



# **Medicinal Laboratory Technician Qualification (MLTQ)**

## **QUALIFICATION WORKBOOK**

**(Assessor's Version)**

By 2022, India is expected to be home to a skilled workforce of 500 million. About 12 million persons are expected to join the workforce every year. This talent pool needs to be adequately skilled.

**Healthcare Sector Skill Council (HSSC)** is a unique initiative of Confederation of Indian Industry (CII), National Skills Development Corporation (NSDC) and leading Healthcare Service Providers. HSSC is developing a system of quality-assured education and skill development for allied healthcare workers and paramedics across India. The organisation aims to support the upskilling of 4.8 million people in the Allied Healthcare and Paramedic workforce over the next 10 years.

#### **Introducing HSSC Qualifications**

HSSC qualifications are central to the system of education and skill development. All HSSC qualifications have been developed in close consultation with healthcare employers and they sit within the **National Skills Qualifications Framework (NSQF)**. As a result, employers and learners can have confidence that the qualifications are relevant to the skills needs of the healthcare sector and that they are nationally approved.

**The India-EU Skills Project** provides technical assistance to key partners and stakeholders to support the development and implementation of the **NSQF**.

HSSC MLTQ Workbook – Assessor’s Version

Produced by HSSC in association with the India-EU Skills Project

October 2015

# CONTENTS

Section 1: Introducing the MLTQ Workbook .....	5
1. Introducing the MLTQ Workbook .....	5
2. Who is this workbook for? .....	5
3. Why should learners use the workbook? .....	6
4. How is the workbook structured? .....	6
5. Guidance for trainers, advisors and assessors .....	7
a) Trainers:.....	7
b) Advisors: .....	8
c) Assessors:.....	8
6. Helping learners to complete the workbook .....	8
a) Completing the questions and tasks: .....	8
b) Verifying the learner's work.....	9
c) Making judgements about evidence .....	10
d) Recording evidence .....	10
e) Completing the workbook.....	11
7. The role of the workbook in summative assessment .....	11
Section 2: Using the workbook .....	12
1. Checklist for trainers and advisors .....	12
Section 3: Workbook Questions & Tasks .....	15
1. Ensuring Health & Safety .....	15
a) <u>Maintaining a clean and safe working environment</u> .....	17
Verification 1:.....	25
b) <u>Preventing and controlling infection</u> .....	27
Verification 2:.....	32
c) <u>Understanding &amp; applying appropriate waste management procedures</u> .....	35
Verification 3:.....	44
2. Being An Effective Worker.....	47
Verification 4:.....	59
3. Specialist Laboratory Skills.....	61
a) <u>Collecting and analysing samples, and reporting results</u> .....	63
Verification 5:.....	76
b) <u>Contributing to high-quality laboratory services</u> .....	79

Verification 6:.....	87
Section 4: Completing the Workbook.....	89
1. Verification Table.....	89
2. Reassessment.....	90
3. Candidate confirmation – To be signed by the candidate .....	91
4. Assessor confirmation – To be signed by the person responsible for assessing the contents of the workbook.....	91

## Section 1: Introducing the MLTQ Workbook

### 1. Introducing the MLTQ Workbook

This workbook contains tasks and questions for learners who are working towards the **Medical Laboratory Technician Qualification (MLTQ)**. It is designed to help learners provide the evidence needed of their knowledge and competence for the role of Medical Laboratory Technician.

The MLTQ sits at Level 4 on the **National Skills Qualifications Framework (NSQF)**. Some of the key requirements of this level are that learners can:

- work in familiar, routine and predictable contexts
- demonstrate practical skills which are routine and repetitive, and in a narrow range
- have factual (as opposed to theoretical) knowledge about their field

By completing the tasks and questions, individuals can demonstrate their skills and knowledge to an appropriate standard.

### 2. Who is this workbook for?

The workbook is designed to support the **formative assessment** of learners working towards the MLTQ. The workbook can be used by everyone who is working towards this qualification. This includes learners who are participating in a **training course**, and experienced staff who are completing a **recognition of prior learning (RPL)** process.

This version of the workbook is provided for assessors, trainers and advisors. It contains all of the information included in the learner's version of the workbook, along with additional guidance for those responsible for assessment.

### 3. Why should learners use the workbook?

The workbook is designed for everyone who is completing the MLTQ.

- Learners who are participating in a training course can complete the workbook as they work through the course. It is designed to help them reflect on how they apply the knowledge and skills they are learning in the workplace. The trainers who are involved in course delivery can then identify where additional learning might be needed.
- Experienced staff who are completing an RPL process can use the workbook to help them describe how their experience matches the assessment requirements of the MLTQ. By completing the questions and tasks prior to assessment, the individual and their **advisor** can identify where their experience matches requirements, and any gaps where additional training might be needed.

In both cases, the workbook supports the **formative assessment** of individuals. It provides a tool to help them demonstrate what they know and can do in relation to the **assessment criteria** of the qualification.

### 4. How is the workbook structured?

Like all HSSC Qualifications, the MLTQ requires individuals to demonstrate that they have the skills and knowledge needed for their job role, and that they can apply these appropriately. By assessing the individual's knowledge and practice, the qualification provides proof of their competence in their role.

The competences included in the MLTQ have been categorised into 3 main themes. These are:

- ensuring health and safety
- being an effective worker
- specialist laboratory skills

The workbook has been structured around these themes. Each theme contains questions and tasks designed to help learners demonstrate their knowledge, skills and experience in that area.

Each task or question is cross-referenced to the **performance criteria** and/or **knowledge & understanding statements** of the qualification. By completing the tasks and questions, learners build up a portfolio of **evidence**, showing how their knowledge, skills and experience matches the standards in the qualification.

## **5. Guidance for trainers, advisors and assessors**

Trainers, advisors and assessors play important roles in assessing how candidates have demonstrated their competence.

- Trainers and advisors carry out formative assessment during the learning process. The trainer needs to ensure that learners can understand the knowledge and apply the skills needed for the role. The advisor needs to support candidates who are completing an RPL process to identify how their knowledge and skills match the standards of the qualification.
- Assessors carry out the **summative assessment**. Their role is to decide if an individual has met the standards of the qualification.

The workbook provides an important tool for trainers, advisors and assessors.

### **a) Trainers:**

The workbook provides a tool to check learning as the learners go through the training course.

- The questions provide a check that the learner can apply their knowledge to their role. These questions can be set as homework, or as classroom tasks. They will help trainers to assess if individuals can understand how the information they are learning is applied in practice.
- The tasks provide a check that the learner has can apply their skills to an appropriate level. They provide trainers with a set of consistent tasks which learners can carry out to ensure they address the standards in the qualification.

**b) Advisors:**

The role of the advisor is to support experienced staff who are completing an RPL process. The workbook is an important tool for this group. It helps them reflect on their experience and gather the information and evidence needed to demonstrate how they meet the standards of the qualifications.

- The questions guide the individuals to identify and describe how the knowledge they apply in their job. They can help the advisor identify where individuals might need additional guidance to think of examples, or where they might have gaps in their knowledge.
- The tasks provide a check that the individual is following appropriate procedures in their role. The advisor can use the tasks to encourage individuals to find evidence of their experience of carrying out these tasks (e.g. from work records or testimony from their manager).

**c) Assessors:**

The assessor is responsible for summative assessment. In this assessment, the completed workbook supports the assessor's final decision. It allows them to develop a fuller picture of what the candidate knows and can do.

**6. Helping learners to complete the workbook**

The workbook provides important evidence of the individual's knowledge, skills and competence measured against the standards of the qualification. It is important that they complete it as fully as possible.

**a) Completing the questions and tasks:**

The **questions** ask learners to provide different types of information:

- **Describe** (e.g. Describe the infection control procedures you follow in your job): Here, they should give clear description of a procedure or process. They need to provide enough detail to show that they know exactly how to carry out the task.
- **Give examples** (e.g. Give examples of when you have to wash your



hands in your job), asks for practical examples from their own role or context.

- **Explain** (e.g. Explain why it is important to wash your hands on these occasions.) asks them to give reasons for different things they do in their work.

**The individual should write their answers in the space given in the workbook.**

The **tasks** ask learners to demonstrate how they do specific tasks:

- **Demonstrate** (e.g. Demonstrate how you process waste in your job). These tasks are marked with the \_ symbol. This symbol means that this is a **practical task**.
  - **In training courses:** The trainer should observe the learner carrying out this task.
  - **In RPL processes:** The advisor can accept testimony from the individual's manager, or can observe them carrying out the task.

In all cases where the learner has been observed, **the trainer or advisor must complete the observation checklist to verify that the task has been completed to the appropriate standard.**

### ***b) Verifying the learner's work***

It is also important for the trainer or advisor to verify the content of the individual's workbook. This means **confirming** that:

- the answers given to questions are the work of the individual him or herself;
- (for training course providers) the individual has been observed carrying out the task. Trainers should use the template provided in the workbook for documenting this observation.
- (for RPL advisors) the individual has provided real and convincing evidence that they carry out this task in their workplace.

