure that all the components required are adequately present	
	PC5. Should know how to assemble and check the extracorporeal circuit parts i.e. the patient connectors, Dialyzer connectors, Drip chamber and bubble trap, Blood pump segment, Heparin infusion line, and saline infusion line	
3.HSS / N 2703 : Prepare and position the patient for treatment	PC1. Maintain patients' privacy	**10**
	PC2. Drape the patient such that it facilitates connecting the patient to the dialysis unit	
	PC3. Explain the need to dress and be placed in particular position for dialysis to patient	
	PC4. Perform actions gently to avoid causing pain specially taking care to not disturb any catheters, IV lines already present	
	PC5. Keep the patient in a comfortable posture	
	PC6. Provide the appropriate linen including covering sheet depending on the patient (male, female, child) and should know from where to obtain the same	
.HSS / N 2704 : Connect patient to the dialysis machine	PC1. Use standard protocols for inserting IV lines and making connections to prevent infection and reduce discomfort to the patient	**10**
	PC2. Understand how to utilise existing catheters for performing dialysis	
	PC3. Be aware of the protocol of starting the dialysis	
	PC4. Minimise inconvenience and pain for the patient while performing the procedure	

5.HSS / N 2705 : Monitor technical/ clinical vitals during the treatment	PC1. Understand the various indicators, alarms and sensors of the dialysis machine	**5**
	PC2. Know the corrective steps to be taken when a particular alarm goes off	
	PC3. Be alert and quick in his/her responses	
	PC4. Know whom and how to inform in case of medical emergency	
6.HSS/ N 2706: Unhook patient from the machine	PC1. Know when dialysis is completed	**5**
	PC2. Detach all connections between patient and unit	
	PC3. Carefully remove IV cannulas with minimum discomfort to patient	
	PC4. Suitably dress the canola/ catheter to keep it sterile and pain-free for future use if the doctor/nurse instructs	
	PC5. Understand needs of the patient and help them to be comfortable	
HSS / N 2707 : Record the treatment	PC1. Follow the right format for documenting the dialysis on the patient's chart	**5**
	PC2. Record the components/ constituents and their quantities used	
	PC3. Understand the importance of documenting the procedure on the patient's chart	
	PC4. Record the quantity and type of constituents like dialysate, acid mixture etc. used during the process	
HSS/ N 2708: Conduct pre and post dialysis evaluation	PC1. Read and understand the patients' reports	**5**
	PC2. Take measurements of non-invasive blood pressure, body temperature, body weight, breathing rate and/or other vital parameters, as appropriate	
	PC3. Recognise the levels of vital parameters under which dialysis can be performed safely	
	PC4. Be alert in noticing any change or distress in the patient during or after dialysis	
	PC5. Communicate effectively with patient, doctors and nurses to enable quick remedial action	
	PC6. Document the changes as per protocol	
HSS/ N 2709: Maintain and disinfect the delivery system	PC1. Clean up any spillage	**5**
	PC2. Know when the dialysate, dialyzer or other constituents need to be replaced	
	PC3. Follow standard sterilisation and cleaning procedure for the unit	
	PC4. Disinfect dialysis machine according to the manufacturer's recommendations	
	PC5. The dialysate circuit should be exposed to disinfectant	
HSS/ N 2710: Evaluate and prepare the site for	PC1. Describe the three main types of vascular access (fistulae, grafts and catheters)	**5**

