



T Level Technical Qualification in Healthcare Science (603/7083/X)

Core knowledge and understanding

Paper A Elements 1–10

Paper number: Sample

Specimen 2021

morning/afternoon

Time allowed: 2 hours and 30 minutes

Student instructions

- Use black or blue ink.
- Fill in the boxes at the bottom of this page.
- Answer **all** questions.
- Read each question carefully.
- You **must** write your responses in the spaces provided. There may be more space than you need.
- You may do rough work in this answer book. Cross through any work you do not wish to be marked.

To be completed by the Examiner			niner
Question	Mark	Question	Mark
1(a)		10	
1(b)		11	
2(a)		12(a)	
2(b)		12(b)	
3(a)		12(c)	
3(b)		13	
4		14	
5(a)		15(a)	
5(b)		15(b)	
6		16	
7(a)		17	
7(b)		18	
8(a)		19	
8(b)		20	
9		21	
		TOTAL MARK	

Student information

- The marks available for each question are shown in brackets. This is to help you decide how long to spend on each question.
- The maximum mark for this paper is 122 including QWC.
- In questions 6, 13, 17 and 21, you will be assessed on your quality of written communication (QWC) and use of specialist terminology.
- You may use a calculator.

Please complete the details below clearly and in BLOCK CAPITALS.

Student name		
Provider name		
Student number	Provider number	

Do not turn over until the Invigilator tells you to do so



Section A: The roles and responsibilities within healthcare science

This section is worth 34 marks, plus 3 marks for QWC and use of specialist terminology. Answer **all** questions in the spaces provided.

1(a)	State the main method of funding for:
	 private health care organisations public healthcare organisations. [2 marks]
1(b)	Give one reason why waiting times for routine operations in private hospitals are usually shorter than in NHS hospitals. [1 mark]

2(a)	A Manager tells a Technician in a hospital laboratory to perform a task which requires the skills of a fully trained Clinical Scientist.
	The Technician tells their manager that they do not feel comfortable undertaking the task as they have not had the required training.
	The manager states that they must complete the task, but the Technician refuses.
	The technician raises a grievance procedure against the manager.
	In this scenario, explain why the Technician is justified in raising a grievance procedure against the Manager. [2 marks]
2(b)	Evaluate the potential impact for the Technician and the organisation if this grievance was upheld.
	Your response should demonstrate reasoned judgements and/or conclusions. [3 marks]

3(a)	An elderly patient with progressive and severe mental impairment has a chronically ulcerated foot, causing considerable pain. The ulcers are not treatable and are spreading.		
	Their consultant is considering amputation of the foot.		
	Define the terms 'beneficence' and 'nonmaleficence'.		
	Explain how they can be applied here. [4 marks]		
3(b)	Identify the appropriate type of power of attorney that may be needed in this situation. [1 mark]		

4	A Healthcare Science Assistant spends one day per week working in five different departments.
	Give four examples of how this continuing professional development (CPD) could benefit them in their career. [4 marks]

5

Examiner use only

6

An elderly woman who lives alone is admitted onto a hospital ward after being brough to the hospital in an ambulance. She is clearly unwell, in an agitated state, and her condition appears to be worsening.
The ambulance staff:
 brief the ward staff on the reasons for the 999 call and the observations and initial treatment prior to arriving at A&E inform the ward staff that English appears to be her second language at that her vocabulary appears to be limited inform the ward staff that she has two hearing aids but is refusing to we them inform the ward staff that she appears to be confused.
The ward staff commence treatment based on the information they have received fror the ambulance staff, from their own observations and on her medical records.
It is important to gain informed consent before commencing treatment with a patient.
Discuss the issue of gaining informed consent by the ward staff in this scenario.
Your response should include references to gaining informed consent and make reasoned judgements/conclusions. [9 marks, plus 3 marks for QW]

Please turn over for the next section.

Section B: Personal and patient safety

This section is worth 34 marks, plus 3 marks for QWC and use of specialist terminology. Answer **all** questions in the spaces provided.

7(a)	State one purpose of the Health and Safety at Work etc Act 1974.	1 mark]
7(b)	Outline two of the requirements an employee is expected to follow within the Heat and Safety at Work etc Act 1974. [2	alth marks]
8(a)	A patient in a radiography department trips and falls over a loose wire located in walkway.	a busy
	They are examined by a doctor and no injury is found.	
	Explain why this should be reported using Reporting of Injuries, Diseases and Dangerous Occurrences Regulation/RIDDOR 2013.	marks]

- **8(b)** A review of the incident suggested the following possible strategies to prevent the incident happening again.
 - Displaying warning signs regarding the hazard.
 - Using a different route for the patients.
 - Taping over the wire in its present position.
 - Channelling the wires under the floor.

	Assess the benefits and limitations of these strategies.	[4 marks]
_		
-		
-		
-		
-		
-		
-		
-		
-		

	An Optical Technician's job role involves spending three hours each morning inputting prescription details into a computer system.
Т	The computer screen is small, and its brightness is turned up as it is in direct sunlight.
Т	he Technician complains of eyestrain and headaches.
	dentify the regulation applicable to these circumstances and explain three ways an employer could meet its requirements.
C	[4 marks]
	A member of staff gets a minor cut whilst using a blunt instrument in the workplace.
	They cannot locate a first aider and the first aid kit does not contain any suitable dressings.
	Identify which regulation applies to this scenario and explain why in this scenario the employer is in breach of this regulation.