The workbook contains a space at the end of each set of questions and tasks which the trainer/advisor should sign and date when the tasks/questions have been completed.

### ***c) Making judgements about evidence***

The MLTQ sits at Level 4 in the **NSQF**. Learners studying for the MLTQ do not need an in-depth knowledge of theoretical aspects related to their work. However, they do need to be able to do the job safely.

As a trainer, assessor or advisor, your role is to ensure that the evidence which the learner includes in the workbook addresses the performance criteria and/or knowledge statements at the appropriate level. Use the guidance given to ensure you are not asking for too much – or too little – detail in the learner’s responses.

### ***d) Recording evidence***

The workbook is designed to help the learner record their evidence, so that it can be included as part of their assessment for the MLTQ. The evidence can be recorded in a number of ways:

The learner can:

- write down their answers to the questions in the workbook.
- discuss their answers with their trainer or advisor. Some questions ask the learner to give explanations, or to provide quite a lot of description. It can be easier to answer these questions in discussion with the individual. Remember, however, that either you or the learner must make a note of the content of their answer.
- note down the time/date of practical tasks, and who observed these. This information can be cross-referenced with the observation feedback sheets completed by the observer.

The main aim of recording evidence is to provide **formative assessment** – that is, to identify where the individual is meeting the standards, and where additional work is needed. The workbook is therefore a working document shared by the learner and the trainer/advisor.

### **e) *Completing the workbook***

Once the learner has completed the tasks and questions in the workbook, it must be signed and dated by the trainer/advisor. It is then used to support **summative assessment** processes.

Training providers must retain the completed workbooks securely for one year following the completion of the training programme/RPL process.

## **7. The role of the workbook in summative assessment**

The workbook supports summative assessment in a number of ways.

- a) Assessors will review the individual's workbook as part of the summative assessment process. This is to ensure that the learner has addressed all of the standards of the qualification, not only those tested in the summative assessment process. This is particularly important for individuals completing the qualification via an RPL route.
- b) HSSC will sample workbooks as part of the verification process before confirming final results. In borderline cases, the content of the workbook will be taken into account in deciding results.
- c) HSSC will also sample completed workbooks as part of the quality assurance mechanisms applied to training providers.

## Section 2: Using the workbook

### 1. Checklist for trainers and advisors

#### **Before you give the workbook to the learner(s):**

- ***Make sure you are familiar with the questions and the tasks in each section:*** This includes understanding how the questions relate to the performance criteria/knowledge in the NOS.
  
- ***Decide how the learner(s) will work through the workbook:*** This may vary between individuals who are following training courses and those completing an RPL process:
  - **Learners on training courses:** Trainers can use the workbooks as homework/revision tools. Learners should be directed to the most appropriate questions/tasks as their course continues.
  - **Learners completing RPL processes:** Candidates following an RPL process should use the workbook questions to help them gather evidence of their knowledge and skills. Advisors should guide candidates to provide workplace evidence – for example in the form of audit sheets, records and manager testimony – to show how they meet the requirements of the questions and tasks.

In both cases, trainers/advisors need to decide how to introduce the workbook to the learners and help them work through it.

#### **When working through the workbook:**

- ***Set aside time for learners to complete the workbook:*** Trainers may want to set questions as homework, or in-class tasks. However you use the workbook, make sure that the individual records the information in the space given and that you sign to verify the work. Without this, the workbook cannot be used in summative assessment.

- **Use the guidance notes to guide your assessment:** The guidance notes are meant for you – not for the learner. They support your assessment, helping you to identify if the learner is meeting the requirements of the standard. Use them to guide your assessment and to help you provide feedback to the learner(s).
- **Use the workbook to identify any gaps in the learner(s) knowledge & skills:** As well as identifying what the learner can do, the workbook can help uncover gaps in knowledge and skills. When reviewing the individual's work, guide them towards the questions/tasks they need to cover in more depth.

**When the workbook is complete:**

- **Make sure the learners submit their completed workbook before summative assessment:** Without this, the workbook cannot inform the final assessment, and the learning provider will not meet its quality assurance responsibilities.
- **Make sure you sign and date the completed workbook:** You need to verify that the workbook contains the work of the individual. If the box at the end of the workbook is not signed, it cannot be accepted by the assessor or HSSC.
- **Store the completed workbooks securely:** The workbooks are part of the quality assurance system for the MLTQ qualification. You need to ensure that they are kept secure and that they cannot be tampered with.

This page has been left blank

## Section 3: Workbook Questions & Tasks

### 1. Ensuring Health & Safety

There are **15** questions and tasks in this section of the workbook.

These questions and tasks in this section will help you demonstrate that you can:

- maintain a safe and clean working environment
- understand and apply appropriate infection control procedures
- understand and apply appropriate waste management procedures

The questions and tasks in this section help you to meet the requirements of the following **National Occupational Standards (NOS)**

**N9606: Maintain a safe, healthy and secure working environment**

**N9609: Follow biomedical waste disposal protocols**

**N9610: Follow infection control policies and procedures**

**N9611: Monitor and assure quality**

Each question and task is cross-referenced to the NOS(s) it relates to.

*The information in italics provides guidance for assessment by trainers, advisors and assessors only.*

This page has been left blank.



## **a) Maintaining a clean and safe working environment**

Good hygiene and knowing how to deal with security risks are essential for minimizing hazards and risks in the healthcare environment.

### **What are ‘hazards’ and ‘risks’?**

- A *hazard* is a possible source of harm or danger. For example, certain chemicals are **hazardous** because they could cause harm to people.
- A *risk* is the possibility that a person could be harmed if they come into contact with a hazard. For example, if laboratory technicians have to pour hazardous chemicals into a machine, there is a risk that they might be injured by the chemicals.

**This section of the workbook helps you show how you address hazards and risks through:**

- **understanding and following good hygiene procedures**
- **maintaining equipment appropriately**
- **complying with health and safety procedures**

**1. Good hand hygiene is essential in all healthcare environments.**

**Give 3 examples of times when you should wash your hands in the course of your work. For each example you give, explain why hand washing is important at this time.**

**Assessor Guidance:**

*This question is designed to allow the candidate to demonstrate that they understand how good hand hygiene contributes to a safe healthcare environment, in particular how it helps in the control of infection.*

*The candidate should provide 3 different example of when, in their role, they need to wash their hands. They need to explain why hand washing is important in each example. Some examples include:*

- *Before handling specimens – to prevent any contamination of the specimen*
- *After handling specimens – to prevent contamination coming from the specimen*
- *Before touching a patient – to avoid spread of infection to patient*
- *After touching a patient – to avoid spread of infection from patient*
- *Before and after wearing protective clothing – to avoid spread of contamination from the clothing*

**How does this question relate to the NOS?**

N9607: KA3; KB3; KB4

N9610: KA1; KA3; KA4; KB6; KB7; KB13

**2. Personal protective equipment, including clothing, is essential for keeping you and others safe in the healthcare workplace.**

**Identify any personal protective equipment (including clothing) which you need to use in your job. Explain when and why you need to use this equipment.**

**For each item of equipment you identify: describe what you should do with it when you have finished using it.**

**Assessor guidance:**

*This question allows the candidate to demonstrate that they know and understand the importance of personal protective equipment (PPE), particularly in the control of infection. The candidate should provide examples of when, in their role, they need to wear PPE. The candidate needs to explain why PPE is important in each example. They also need to explain how they deal with the PPE after use. For example, should they wash it or dispose of it as waste?*

*Please note: The PPE which the candidate needs to use will vary according to their work context. The examples should reflect the policies and procedures of their organisation. The candidate needs to explain clearly why their role needs PPE.*

*Some examples include:*

- *Gloves when handling specimens/samples*
- *Gloves when taking blood samples*
- *Goggles to avoid contamination from spatter*
- *Aprons to prevent contamination of their clothes*

**How does this question relate to the NOS?**

N9607: KA3; KB3; KB4

N9610: KA1; KA3; KA4; KB3; KB9; KB13

**3. Using, maintaining and storing equipment appropriately is essential for minimizing hazards and risks in the healthcare environment.**

**Describe the main types of healthcare equipment you use in your job. Explain what each is used for and describe how you clean and store them after use. Describe any hazards or risks associated with not cleaning and storing them appropriately.**

**Assessor Guidance:**

*This question allows the candidate to demonstrate that they know and understand how to clean and maintain equipment, and the link between this maintenance and a safe working environment.*

*The candidate needs to provide examples of different types of equipment.*

*Examples might include equipment used for:*

- *taking blood samples*
- *processing or transporting samples*
- *analysing samples*

*For each type, the candidate needs to describe how to deal with the equipment after it has been used. This may cover:*

- *decontamination procedures*
- *processing waste*
- *cleaning of work surfaces*
- *storage of decontaminated equipment*