cannulation	PC2. Identify the predialysis assessments for all types of vascular access.	
	PC3. Describe the methods of needle insertion for AVFs and grafts.	
	PC4. Describe the predialysis assessment, accessing procedure, exit site care, and monitoring of catheters	
	PC5. Describe how fistulae are created and the pros and cons of these	
	PC6. Assess the maturity of a fistula	
	PC7. Describe how grafts are created and the pros and cons of these	
	PC8. Describe how catheters are placed and the various methods of catheter placement (both short and long term)	
	PC9. Describe the pros and cons of catheters	
	PC10. Describe the types of catheter and port/catheter devices	
	PC11. Assess a fistula or graft prior to each treatment by inspecting (looking for infection, steal syndrome, stenosis, etc.), auscultating (listening for bruit and deep access location), and palpating (feeling for skin temperature, thrill, stenosis, vein diameter etc.) the access	
	PC12. Assess the blood flow before inserting a needle into the fistula/ graft	
	PC13. Assess catheters prior to dialysis treatment	
	PC14. Describe the considerations for accessing catheters and cleansing exit sites	
	PC15. Describe the various methods for preparing a patient's skin for cannulation	
	PC16. Prepare a patient's skin for cannulation using anti-bacterial solutions	
	PC17. Apply a tourniquet	
	PC18. Select a site for cannulation and insert a needle into the patient's vein	
	PC19. Understand the concept of Antegrade and retrograde needle direction	
	PC20. Understand how to rotate cannulation sites for fistulae and grafts	
	PC21. Secure needles after insertion	
	PC22. Describe common complications that occur due to: a. Fistulae, grafts and catheters b) b. Poor needle site rotation, c) c. Dialysis	
	PC23. Monitor catheters during the treatments	
	PC24. Describe post-dialysis care for fistulae, catheters and grafts	

HSS/ N 2711: Respond to dialysis related emergencies in patient and equipment	PC1. Clean up any spillage	**5**
	PC2. Know when the dialysate, dialyzer or other constituents need to be replaced	
	PC3. Follow standard sterilisation and cleaning procedure for the unit	
	PC4. Disinfect dialysis machine according to the manufacturer's recommendations	
	PC5. The dialysate circuit should be exposed to disinfectant	
HSS/ N 2712: Reprocess dialyserstreatment guidelines.	PC1. Clean up any spillage	**5**
	PC2. Know when the dialysate, dialyzer or other constituents need to be replaced	
	PC3. Follow standard sterilisation and cleaning procedure for the unit	
	PC4. Disinfect dialysis machine according to the manufacturer's recommendations	
	PC5. The dialysate circuit should be exposed to disinfectant	
HSS/ N 2713: Operate and maintain water treatment plant	PC1. Check the incoming water temperature	**5**
	PC2. Look around the RO(reverse osmosis) system for any visible fluid leaks	
	PC3. Check and record the pressure gauge	
	PC4. Measure and record the pressures before and after the endotoxin filter	
	PC5. Record all checks, including time and initials, on the Daily Dialysis Water Equipment Monitoring Log Sheet	
	PC6. Check and record the pump, reject, and product pressures	
	PC7. Check and record the recycle, waste, and permeate flow rates	
	PC8. Check and record the inlet and permeate conductivities	
	PC9. Read the RO monitor and record the conductivity and percent rejection	
	PC10. Check and record the pump run hours	
	PC11. Check the multi-media sediment filter	
	PC12. Measure and record the pressures before and after the multi-media filter	
	PC13. Check the water softener	
	PC14. Measure and record the pressures before and after the water softener	
	PC15. Check and record the setting for the regeneration timer. The timer should be set to activate when the facility, especially the RO, is not operating	
	PC16. Check the brine tank	
HSS/ N 9610 (Follow infection control	PC1. Preform the standard precautions to prevent the spread of infection in accordance with organisation requirements	**5**