Examiner use only

11	Whilst unpacking a delivery of over the counter medication you notice that to information on the outside of the pack on the new stock is different to that c existing stock.	
	Identify which regulatory body should be alerted and explain why.	[2 marks]
12(a)	A Domestic Assistant cleans a number of day clinics each evening. As they cleaning a wound clinic, they notice a small amount of fluid on the floor.	' are
	The clinic treats patients with chronic wounds which are often infected.	
	Explain why cleaning up the fluid poses a risk to the Domestic Assistant.	
		[2 marks]

- **12(b)** The Domestic Assistant cleans up the fluid in the following way:
 - they wear disposable gloves
 - they wear a non-surgical mask
 - they use an absorbent wipe to clean up the fluid
 - they then clean the area with an antiseptic wipe
 - they place both wipes into waste for incineration bin.

Evaluate the cleaning method they used in this scenario.

Your response should include reasoned judgements/conclusions.	[4 marks]

2(c)	Explain why the wipes used to clean up the spill must be disposed of by incineration [2 mag)		

Please turn over for the next question.

- The following items are examples of multiple-use products:
 - scalpels
 - blood pressure cuffs
 - stethoscopes
 - ear thermometers.

The **three** main methods of decontamination are:

- cleaning
- disinfection
- sterilisation.

To prevent MRSA infection, a Hospital Manager makes the decision that all multiple-use products should be sterilised.

Evaluate this decision in relation to these products.

Your response should include a demonstration of your understanding of the **three** main methods of decontamination and reasoned judgements/conclusions.

[9 marks, plus 3 marks for QWC]

Section C: Data handling and confidentiality

This section is worth 21 marks, plus 3 marks for QWC and use of specialist terminology. Answer **all** questions in the spaces provided.

4	A hospital administration department is responsible for handling patients' personal data and is looking to improve ways of working.
	Explain four advantages of maintaining secure data management within the department.
	[4 marks]

Examiner use only

16	A data breach has occurred where patient information has been wrongly shared from an online database.
	The organisation that runs the database states that this must have been maliciously shared by a staff member as all IT based systems are password protected.
	Evaluate this statement and provide reasoned justifications for whether this could be either true or false.
	[4 marks]

The senior management of a private hospital trust were debating the role of social media in the future of the trust.

The Chief Executive states that, "the trust will gain more from the positive effects of social media than they will lose from the negative effects."

Evaluate the Chief Executive's statement.

Your response should demonstrate:

- consideration of social media influences
- reasoned judgments and/or conclusions about the statement.

[9 marks, plus 3 marks for QWC]

·	

Please turn over for the next section.

Section D: Regulatory and professional frameworks

This section is worth 21 marks, plus 3 marks for QWC and use of specialist terminology. Answer all questions in the spaces provided.

. A new hospital cytopathology laboratory is being developed. The laboratory will examine samples from patients with potentially infectious diseases.
The Director of the laboratory states:
'Standard Operating Procedures must be developed and followed for all procedures used in the laboratories activities.'
Define the term 'Standard Operating Procedure' (SOP) and evaluate the importance of SOPs in this setting.
Your response should demonstrate reasoned judgements and/or conclusions. [4 marks
Identify two reasons for effective stock management.
For each reason explain the impact of poor stock management in a healthcare science lab.
[4 marks

You are m	easuring out small ar	mounts of a cat:	alvst. The electronic	s scales are
undermea	suring and you canno	ot recalibrate the	em.	, scales are
Describe a	nd justify two proced	dures to follow i	n this scenario.	I
A pharmaconditions	ceutical company pro	duces a variety	of drugs for the trea	atment of a v
Discuss the in their pro	e importance of the oduction.	company followi	ng Good Manufactu	ıring Practice
Your resp	onse should include r	easoned judger	ments/conclusions.	
			[9 marks, pl	us 3 marks

-		
-		
-		

This is the end of Paper A.

This page is intentionally left blank.

Document information

Copyright in this document belongs to, and is used under licence from, the Institute for Apprenticeships and Technical Education, © 2021 - 2024.

'T-LEVELS' is a registered trade mark of the Department for Education.

T Level' is a registered trade mark of the Institute for Apprenticeships and Technical Education.

'Institute for Apprenticeships & Technical Education' and logo are registered trade marks of the Institute for Apprenticeships and Technical Education.

The T Level Technical Qualification is a qualification approved and managed by the Institute for Apprenticeships and Technical Education.

NCFE is authorised by the Institute for Apprenticeships and Technical Education to develop and deliver this Technical Qualification-

'CACHE' is a registered trade mark of NCFE.

Owner: Head of Assessment Solutions

Change History Record

Version	Description of change	Approval	Date of Issue
v1.0	Post approval, updated for publication.		January 2021
v1.1	NCFE rebrand.		September 2021
v1.2	Content changes, ODSR_HS_090	June 2022	June 2022
v2.0	Annual review 2024 – change of marks in question 8(a) on page 9.	May 2024	08 May 2024