*The candidate must demonstrate that they know the procedures to follow and understand why the procedures are necessary in maintaining a safe workplace.*

**How does this question relate to the NOS?**

N9606: KA1; KA2; KB1

N9610: KA3; KB4; KB11; KB13

N9607: KA3; KB3

N9611: KB5

4. Demonstrate how you clean your work area. During the this task, you should demonstrate how you:

- clean and store the different types of equipment identified in Question 3 appropriately
- clean your work area, including surfaces
- follow appropriate hand hygiene procedures
- use any relevant personal protective equipment (PPE) appropriately
- clear up spills of liquid appropriately

**Assessor Guidance: OBSERVED TASK**

*This task allows the candidate to demonstrate that they can clean and store equipment, maintain a clean environment and follow appropriate procedures to ensure their own safety and hygiene.*

*The candidate must follow appropriate cleaning procedures for the equipment they have identified in Question 3. These procedures will depend on the equipment itself, manufacturers' instructions and local procedures. As a result, you should ensure you are familiar with the equipment, instructions and procedures being used.*

*The task also provides an opportunity for the candidate to demonstrate good hand hygiene and, depending on the equipment used, use of PPE. You should ensure that you are aware of PPE requirements.*

*If the candidate uses equipment which must be decontaminated/sterilized, they must be observed cleaning this equipment. Candidates must also be asked to clear spills of liquid to demonstrate that they can follow appropriate procedures.*

**For RPL Candidates:** Workplace records and manager testimony can be

*accepted as evidence that they complete this task to the required standard.*

**How does this task relate to the NOS?**

N9606: PC2; KA2; KB1

N9607: PC8; KA3

N9610: PC3; PC9-13; PC14 (if appropriate); PC15 (if appropriate) PC17;  
PC19; PC25 (if appropriate); PC26-31; KA4; KA5; KB4; KB7;  
KB9 (if appropriate); KB11-13

5. Give 3 examples of the types of hazards which exist or risks which can arise in your work. Describe what you do if you think something poses a risk to you or others.

**Assessor Guidance:**

*This question allows the candidate to demonstrate their understanding of workplace risks and hazards, and their knowledge of the policies and/or procedures they should follow to deal with them.*

*Examples of hazards/risks include:*

- *They may handle or store hazardous substances, including chemicals and/or blood/body fluids. There is a risk of spillage or accidental contact with the substances.*
- *They may have to process hazardous or contaminated waste. There is a risk of spillage, contamination or contact (NB Waste management is dealt with in details in Qus 10-15)*
- *Risks that test results may not be processed properly, resulting in errors.*

*The candidate needs to demonstrate that they know and understand local procedures and policies for addressing hazards and risk, and that they can apply these. In particular, they need to show that they can:*

- *identify risks/hazards appropriately*
- *comply with local procedures as they relate to their role. Importantly, they must know the limits of their role in dealing with risks/hazards*
- *report the hazard/risk appropriately.*

**How does this question relate to the NOS?**

N9606: PC1; PC3; PC4; KA1-6; KB1-6

N9610: PC7; KA3;

N9611: KA1-3;

6. Demonstrate what you should do if you discover the following emergencies in your workplace:
- a) a fire
  - b) a suspicious packet or person in your work area
  - c) a serious accident in your work area
  - d) a minor accident, where someone needs first aid

**Assessor Guidance OBSERVED TASK**

*This task allows the candidate to demonstrate that they know and understand the procedures they need to follow if they discover an emergency situation. Allowing the candidate to complete this as a simulated situation allows them both to demonstrate that they can respond appropriately, and explain what they are doing. In particular, the candidate should describe:*

- *who they should alert, and how they do this*
- *what they should do while waiting for expert help to arrive*
- *any reporting requirements they need to complete after the emergency has passed.*

*The candidate also needs to demonstrate that they understand the limits of their role in an emergency – i.e. what they must not do.*

**How does this question relate to the NOS?**

N9606: PC1-3; PC5-7; KA1-6; KB1-6

N9607: KB1; KB2

N9611: PC5; PC6; PC7; PC8; PC10; KA1-4



## Verification 1:

The person responsible for the assessment of the workbook should complete this page.

<b>Assessor's Notes</b>			
	<b>Outcome</b> (C= complete / NC = not complete)	<b>Comments:</b> <i>Assessor comments should note if candidate has met the required standard, identifying any particular areas of strength or weakness.</i>	<b>Assessor initials &amp; date</b>
1			
2			
3			
4			
5			
6			

## OVERALL

Please circle the statement which matches your assessment:

- a) ALL of the questions in this section have been completed to the required standard.
- b) NOT ALL of the questions in this section have been completed to the required standard

*If you selected b): Which questions does the candidate need to try again?*

**Assessor name:**

**Signature:**

**Date:**

### **Assessor Guidance**

*It is very important that you complete this verification fully. Your comments will help the learner understand where they are doing well and what they need to do to improve their work. They will also show help the summative assessor to understand the learner's progress.*

*If the learner needs to redo questions, **you must record your assessment of the next attempt at those questions in the verification table in Section 4.***

## **b) Preventing and controlling infection.**

The World Health Organisation (WHO) defines infection prevention and control in this way:

*..measures [that] aim to ensure the protection of those who might be vulnerable to acquiring an infection both in the general community and while receiving care due to health problems... The basic principle of infection prevention and control is hygiene.*

**This section of the workbook looks at how you:**

- **identify how and where risks of infection can occur in your work**
- **take action to prevent infection occurring and spreading**
- **ensure that your personal hygiene contributes to a safe and healthy environment**

**7. Give 3 examples of situations which can cause or spread infection in your work area. Describe why each situation poses an infection risk and the possible effects on patients.**

**Assessor Guidance:**

*This question is designed to allow the candidate to demonstrate their understanding of the causes of infection, how it can occur, how it is spread and the effects it can have on patients and on the service.*

*The candidate needs to identify where there is risk of infection occurring in their work, and give a clear explanation of how the infection might begin or spread. Examples should demonstrate that the candidate understands that different types of infections have different root causes.*

*Some examples include:*

- *Infection risks spread from contact with patients who have communicable diseases, for example:*
  - *body fluids may contaminate an area e.g. if patient coughs/sneezes/bleeds*
- *Infection risks occurring as a result of poor health and safety practice, for example:*
  - *not cleaning/decontaminating areas and equipment used during contact with patients , which means infection could spread to others*
  - *not washing hands before and after contact with patients, which means the technician could spread infection*
  - *not following waste disposal protocols properly, which means that staff and patients may come into contact with contaminated waste*
  - *not using and laundering/disposing of personal protective equipment appropriately, which means that infection might be spread through contact with the equipment/clothing*
- *Infection risks as a result of errors in taking/handling samples, for*

*example:*

- *not using appropriate sterile equipment in taking and handling samples*
- *not following protocols to prevent contamination of the sample, such as ensuring that vials are sterile and sealed after use*
- *reusing equipment which should be disposed of*

[How does this question relate to the NOS?](#)

N9610: KB2; KB3; KB4; KB5; KB8; (KB10); KB13

8. For each of the examples given in Question 7, describe the actions you should take if they occur. Explain why these actions are important.

**Assessor Guidance:**

*This question allows the candidate to demonstrate their understanding of the ways in which the knowledge displayed at Question 3 informs their own practice.*

*In each example, the candidate should describe the procedures they should follow and give a clear rationale for these procedures.*

*Precautions linked to the examples provided for question 7 include:*

- *Use appropriate personal protective clothing and equipment (e.g. masks; aprons etc)*
- *Check that all equipment used in contact with patients is appropriately sealed or sterile*
- *Follow instructions for the cleaning or disposal of personal protective clothing*
- *Wash hands before and after contact with patient*
- *Wash hands after contact with all types of waste*
- *Follow instructions for cleaning/decontaminating areas and equipment*
- *Make sure that waste is managed appropriately*
- *Do not reuse equipment which is single-use only*
- *Do not reuse reusable equipment before it has been decontaminated/cleaned appropriately*

**How does this question relate to the NOS?**

N9610: KA1; (KA2); KA3; KA4; KB1; (KB4); KB6; KB8; (KB9); (KB12); KB13

**9. Demonstrate how you minimize the risk of causing or spreading infection in your role. This includes demonstrating:**

- **how you protect patients from infection during phlebotomy activities**
- **how you handle samples to prevent the spread of infection**
- **what you do if you come into direct contact with blood or bodily fluid**
- **what you do if you spill blood or bodily fluid**

**Assessor Guidance: OBSERVED TASK**

*This task allows the candidate to demonstrate that they can routinely carry out the necessary infection control measures required in their role. Some of these tasks may have been carried out as part of Question 4 (Cleaning your work environment). If so, the evidence from that task may be used for this one.*

*The assessor must observe the candidate handling specimens of blood/fluids, to see if appropriate procedures are carried out. The assessor should note that assessment of this task includes assessment of appropriate hand washing and use of personal protective equipment (where relevant).*

**How does this task relate to the NOS?**

*The performance criteria covered in this task include.*

N9606: PC4; PC5

N9610: PC1; (PC2); (PC3); PC4; PC6-8; PC10; PC12; (PC 15); PC17; PC19; (PC20)

## Verification 2:

The person responsible for the assessment of the workbook should complete this page.