policies and procedures)	PC2. Preform the additional precautions when standard precautions alone may not be sufficient to prevent transmission of infection	
	PC3. Minimise contamination of materials, equipment and instruments by aerosols and splatter	
	PC4. Identify infection risks and implement an appropriate response within own role and responsibility	
	PC5. Document and report activities and tasks that put patients and/or other workers at risk	
	PC6. Respond appropriately to situations that pose an infection risk in accordance with the policies and procedures of the organization	
	PC7. Follow procedures for risk control and risk containment for specific risks	
	PC8. Follow protocols for care following exposure to blood or other body fluids as required	
	PC9. Place appropriate signs when and where appropriate	
	PC10. Remove spills in accordance with the policies and procedures of the organization	
	PC11. Maintain hand hygiene by washing hands before and after patient contact and/or after any activity likely to cause contamination	
	PC12. Follow hand washing procedures	
	PC13. Implement hand care procedures	
	PC14. Cover cuts and abrasions with water-proof dressings and change as necessary	
	PC15. Wear personal protective clothing and equipment that complies with Indian Standards, and is appropriate for the intended use	
	PC16. Change protective clothing and gowns/aprons daily, more frequently if soiled and where appropriate, after each patient contact	
	PC17. Demarcate and maintain clean and contaminated zones in all aspects of health care work	
	PC18. Confine records, materials and medicaments to a well-designated clean zone	
	PC19. Confine contaminated instruments and equipment to a well-designated contaminated zone	
	PC20. Wear appropriate personal protective clothing and equipment in accordance with occupational health and safety policies and procedures when handling waste	
	PC21. Separate waste at the point where it has been generated and dispose of into waste containers that are colour coded and identified	
	PC22. Store clinical or related waste in an area that is accessible only to authorised persons	

	PC23. Handle, package, label, store, transport and dispose of waste appropriately to minimise potential for contact with the waste and to reduce the risk to the environment from accidental release	
	PC24. Dispose of waste safely in accordance with policies and procedures of the organisation and legislative requirements	
	PC25. Wear personal protective clothing and equipment during cleaning procedures	
	PC26. Remove all dust, dirt and physical debris from work surfaces	
	PC27. Clean all work surfaces with a neutral detergent and warm water solution before and after each session or when visibly soiled	
	PC28. Decontaminate equipment requiring special processing in accordance with quality management systems to ensure full compliance with cleaning, disinfection and sterilisation protocols	
	PC29. Dry all work surfaces before and after use	
	PC30. Replace surface covers where applicable	
	PC31. Maintain and store cleaning equipment	
Grand Total-1 (Subject Domain)		**80**

Soft Skills and Communication		**Select all NOS totalling 20**
National Occupational Standards (NOS)	**Performance Criteria (PC)**	**Weightage**
1. Attitude		
HSS/ N 9603 (Act within the limits of one's competence and authority)	PC1. Adhere to legislation, protocols and guidelines relevant to one's role and field of practice	**4**
	PC2. Work within organisational systems and requirements as appropriate to one's role	
	PC3. Recognise the boundary of one's role and responsibility and seek supervision when situations are beyond one's competence and authority	
	PC4. Maintain competence within one's role and field of practice	
	PC5. Use relevant research based protocols and guidelines as evidence to inform one's practice	
	PC6. Promote and demonstrate good practice as an individual and as a team member at all times	
	PC7. Identify and manage potential and actual risks to the quality and safety of practice	

	PC8. Evaluate and reflect on the quality of one's work and make continuing improvements	
2. Team Work		
HSS/ N 9604 (Work effectively with others)	PC1. Communicate with other people clearly and effectively	**4**
	PC2. Integrate one's work with other people's work effectively	
	PC3. Pass on essential information to other people on timely basis	
	PC4. Work in a way that shows respect for other people	
	PC5. Carry out any commitments made to other people	
	PC6. Reason out the failure to fulfil commitment	
	PC7. Identify any problems with team members and other people and take the initiative to solve these problems	
	PC8. Follow the organisation's policies and procedures	
3. Safety management		
HSS/ N 9606 (Maintain a safe, healthy, and secure working environment)	PC1. Identify individual responsibilities in relation to maintaining workplace health safety and security requirements	**4**
	PC2. Comply with health, safety and security procedures for the workplace	
	PC3. Report any identified breaches in health, safety, and security procedures to the designated person	
	PC4. Identify potential hazards and breaches of safe work practices	
	PC5. Correct any hazards that individual can deal with safely, competently and within the limits of authority	
	PC6. Promptly and accurately report the hazards that individual is not allowed to deal with, to the relevant person and warn other people who may get affected	
	PC7. Follow the organisation's emergency procedures promptly, calmly, and efficiently	
	PC8. Identify and recommend opportunities for improving health, safety, and security to the designated person	
	PC9. Complete any health and safety records legibly and accurately	
4. Waste Management		
HSS/ N 9609 (Follow biomedical waste disposal protocols)	PC1. Follow the appropriate procedures, policies and protocols for the method of collection and containment level according to the waste type	**4**
	PC2. Apply appropriate health and safety measures and standard precautions for infection prevention and control and personal protective equipment relevant to the type and category of waste	
	PC3. Segregate the waste material from work areas in line with current legislation and organisational requirements	