<b>Assessor's Notes</b>			
	<b>Outcome</b> (C= complete / NC = not complete)	<b>Comments:</b> <i>Assessor comments should note if candidate has met the required standard, identifying any particular areas of strength or weakness.</i>	<b>Assessor initials &amp; date</b>
7			
8			
9			



## OVERALL

**Please circle the statement which matches your assessment:**

- c) ALL of the questions in this section have been completed to the required standard.
  
- d) NOT ALL of the questions in this section have been completed to the required standard

*If you selected b): Which questions does the candidate need to try again?*

**Assessor name:**

**Signature:**

**Date:**

### **Assessor Guidance**

*It is very important that you complete this verification fully. Your comments will help the learner understand where they are doing well and what they need to do to improve their work. They will also show help the summative assessor to understand the learner's progress.*

*If the learner needs to redo questions, **you must record your assessment of the next attempt at those questions in the verification table in Section 4.***

This page has been left blank.

## **c) Understanding & applying appropriate waste management procedures**

'Healthcare waste' (HCW) refers to all waste from a healthcare environment. According to the World Health Organisation (WHO), 75%-90% of this waste is similar to domestic waste. However, the remaining 10%-25% of this waste may be infectious or hazardous, and needs special treatment.

According to WHO:

*If these two basic categories of waste aren't segregated (separated) properly, the entire volume of HCW must be considered as being infectious according to the precautionary principle, hence the importance of setting up a safe and integrated waste management system.*

**This section of the workbook looks at how you:**

- **identify the different types of waste which you deal with in your job, and the hazards they present**
- **process these different types of waste**
- **minimize the hazards which the waste presents**
- **maintain your own safety, and the safety of others, when processing waste.**

**10. Give examples of different types of waste you handle in your job.  
Describe the main hazards posed by each type of waste.**

**Assessor Guidance:**

*This question is designed to allow the candidate to demonstrate their awareness of different categories of waste, and in particular to identify any types of hazardous waste they have to deal with.*

*The types of waste they identify here will provide the context for the questions which follow. Candidates should also demonstrate that they know and understand the risk assessment requirements linked to each type of waste.*

*Some examples might include:*

- *Biomedical waste (e.g. liquid samples such as urine, blood; solid samples such as stool, tissue)*
- *Clinical waste (e.g. swabs; vials; needles; used dressings)*
- *Personal protective equipment (e.g. masks; aprons; gloves)*
- *Waste generated by patients (e.g. handkerchiefs or tissues)*
- *Non-clinical waste (e.g. paper; packaging)*

**How does this question relate to the NOS?**

N9609: KB1; KB5

11. There are a number of steps involved in the processing of waste: handling; packaging; storing; transporting; and disposal.

Choose 3 of the types of waste you named in Question 10. For each one, identify:

- the hazards that can arise if the waste is not processed properly.
- the step(s) in the process where the hazards you have identified can occur.

**Assessor Guidance:**

*This question is designed to allow the candidate to demonstrate their knowledge and understanding of the hazards presented by poor waste management.*

*The candidate should have identified different categories of waste at Question 6, (e.g. biomedical; chemical). Here, they should demonstrate their understanding of the types of hazards relating to the different categories which each can occur at different steps in the process.*

*Typical hazards might include:*

*In handling:*

- *Needle stick injuries from needles in clinical waste*
- *Hazards from contact with clinical waste (e.g. blood and fluids on swabs, dressings, in vials etc)*
- *Hazards from contact with or spillage of biomedical waste*

*In packaging & storing:*

- *Degeneration of waste if not packaged stored correctly*
- *Leakage if waste is not packaged appropriately*
- *Degeneration if waste is not stored at the correct temperature*
- *Cross-contamination if waste is not packaged and stored separately.*  
*(The candidate should describe any colour coding system used for packaging and storage in their area.)*

*In transporting*

- *Cross-contamination can occur if different types of waste are not transported separately*
- *Tears or breaks can occur in packaging when waste is moved*

*In disposal*

- *Inappropriate disposal can create danger for the public (e.g. clinical waste can release toxins if incinerated; needles and vials can cause cuts and infections if picked up on rubbish dumps etc)*

**How does this question relate to the NOS?**

N9609: KA1; KA3; KA4; KB5; KB7; KB8

N9610: (KB8); KB13

**12. For the 3 types of waste you identified:**

- describe what you should do at each step in the process to ensure the waste is processed appropriately
- explain why each step is important.

**Assessor Guidance:**

*This question is designed to enable the candidate to demonstrate their knowledge and understanding of necessary procedures for processing the different types of waste they deal with in their job role.*

*Answers to this question need to reflect manufacturer's instructions and local/organisational policies and procedures. It is therefore important that you, as the assessor, are familiar with these.*

*The candidate needs to demonstrate their understanding of the required procedures at each stage. This includes*

- *any standard operating procedures used in their department for the management of waste*
- *any risk assessment requirements*
- *any personal protective equipment they need to use*
- *the appropriate segregation and storage of waste using the appropriate containers*
- *(if they are responsible for transporting waste) the precautions they need to take when preparing for transport and for transporting*
- *(if they are responsible for the disposal of waste) the precautions they need to take to ensure the safe disposal*
- *(if they are not responsible for transport/disposal) who they need to liaise with – and how – to ensure safe transport/disposal*
- *any control documents they need to complete to provide proof that the waste has been managed appropriately*

*The candidate should also demonstrate that they understand how the procedures they follow help to reduce the risk of the spread of infection.*

*This question could be combined with Question 11. As assessor, you can ask the candidate to explain their actions as they are doing them.*

**How does this question relate to the NOS?**

N9609: KA1; KA3; KB1-7; KB10-13; KB15; KB16

N6910: KA1; KA3; KB8; KB9; KB13



**13. Give at least 3 examples of things you do to protect your own health and safety and prevent the spread of infection when you are handling waste. Explain why each of these actions is important.**

**Assessor Guidance:**

*This question allows the candidate to demonstrate their knowledge and understanding of how to assure their safety and the safety of others when dealing with waste.*

*Assessors should ensure candidates can explain both the precautions they take to prevent health and safety problems, and how they would ensure their own safety in the face of hazards occurring. In particular, assessors should be sure that the candidate understands how to protect themselves and others:*

- when working with sharps and/or contaminated waste*
- if a major hazard (e.g. major leak of contaminated waste) occurs*

*They should also identify any reporting responsibilities they have if a hazard occurs.*

*The candidate may have given adequate information in response to Question 8 to demonstrate that they understand how to prevent the spread of infection. If they have not, this question provides a further opportunity for the candidate to demonstrate their knowledge and understanding of this area.*

**How does this question relate to the NOS?**

N9606: KA1; KA2; KA5; KA6; KB2; KB3; KB5; KB6

N9609: KA1; KA2; KA3; KA4; KB6; KB7; KB8; KB15; KB16

N9610: KA1; KA3; KB2; KB4; KB8; KB9; KB12; KB13

**14. Describe the procedures you follow when dealing with spillage of the 3 types of waste you identified in Question 11. Explain why each step in the procedure is important**

**Assessor Guidance:**

*This question allows the candidate to demonstrate their knowledge and understanding of how to deal with spillages of different types of waste.*

*The candidate needs to show that can identify and explain a range of issues related to the types of waste they have identified in Question 10. Examples include*

- *the use of any specific equipment or materials needed to deal with the spillage*
- *how people will be kept safe until spillage is dealt with (e.g. is it necessary to rope off areas or put up signs?)*
- *any reporting requirements – does the candidate need to report the incident? If so, to whom and how do they do it?*

**How does this question relate to the NOS?**

N9606: KA3; KA5; KA6; KB1-3

N9609: KA1; KA3; KB6; KB7; KB8

N9610: KB11

**15. Demonstrate how you process the different types of waste you have identified in Question 6.**

**Assessor Guidance: OBSERVED TASK**

*The candidate needs to demonstrate that they can process different types of waste appropriately. This might involve observing the candidate processing a range of different types of waste. Alternatively they might explain how they would alter a process they are demonstrating to deal with a different type of waste.*

*Candidates should also demonstrate good hand hygiene and wear PPE as appropriate when processing waste.*

***This observation might be accompanied by questioning at each stage to generate evidence for Question 12.***

**How does this task relate to the NOS?**

N9609: PC1; PC2; PC3; PC4; PC5; PC6; PC7; (PC8 if applicable to role); (PC 9 if applicable to role); PC10

N9610: PC11-PC13; (PC15 & PC 20 if appropriate); PC21-24

***FOR RPL CANDIDATES: Documents which provide evidence of competence might include copies of:***

- *Completed waste management records for the different types of waste mentioned, completed by the candidate and verified by a more senior manager*
- *Statement from the candidate's manager, confirming their responsibility for waste management and that this is carried out to standard.*

***These documents can provide evidence for the PCs in N9609 and N9610.***

### Verification 3:

The person responsible for the assessment of the workbook should complete this page.

<b>Assessor's Notes</b>			
	<b>Outcome</b> (C= complete / NC = not complete)	<b>Comments:</b> <i>Assessor comments should note if candidate has met the required standard, identifying any particular areas of strength or weakness.</i>	<b>Assessor initials &amp; date</b>
<b>10</b>			
<b>11</b>			
<b>12</b>			
<b>13</b>			
<b>14</b>			
<b>15</b>			

## OVERALL

Please circle the statement which matches your assessment:

- e) ALL of the questions in this section have been completed to the required standard.
- f) NOT ALL of the questions in this section have been completed to the required standard

*If you selected b): Which questions does the candidate need to try again?*

**Assessor name:**

**Signature:**

**Date:**

### **Assessor Guidance**

*It is very important that you complete this verification fully. Your comments will help the learner understand where they are doing well and what they need to do to improve their work. They will also show help the summative assessor to understand the learner's progress.*

*If the learner needs to redo questions, **you must record your assessment of the next attempt at those questions in the verification table in Section 4.***

This page has been left blank.

## 2. Being An Effective Worker

There are **10** questions and tasks in this section of the workbook.

These questions and tasks in this section will help you demonstrate that you can:

- carry out your role effectively and within appropriate boundaries
- work effectively with others
- ensure you provide high-quality healthcare services

The questions and tasks in this section help you to meet the requirements of the following **National Occupational Standards (NOS)**

**N9603: Act within the limits of one's competence and authority**

**N9604: Work effectively with others**

**N9605: Manage work to meet requirements**

**N9607: Practice code of conduct while performing duties**

**N9611: Monitor and assure quality**

Each question and task is cross-referenced to the NOS(s) it relates to.

*The information in italics provides guidance for assessment by trainers, advisors and assessors only.*

16. Give at least 3 examples of the main tasks which you normally carry out in your role. Describe how you organize your work to make sure you can carry out the tasks to the required standard. In your answer, you should include information about:

- how you prepare for each task
- the steps involved in the task
- how long the task should take
- how you check that the task is completed properly

**Assessor Guidance:**

*This task allows the candidate to demonstrate how they manage time, tasks and priorities, and how they ensure that their work is at the required standard.*

*The candidate should identify a selection of the key and/or routine tasks required by their work. Examples might include:*

- *taking blood*
- *processing blood or other samples*
- *recording results*
- *ordering supplies*

*Candidates should describe preparations needed and the steps involved in the tasks. They should indicate how long the tasks should take and how they check the task is completed in the allotted time without errors.*

*If they are responsible for ordering supplies, they should include this task in this question as it will provide evidence for NOS N9602*

**How does this task relate to the NOS?**

N9605: KA3; KB2; KB3; KB5-8; KB10

(N9602: KA1-4; KB1-5)



**17. Identify some of the main supplies you need to carry out the tasks you described in Question 16. Describe:**

- **why you need these supplies.**
- **how you ensure that supplies are kept at an appropriate level.**
- **what you should do if you discover that supplies are out of stock or when they do not reach the required standard.**

**Assessor Guidance:**

*This question allows the candidate to show that they know, understand and can apply local requirements relating to maintaining appropriate levels of stock.*

*Depending on their role, individuals may be responsible for ordering supplies or they may have to request supplies from others. All candidates should be able to describe:*

- *how they identify the amount of supplies needed for them to be able to carry out their tasks appropriately*
- *how they ensure that appropriate stocks of supplies are always available, including identifying who they need to contact/communicate with.*
- *how they should handle situations if supplies are not available, including who they need to contact/communicate with.*
- *How they should handles situations where supplies are not up to the appropriate standard, including who they need to contact/communicate with*

*In describing their approach to these tasks, candidates should demonstrate their understanding and ability to apply local policies and procedures relating to stocks and supplies.*

**How does this question relate to the NOS?**

N9602: PC2-4; KA1-4; KB1-5

N9605: PC1; PC5; KA1; KA3; KB1-3; KB8

**18. Demonstrate that you can carry out the tasks you described in Question 16 to the required standard.**

**Assessor Guidance    OBSERVED TASK**

*This task allows the candidate to demonstrate that they can carry out the tasks identified at Question 16 to the required standard.*

*RPL candidates can provide evidence such as work records and manager testimony to show that they meet these requirements.*

*NB If the candidate's role requires them to order stock or supplies, they should demonstrate how they identify and order required items. This provides evidence for N9602.*

**How does this question relate to the NOS?**

(N9602: PC1-3)

N9605: PC1-3; PC5

**19. It is important to recognise the limits of your role. Give 3 examples of tasks you cannot do without the direct permission, supervision or help of a more senior colleague. Explain why you need this permission/supervision/help.**

**Assessor Guidance:**

*This question allows the candidate to demonstrate that they understand the limitations of their role, and the need to ensure they have appropriate permission for the tasks they carry out. It also demonstrates that they understand why permission is necessary.*

*There are many times when direct supervision or permission might be needed. Examples might include:*

- *direct supervision required for some aspects of clinical tasks*
- *permission may be required for the retesting of samples and for the handling of urgent referrals*
- *permission required if there is a request for information from someone outside the team*
- *help needed to deal with patients' questions – e.g. a more senior colleague may have to answer questions directly related to the patient's treatment.*

*For each example, the candidate needs to explain why they cannot act without this permission/supervision/help.*

**How does this relate to the NOS?**

N9603: PC1; PC3; KA1; KA3; KB1; KB2; KB4; KB5; KB7-9; KB11

N9604: KA1; KB2-4

N9607: PC1; PC3; KA1; KA2; KB1-3; KB6; KB7; KB9-11

**20. Problems can occur when things go wrong or when work is not completed in time or to the correct standard. It is important to know what to do in these circumstances.**

**Give an example of a time when you have had to deal with a work problem. Describe what happened, what you did to resolve the problem, and what you learned from this experience.**

**Assessor Guidance:**

*This question allows candidates to demonstrate that they can solve work problems, can take appropriate action and can use the experience to help them improve their work.*

*The type of problem will depend on the individual's context. However, in answering the individual needs to ensure that they demonstrate their understanding of:*

- *the procedures to follow when problems arise, and the importance of following these*
- *the importance of good communication in solving problems*
- *how to change their practice to limit the chance of the problem occurring again.*

**How does this question relate to the NOS?**

N9603: PC1-3; PC6-8; KA3; KB1-5; KB8-12

N9604: PC5; PC6; PC8; KA2; KB1-4

N9605: PC3; PC5; KA1; KA3; KB1; KB4; KB8

N9607: PC1-3; PC5-7; KA1; KA2; KB1-6; KB10

*If the candidate identifies a problem with team working, this question may also provide evidence for:*

N9604: PC7; KA4; KA5; KB6; KB7

**21. Your role may bring you into contact with different groups of people. Give examples of the different groups of people you come into contact with in your role. How does your role relate to each group?**

**Assessor Guidance:**

*This question allows the candidate to demonstrate their understanding of how their roles relates to other people. This may include different groups of healthcare colleagues, patients and external suppliers.*

*The groups the individual identifies will depend on their own context. However, for each group they should describe their how the work they do relates to the group. Examples might include:*

- *Their own manager and team: they should outline the team and where their role sits within it.*
- *People in other departments: who are the main departments they link with?*
- *Patients: what services do they deliver directly to patients?*
- *External suppliers or other providers: how does their work and their role relate to people outside their organisation?*

**How does this question relate to the NOS?**

N9604: KA1-4; KB3-5

**22. Good communication is an essential part of the healthcare workers role. Give examples of how you communicate with people in each of the groups you identified in Question 19. In answering this question, think about:**

- **the type of information you have to communicate**
- **the forms of communication you use**

**Assessor Guidance:**

*This question allows the candidate to demonstrate their understanding of good communication skills and how they apply these in their work.*

*The candidate should describe how and why they communicate with the different groups of people identified in Question 21. For example, they may deal with patient enquiries, provide reports to patients or colleagues, or provide results to people in other departments. In all examples, the candidate needs to show that they know how to check that:*

- *the person they are communicating with has understood the information being communicated*
- *the person is happy with the way it has been communicated*

**[How does this question relate to the NOS?](#)**

N9603: PC1-3; PC6; KA1; KA3; KB8; KB9

N9604: PC1; PC3; PC8; KA1; KA2; KA4; KB1; KB2

N9607: PC1-3; PC6; KA1; KA2; KB1-3; KB5; KB6; KB10

**23. Give an example of a time when you have had to deal with a communication problem at work. Describe in detail what you did to overcome the problem, and how successful you were.**