	PC4. Segregation should happen at source with proper containment, by using different colour coded bins for different categories of waste	
	PC5. Check the accuracy of the labelling that identifies the type and content of waste	
	PC6. Confirm suitability of containers for any required course of action appropriate to the type of waste disposal	
	PC7. Check the waste has undergone the required processes to make it safe for transport and disposal	
	PC8. Transport the waste to the disposal site, taking into consideration its associated risks	
	PC9. Report and deal with spillages and contamination in accordance with current legislation and procedures	
	PC10. Maintain full, accurate and legible records of information and store in correct location in line with current legislation, guidelines, local policies and protocols	
5. Quality Assurance		
HSS/ N 9611: Monitor and assure quality	PC1. Conduct appropriate research and analysis	**4**
	PC2. Evaluate potential solutions thoroughly	
	PC3. Participate in education programs which include current techniques, technology and trends pertaining to the dental industry	
	PC4. Read Dental hygiene, dental and medical publications related to quality consistently and thoroughly	
	PC5. Report any identified breaches in health, safety, and security procedures to the designated person	
	PC6. Identify and correct any hazards that he/she can deal with safely, competently and within the limits of his/her authority	
	PC7. Promptly and accurately report any hazards that he/she is not allowed to deal with to the relevant person and warn other people who may be affected	
	PC8. Follow the organisation's emergency procedures promptly, calmly, and efficiently	
	PC9. Identify and recommend opportunities for improving health, safety, and security to the designated person	
	PC10. Complete any health and safety records legibly and accurately	
Grand Total-2 (Soft Skills and Comunication)		**20**

SECTION 2

EVIDENCE OF NEED

What evidence is there that the qualification is needed? While collecting data from the companies for the occupational map & functional analysis, we also took

feedback from industry, which was collected with respect to roles for which qualification packs development, was to be prioritized. This was largely based on volume of people required, quantitative and qualitative shortfall which the Industry feels they face. Governing council of HSSC gave final approval and endorsement for the same.

What is the estimated uptake of this qualification and what is the basis of this estimate?

The workforce in allied healthcare sector need expected to around 74 lac by 2022 double the workforce employed in 2013 as envisaged in Skills Gap analysis Reports for industry demand and secondary research data, though these do not lend to accurate demand projection. The link to NSDC Human Resource & Skills Requirement in Healthcare Sector is http://healthcare-ssc.in/images/Human%20Resource%20&%20Skills%20Requirement%20in%20Healthcare%20sector.pdf

- Feedback from industry for demand though again sample size may not lend to accurate figures
- Training duration, and current and potential training capacity envisaged
- An LMIS development initiative is being put in place to be more precise regarding the demand and supply

What steps were taken to ensure that the qualification(s) does/do not duplicate already existing or planned qualifications in the NSQF?

- NSDC list of Approved and Under-Development QPs was checked prior to commissioning the work
- NSDC QRC team also confirmed the same

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?