**Assessor Guidance:**

*This question allows the candidate to demonstrate their skills in solving communication problems. Examples of the types of problems they might address include:*

- *Communicating when there are obstacles (e.g. language barriers; technology not working)*
- *Communicating with people who have difficulty communicating (e.g. visual or hearing impairment; learning difficulties)*
- *Communicating problems within the team*
- *Communicating with people who are demanding or who have complaints*

*In their example, the candidate should describe the situation, describe the steps they took to resolve the difficulty, and evaluate how successful they were.*

**How does this question relate to the NOS?**

N9603: PC6; PC8; KA3; KB3;

N9604: PC1; PC2; PC4; (PC7); KA1; KA2; KA4; KB1-3; KB7

N9607: PC6; KA2; KB5; KB10

**24. In your work, you may have access to information which is confidential. This information should only be shared with people who are authorised to see it.**

**Give examples of confidential information which you deal with in your work. Explain why it is confidential, and how you ensure that it is kept secure.**

**Assessor Guidance**

*This question allows the candidate to demonstrate their knowledge and understanding of the requirements surrounding the protection of information, and to show how they safeguard information in their work.*

*Examples of confidential information might some of the following include:*

- *Patient treatment records*
- *Test results*
- *Personal data of patients or colleagues (e.g. address; age; phone number etc)*
- *Financial information*

*In their example, the candidate should identify data which they should keep confidential, identify who they are authorised to share it with, and describe how they ensure that no other person has access to it.*

**How does this question relate to the NOS?**

N9603: PC1-3; PC6; KA1; KB1-5; KB8; KB9

N9605: PC4; PC5; KA1; KA2; KB9

N9606: PC1; PC2; KA1; KA2; KA6; KB1

N9607: PC1-3; PC6; KA1; KA2; KB1-3; KB6; KB7; KB10

N0304: KA1; KA2; KA3; KB1; KB2



**25. High-quality healthcare depends on workers keeping their knowledge and skills up to date. Give examples of activities you participate in to keep your own knowledge and skills up to date. Explain how each activity helps you in your work.**

**Assessor Guidance**

*This question allows the candidate to demonstrate how their understanding of the importance of ongoing development and to describe how they are developing their own skills.*

*Candidates should provide examples of activities which they have undertaken within the past year. Examples of activities which the candidate might highlight include:*

- *reading journals and relevant articles*
- *learning to use new equipment*
- *coaching a colleague to complete a work task*
- *attending courses or seminars*
- *participating in online forums etc*
- *completing this workbook*

*For each example, the candidate needs to identify how the development they have undertaken has helped them in their role.*

**How does this question relate to the NOS?**

N9603: PC4; PC8; KB6; KB13; KB14

N9607: PC4; KB8; KB12

N9611:

***FOR RPL CANDIDATES: Additional documents which provide evidence of competence might include copies of:***

- *training records, showing courses or seminars they have attended*
- *evaluations or appraisals of their work by a manager*
- *statement from a manager outlining how the candidate has contributed*

*to the development of the team*

***These documents can provide evidence for:***

**N9603:** PC4; PC5; PC6

**N9607:** PC2; PC4; PC5; PC6

## Verification 4:

The person responsible for the assessment of the workbook should complete this page.

<b>Assessor's Notes</b>			
	<b>Outcome</b> (C= complete / NC = not complete)	<b>Comments:</b> <i>Assessor comments should note if candidate has met the required standard, identifying any particular areas of strength or weakness.</i>	<b>Assessor initials &amp; date</b>
16			
17			
18			
19			
20			
21			
22			
23			

24			
25			

**OVERALL**

**Please circle the statement which matches your assessment:**

- a) ALL of the questions in this section have been completed to the required standard.
  
- g) NOT ALL of the questions in this section have been completed to the required standard

*If you selected b): Which questions does the candidate need to try again?*

**Assessor name:**

**Signature:**

**Date:**

**Assessor Guidance**

*It is very important that you complete this verification fully. Your comments will help the learner understand where they are doing well and what they need to do to improve their work. They will also show help the summative assessor to understand the learner's progress.*

***If the learner needs to redo questions, you must record your assessment of the next attempt at those questions in the verification table in Section 4.***

### 3. Specialist Laboratory Skills

This section of the workbook focuses on the specialist skills required by medical laboratory technicians.

There are **NUMBER** questions and tasks in this section of the workbook. These questions and tasks in this section will help you demonstrate that you can:

- carry out all aspects of tests on blood and other clinical samples, from collection through to reporting
- maintain laboratory equipment appropriately
- conduct research under guidance
- support and provide effective guidance for more junior members of staff

The questions and tasks in this section help you to meet the requirements of the following **National Occupational Standards (NOS)**

**N0301: Correctly collect, transport, receive, accept or reject, and store blood samples**

**N0302: Conduct analysis of body fluids/samples**

**N0303: Maintain, operate and clean laboratory equipment**

**N0305: Prepare and document medical tests and clinical results**

**N0306: Establish and monitor quality assurance program**

**N0307: Supervise and guide other laboratory personnel**

**N0308: Conduct research under guidance**

**N0409: Assist in fine needle cytology**

Each question and task is cross-referenced to the NOS(s) it relates to.

*The information in italics provides guidance for assessment by trainers, advisors and assessors only.*

This page has been left blank.

## **a) Collecting and analysing samples, and reporting results**

Medical Laboratory Technicians have important responsibilities for collecting blood samples, and for assisting medical staff in the collection of samples using fine needle cytology. They also have responsibility for analysing a range of different types of samples.

MLTs are also responsible for recording, storing and reporting on information gathered from tests. They have a duty to ensure that records are stored safely, and for ensuring that information is shared only with people who are authorised to see it.

**This section of the workbook looks at how you:**

- **prepare for the collection of blood or samples**
- **collect samples appropriately**
- **ensure high standards of patient care at each stage in the collection process**
- **make judgements on the acceptability of samples for analysis**
- **carry out appropriate analysis of samples**
- **record the findings of the analysis**
- **store and share the information you gather**

**26. There are a number of checks you must carry out before you begin to take a blood or cytology sample from a patient. These checks ensure that the correct samples are taken, the correct tests are carried out, and the patient is happy with the procedure.**

**Describe the checks you carry out before you begin the process of taking a sample from a patient. Explain:**

- **why each check is important**
- **what you should do if the check highlights a problem.**

***Assessor Guidance***

*This question allows the candidate to demonstrate their understanding of the importance of safety checks prior to the taking of samples. The candidate must be able to explain why each check is important, and what they would do if the answer to a check indicated a problem.*

- *Patient checks including:*
  - *checking the patient's identity (i.e. full name; date of birth)*
  - *checking that the laboratory form matches the patient's identity*
  - *asking if the patient has a history of fainting during the drawing of samples, or if they have any allergies or phobias related to the process*
  - *asking if the patient feels particularly anxious or nervous*
  - *ensuring that the patient fully understands the procedure and gives informed consent to it being carried out*
- *Equipment/area checks including:*
  - *ensuring that all equipment needed for the procedure is available and prepared*
  - *ensuring that the area being used for the drawing of the sample is clean and meets the standard required in SOPs*



**How does this question relate to the NOS?**

**N0301:** KA1; KA2; KB1

**N0409:** KA1; KA2; KB1; KB2; KB3; KB4

**27. Describe the procedure you follow when you take a blood sample (after you have carried out the checks you described in Question 26). Explain why each step in the procedure is important.**

**Assessor Guidance**

*This question allows the candidate to demonstrate that they understand the appropriate procedure for taking a blood sample, and the consequences of not following the procedure.*

*The steps identified should include:*

- *choosing and preparing the equipment needed, based on the patient and the test to be performed*
- *performing hand hygiene before touching the patient*
- *extending the patient's arm and inspecting it for an appropriate site*
- *locating an appropriate site for drawing the sample (the candidate should be able to describe the features of an 'appropriate site')*
- *cleaning the site prior to drawing the sample*
- *applying a tourniquet above the site*
- *inserting the needle appropriately, drawing the sample, and withdrawing the needle causing minimum discomfort to the patient*
- *providing cotton/gauze and guiding the patient on how to stem any bleeding*
- *sealing and labeling the sample in line with laboratory procedures*
- *performing hand hygiene after taking the sample*

**[How does this question relate to the NOS?](#)**

**N0301: KA1; KB1; KB2**

**28. Describe the procedure you follow when you are assisting a medical professional to take a cytology sample. You should describe the steps you follow before, during and after the taking of the sample. Explain why each step is important to the success of the sample taking.**

**Assessor Guidance**

*This question allows the candidate to demonstrate their understanding of their role in the taking of cytology samples.*

*Steps might include:*

- **Before:** *The candidate should describe any checks they are required to carry out with patients and how they prepare the required equipment. (NB: The candidate may have provided this information in response to Question 26. If so, the evidence may be used to cover this question too.)*
- **During:** *The candidate should describe their responsibilities during the intervention. These may include monitoring vital signs, and attending to the patient to ensure they are comfortable.*
- **After:** *The candidate should describe their responsibilities following the completion of the intervention. This might include assisting the patient, and/or preparing the sample for analysis.*

*At each stage, the candidate should explain why the tasks they perform are important.*

**How does this question relate to the NOS?**

**N0409:** KA1-5; KB2; KB3; KB4;

underpinning knowledge for PC1; PC2; PC3; PC4

**29. Give 3 examples of problems which might arise during the taking of blood or cytology sample from a patient. For each example, describe the action you should take to deal with the problem.**

**Assessor Guidance**

*This question allows the candidate to demonstrate their understanding of how they should respond to unforeseen problems during the taking of samples.*

*By definition, there is no finite list of potential problems. However, the examples which the candidate identifies are likely to fall into one of the following categories:*

- *adverse reaction by the patient (e.g. fainting; extreme anxiety etc)*
- *problems with the equipment (e.g. sharps breaking; punctures in bags)*
- *external problems (e.g. a fire alarm is activated while the blood collection is being carried out)*

*In all cases, the candidate needs to demonstrate that they:*

- *know how to respond within the limits of their role*
- *can keep the patient safe while summoning help if needed*
- *know who to contact for help, and how to contact them*

**How does this question relate to the NOS?**

**N0301:** PC4; KA2

**N0409:** KA1; KA5; KB4

**N9603:** KA1; KA2; KB1; KB2

**30. Demonstrate how you take blood following the procedures your have outlined in Questions 26, 27 and 28. You should ensure that you demonstrate appropriate patient care throughout the procedure.**

***Assessor Guidance***

*The candidate needs to demonstrate that they have the skills to apply the procedures they have described and explained in the preceding questions.*

*Throughout the procedures, candidates need to show that they can:*

- *Ensure that the patient is safe and comfortable*
- *Maintain appropriate hygiene and infection control (including hand hygiene)*

**How does this question relate to the NOS?**

**N0301: PC3; PC4; KA2; KB1**

**31. Give 3 examples of the types of samples which you have to analyse as part of your job. For each type of sample, list the types of tests you carry out.**

**Assessor Guidance**

*This question allows the candidate to describe the range of analysis work they carry out in their role, and to demonstrate their understanding of what they are looking for in each analysis.*

*Examples of the types of samples might include:*

- *Blood*
- *Urine*
- *Stool*
- *Tissue*

*The candidate should name the different types of test they carry out on each sample type.*

**[How does this question relate to the NOS?](#)**

32. Choose 3 of the tests you have identified in Question 31. For each test, describe the procedure you follow to:

- decide if the sample is acceptable for testing
- prepare the sample for analysis
- carry out the analysis to the appropriate standard
- record the results to the appropriate standard
- store or dispose of samples after the analysis is complete

For each test, identify the problems which can occur if you do not follow the procedure correctly.

**Assessor Guidance**

*This question allows the candidate to demonstrate that they know and understand the procedures they need to follow when carrying out three different tests on samples.*

**How does this question relate to the NOS?**

**N0301:** PC8

**N0302:** PC1; PC2; KA1; KA3; KA4; KB1; KB2;

**N0305:** KA1; KA2

(If cytology samples are chosen) **N0409:** PC4; KA1; KA5;

**33. Problems can sometimes occur during the analysis process.**

**Describe what you should do in each of the situations below:**

- a) you have found that a sample is not acceptable for analysis**
- b) the test result identifies abnormalities**
- c) the test result is not clear**
- d) you find a test result which you don't think is accurate**

**Assessor Guidance**

*This question allows the candidate to describe the procedures they need to follow if problems occur in the analysis of samples. It also allows them to describe how they work within the parameters and authority of their role.*

*Key areas which should be addressed include:*

- a)*
- b)*
- c)*
- d)*

**How does this question relate to the NOS?**

**N0301:** PC8; PC9; KA2; KB4; KB6

**N0302:** PC2; PC3; KA1; KA2; KA3; KA4; KB2

(If cytology samples are chosen) **N0409:** PC4; KA1; KA5;



**34. Demonstrate how you carry out the tests following the procedures you have described in Questions 32 and 33.**

**Assessor Guidance**

*The candidate needs to demonstrate that they have the skills to apply the procedures they have described and explained in the preceding questions.*

*Key points to look for*

**How does this question relate to the NOS?**

**N0301:** PC3; PC4; KA2; KB1

**N0302:** PC1; PC2; PC3; KA1; KA3; KA4

(If cytology samples are chosen) **N0409:** PC4; KA1; KA5;

**35. After you have carried out tests, you may need to produce reports on your findings.**

**Give 3 examples of reports you have to produce in your job. For each example, state:**

- **the information which the report should contain**
- **the procedure you follow to compile the report**
- **who has the authority to see this report**
- **how you ensure that only the authorised people have access to the information**

#### **Assessor Guidance**

*This question allows the candidate to demonstrate that they know and understand the procedures to follow to produce reports on test results.*

*The description they provide should demonstrate that they:*

- *know what different reports should contain, and how to produce them*
- *understand and can adhere to data protection guidelines*
- *understand and are able to store and share information safely and securely*

*Evidence that they understand and can follow procedures to keep information confidential is also required in Question 24. The evidence they provided in answer to that question may also be relevant to this question.*

#### **How does this question relate to the NOS?**

**N0304:** PC2; KA1; KA2; KA3; KB1; KB2

**N0305:** KA1; KA2

**FOR RPL CANDIDATES: Additional documents which provide evidence**

***of competence might include copies of:***

- *Completed reports, completed by the candidate and meeting all data protection requirements*
- *Statement from manager confirming that the candidate routinely provides reports described, and those reports meet the required standard*

***These documents can provide evidence for:***

**N0304:** PC2

**N0305:** PC1-3

## Verification 5:

The person responsible for the assessment of the workbook should complete this page.

<b>Assessor's Notes</b>			
	<b>Outcome</b> (C= complete / NC = not complete)	<b>Comments:</b> <i>Assessor comments should note if candidate has met the required standard, identifying any particular areas of strength or weakness.</i>	<b>Assessor initials &amp; date</b>
26			
27			
28			
29			
30			
31			
32			
33			

34			
35			

**OVERALL**

**Please circle the statement which matches your assessment:**

- b) ALL of the questions in this section have been completed to the required standard.
  
- h) NOT ALL of the questions in this section have been completed to the required standard

*If you selected b): Which questions does the candidate need to try again?*

**Assessor name:**

**Signature:**

**Date:**

**Assessor Guidance**

*It is very important that you complete this verification fully. Your comments will help the learner understand where they are doing well and what they need to do to improve their work. They will also show help the summative assessor to understand the learner's progress.*

***If the learner needs to redo questions, you must record your assessment of the next attempt at those questions in the verification table in Section 4***

This page has been left blank.

## **b) Contributing to high-quality laboratory services**

This section of the workbook looks at the work which the Medical Laboratory Technician does to make sure that the laboratory functions well, and that laboratory services are the best they can be.

**This section of the workbook looks at how you make sure that:**

- **laboratory equipment is always clean and maintained to appropriate standards**
- **junior staff in the laboratory receive the support and guidance they need to do their job**
- **all aspects of laboratory work meets the required quality assurance standards**
- **you contribute to research to help improve understanding of areas related to the laboratory's work**

**36. Give 3 examples of laboratory equipment you are responsible for. For each piece of equipment:**

- a. describe the procedures you follow when you:**
- **clean the equipment, using sterilization and/or decontamination techniques if appropriate**
  - **check the equipment for faults**
  - **monitor the performance of the equipment to make sure that it functions well**
- b. identify any problems that can occur if you don't follow these procedures**

**Assessor Guidance**

*This question allows the candidate to demonstrate that they know and understand the procedures to follow to maintain key pieces of laboratory equipment.*

*The description they provide should demonstrate that they:*

- *know the procedures to follow to clean and check the equipment*
- *monitor the performance of pieces of equipment*
- *understand problems that can arise if they do not follow these procedures*

*Evidence that they understand and can follow procedures to clean and maintain equipment is also required in Question 3. The evidence they provided in answer to that question may also be relevant to this question.*

**How does this question relate to the NOS?**

**N0303:** PC1; PC3; KA2; KA3; KA4; KB1; KB2; KB3; (KB4)

**N9606:** PC1; KA1; KA2; KA3; KA6

**N9610:** KA1; KA3; KB1; KB4; KB6; KB8; KB9; KB11; KB13

**N9611:** KA1; KA2



**37. Demonstrate how you clean and check the equipment you identified in Question 36, following the procedures you described.**

**Assessor Guidance**

*The candidate needs to demonstrate that they have the skills to apply the procedures they have described and explained in the preceding questions.*