- Agencies/personnel would be appointed by the HSSC to interact with training providers, employers, assessors to gather feedback in implementation.
- Monitoring of results of assessments, training delivery
- Employer feedback will be sought post-placement
- A formal review is scheduled in two year time

Please attach any documents giving further information about any of the topics above.
Give details of the document(s) here:

1. **Occupational Mapping Report-Annexure 2**
2. **Functional Analysis Report-Annexure 3**
3. **RFP for development of occupational standards-Annexure 4**
4. **Validation group and industry consultations- Annexure 5**
5. **The Brief Report on the whole process of the development, validation and notification of these qualification packs along with list of companies and Industry associations involved -Annexure 6**
6. **Human Resource & Skills Requirement in Healthcare Sector accessible on below given link:**

http://healthcare-ssc.in/images/Human%20Resource%20&%20Skills%20Requirement%20in%20Healthcare%20sector.pdf

SECTION 3

SUMMARY OF DIRECT EVIDENCE OF LEVEL

Justify the NSQF level allocated to the QP. Relate information about the job role and build upon the five descriptors for the level to justify.

Generic NOS is/are linked to the overall authority attached to the job role.

Qualification Title and Classification Code Dialysis Technician, HSS/Q2701					
Process required	**Professional knowledge**	**Professional skill**	**Core skill**	**Responsibility**	**Level**
Dialysis Technician operates machines and perform dialysis on patients with acute or chronic kidney failure. They are responsible for the operation, cleaning, and sterilisation of the dialysis machines. Dialysis Technicians give patients important medical, technical, social and emotional support and also provide vital information on patient conditions to nurses, doctors, and other medical staff. This is an activity of a routine nature in a situation of clear choice as demanded by the workplace.	The Dialysis Technician should be aware of correct procedure of operation, cleaning, and sterilisation of the dialysis machines and how to perform dialysis on patients with acute or chronic kidney failure. Dialysis Technicians give patients important medical, technical, social and emotional support and also provide vital information on patient conditions to nurses, doctors, and other medical staff. This indicates that a Dialysis technician must have factual knowledge of field or study in order to perform activities correctly.	A Dialysis Technician is expected to Collect and assess the patient's chart and vitals; Manage dialysis machine set up and assemble the extracorporeal circuit; Prepare and position the patient for treatment; Connect patient to the dialysis machine; Monitor technical/ clinical vitals during the treatment; Unhook patient from the machine; Record the treatment; Conduct pre and post dialysis evaluation; Maintain and disinfect the delivery system; Evaluate and prepare the access site for cannulation; Respond to dialysis related emergencies in patient and equipment; Reprocess dialysers; Operate and maintain	The job of Dialysis Technician requires the individual to work in collaboration with Doctors, nurses and other healthcare providers. They must have good Communication skills to accurately report and document findings/results of their patients. They should be sensitive to the needs of the patient and be able to establish a good rapport with them. This requires communication skills (written or oral) with required clarity and indicates that he/she should have the basic understanding of social, political and natural environment.	A Dialysis Technician work under the supervision of physicians and nurses, primarily in hospitals, clinics, dialysis centers/facilities, some nursing homes, assisted living facilities, and long term care facilities in their day-today working in a variety of roles. They also provide vital information on patient conditions to nurses, doctors, and other medical staff. This is critical as it indicates that the person is responsible for his own work and learning. This is further reconfirmed by the fact that The Dialysis Technician is expected to learn and improve his/her practice while on the job and is referred as "skilled workers".	4

		water treatment plant. All these are activities that require him/her to demonstrate his practical skill, as per the scope of the job role, using appropriate tool, quality concepts, responsible for carrying out range of activities, requiring either laid down approach or may adopt alternative approaches as per the best evidenced practices.			
Level: 4	Level: 4	Level: 4	Level: 4	Level: 4	4

OTHER EVIDENCE OF LEVEL [This need only be filled in where evidence other than primary outcomes was used to allocate a level] (**Optional)**

- Validated by Industry through various training provider & stake holders

Summary of other evidence (if used): NA

SECTION 4

EVIDENCE OF RECOGNITION OR 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?

Horizontal and vertical mobility options have been articulated.

Please attach any documents giving further information about any of the topics above.
Give details of the document(s) here:

1. **Occupational Mapping Report-Annexure 2**
2. **Functional Analysis Report-Annexure 3**
3. **Validation group and industry consultations- Annexure 5**
4. **The Brief Report on the whole process of the development, validation and notification of these qualification packs along with list of companies and Industry associations involved -Annexure 6**