**Key points to look for:**

*The candidate:*

- *carries out hand hygiene before and after the procedures*
- *wears personal protective equipment if appropriate*
- *uses cleaning equipment and techniques appropriate to the equipment they are cleaning*
- *carries out any necessary checks to ensure that cleaning has been completed to the appropriate standard*
- *checks that the equipment is ready for the next time it needs to be used*
- *records cleaning and maintenance as appropriate*
- *disposes of any waste – including any waste chemicals and cleaning tools - appropriately*

**How does this question relate to the NOS?**

**N0303:** PC1; PC3; KA2; KA3; KA4; KB1; KB2; KB3; (KB4)

**N9606:** PC2; PC4; PC5; PC9; KA1; KA2; KA3; KA6

**N9609:** If waste is dealt with: PC1-7; PC9; PC10

**N9610:** PC1; PC3; PC4; PC5; PC7; PC8; PC 10-13; PC 15; PC17 – 31;

**N0911:** PC10

**38. Draw a diagram of the structure of your team. What is each team member's role, and what are they responsible for? Identify any team members who you manage or supervise.**

***Assessor Guidance***

*This question allows the candidate to demonstrate their understanding of the team structure they operate within, and where management and accountability responsibilities lie.*

*This question does not relate directly to the performance criteria and knowledge points in a NOS. However, the information in this question will help the candidate to answer the remaining questions relating to staff supervision and the management of quality.*

**39. As a member of the laboratory team, you have a duty to make sure that the quality of the laboratory services is monitored and maintained at a high level.**

**List any responsibilities you have for monitoring or checking the services you provide. This might include monitoring or checking:**

- **the performance of pieces of laboratory equipment over time**
- **the accuracy of tests results produced by the laboratory**
- **the work of individual team members to ensure that it meets required standards.**

**For each example, describe:**

- a) the monitoring or checking tasks you carry out you**
- b) the action you take if work, or a piece of equipment, does not reach the required standards.**

#### **Assessor Guidance**

*This question allows the candidate to describe their responsibilities for the quality assurance of laboratory services. It asks them to describe the duties they have for monitoring the quality of laboratory services, and what they should do if they identify shortfalls in quality.*

*Some of the areas they might identify include:*

- **Equipment:** *recording maintenance checks; auditing results from particular pieces of equipment; auditing the use of supplies for each piece of equipment etc.*
- **Test accuracy:** *auditing results to identify any which are rejected; auditing requests for repeat tests; monitoring/sampling results as a check on accuracy etc.*
- **Individual team members:** *monitoring the work of individuals for completion, accuracy, speed of turnaround etc*

*For each example, the candidate should describe the action they take if they notice a problem or anomaly. This should include:*

- *any checks they make*
- *who they should inform*
- *how they report the incident*

**How does this question relate to the NOS?**

**N0306:** KA1-4; KA1

***FOR RPL CANDIDATES: Additional documents which provide evidence of competence might include copies of:***

- *Completed audit or monitoring records, completed by the candidate and verified by a more senior manager*
- *Records or reports identifying problems*

***These documents can provide evidence for:***

**N0306:** PC1; PC2; PC3

**40. This question looks at how you support other members of your team:**

**IF YOU MANAGE OTHER PEOPLE:**

**Describe 3 things you do to make sure that your team members are appropriately trained and supported to do their job. Explain how these actions contribute to high-quality laboratory services.**

**IF YOU DO NOT HAVE LINE MANAGEMENT RESPONSIBILITIES:**

**Describe 3 ways in which you help other or support other members of your team. Explain how these actions help the team to provide high-quality laboratory services.**

**Assessor Guidance**

*This question allows the candidate to demonstrate that they understand their role in managing and/or supporting other team members to carry out their roles.*

*This question is applicable to all candidates:*

- *Candidates who are responsible for managing others should describe how they carry out their management role*
- *Candidates **who do not manage other people** should describe how they work with and support other colleagues to ensure that the work of the laboratory meets the required standard.*

*Key areas to look for in an answer include examples which illustrate how the candidate:*

- *delegates or shares responsibility for routine laboratory tasks, including the cleaning and maintenance of equipment*
- *identifies occasions when others in the team need help, and how they respond*
- *provides guidance on tasks to others*

**How does this question relate to the NOS?**

**N0307: KA1; KA2; KA3; KB1; KB2**

**41. Many Medical Laboratory Technicians carry out research tasks under the supervision of a healthcare scientist (e.g. microbiologist; biochemist)**

**Identify at time when you have had to undertake a research task.**

**Describe:**

- **the aim of the research, and the task you had to perform**
- **what data you needed and you gathered the data you needed**
- **how you made sure that your research task met ethical standards for research**

***Assessor Guidance***

*This question allows candidates to demonstrate their experience of carrying out research under the supervision of a qualified healthcare scientist.*

*The candidates should be able to describe their practice and to identify any ethical standards they had to abide by.*

**How does this question relate to the NOS?**

**N0308: KA1; KA2; KB1**

***FOR RPL CANDIDATES: Additional documents which provide evidence to support this question include copies of:***

- *research results or reports which they have produced*
- *research reports in which they are named and their contribution is acknowledged*
- *any research protocols they follow*
- *any research protocols or approval documents which they have signed*

*These documents provide evidence for:*

**N0308: PC1; PC3; PC5**

## Verification 6:

The person responsible for the assessment of the workbook should complete this page.

<b>Assessor's Notes</b>			
	<b>Outcome</b> (C= complete / NC = not complete)	<b>Comments:</b> <i>Assessor comments should note if candidate has met the required standard, identifying any particular areas of strength or weakness.</i>	<b>Assessor initials &amp; date</b>
36			
37			
38			
39			
40			
41			

## OVERALL

Please circle the statement which matches your assessment:

- a) ALL of the questions in this section have been completed to the required standard.
- b) NOT ALL of the questions in this section have been completed to the required standard

*If you selected b): Which questions does the candidate need to try again?*

**Assessor name:**

**Signature:**

**Date:**

### **Assessor Guidance**

*It is very important that you complete this verification fully. Your comments will help the learner understand where they are doing well and what they need to do to improve their work. They will also show help the summative assessor to understand the learner's progress.*

*If the learner needs to redo questions, **you must record your assessment of the next attempt at those questions in the verification table in Section 4***



## Section 4: Completing the Workbook

The person responsible for assessing the workbook must complete this section.

### 1. Verification Table

There are 6 Verification Pages in the workbook. You must complete each page to show that the candidate has completed the requirements of the questions and tasks in the workbook.

This table summarises your assessment recorded on the Verification Pages. Please complete it fully. If the candidate has not met the requirements of any of the questions, you should record those question numbers here.

Verification Page	Question Nos.	Date assessed	Questions not complete	Signature
1	1-6			
2	7-9			
3	10-15			
4	16-25			
5	26-35			
6	36-41			

## 2. Reassessment

In this table you should record your assessment of any questions which the candidate did not complete in the first assessment.

<b>Assessor's Notes</b>			
<b>Qu. No.</b>	<b>Outcome</b> (C= complete / NC = not complete)	<b>Comments:</b> <i>Assessor comments should note if candidate has met the required standard, identifying any particular areas of strength or weakness.</i>	<b>Assessor initials &amp; date</b>

### **3. Candidate confirmation – To be signed by the candidate**

I confirm that the answers and evidence recorded in this workbook are my own work.

Name:

Signature:

Date:

### **4. Assessor confirmation – To be signed by the person responsible for assessing the contents of the workbook.**

I confirm that the assessment has been carried out in accordance with the requirements of the Healthcare Sector Skills Council and are a true assessment of the evidence provided by the candidate.

Name:

Signature:

Organisation:

Date:

## **Appendix 2: How the questions and tasks link with the NOS**

The table on the next page shows how the questions and tasks relate to the NOS.

A more detailed version of this information is available for trainers and advisors. This shows the links between the questions/tasks and the individual criteria in each NOS.

Question number

	N9602	N9603	N9604	N9605	N9606	N9607	N9608	N9609	N9610	N9611	N0301	N0302	N0303	N0304	N0305	N0306	N0307	N0308	N0409
<b>Hazards and risks</b>																			
1																			
2																			
3																			
4																			
5																			
6																			
<b>Infection control</b>																			
7																			
8																			
9																			
<b>Waste management</b>																			
10																			
11																			
12																			
13																			
14																			
15																			
<b>Being an effective worker</b>																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			
25																			
<b>Collecting and analysing samples</b>																			
26																			
27																			
28																			
29																			
30																			
31																			
32																			
33																			
34																			
35																			
<b>Contributing to high-quality laboratory services</b>																			
36																			
37																			
38																			
39																			
40																			
41																			

**Table: How workbook questions cross reference with MLTQ NOS**

**HSSC MLTQ QUALIFICATION WORKBOOK**  
**(Assessor's Version)**  
**October 2015**

**Designed and developed with the technical assistance of the  
India-EU Skills Development Project.**