

# Chief Examiner's Report

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

**Autumn 2023 – core A and B**

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Assessment dates: **core A – 6 December 2023**  
**core B – 13 December 2023**

Paper number core A: **P002396**

Paper number core B: **P002397**

This report contains information in relation to the externally assessed core sub-component provided by the chief examiner, with an emphasis on the standard of student work within this assessment.

The report is written for providers, with the aim of highlighting how students have performed generally, as well as any areas where further development or guidance which may be required to support preparation for future opportunities.

#### Key points:

- grade boundaries
- standard of student work
- responses to the external assessment questions
- administering the external assessment

It is important to note that students should not sit the core exam until they have received the relevant teaching of the qualification in relation to this sub-component, and that both papers must be taken in any given series that a student sits the core exam.

#### Grade boundaries

Raw mark grade boundaries for the series are:

	Overall	Notional Boundaries	
		Paper A P002396	Paper B P002397
Max	234	122	112
A*	189	96	92
A	166	83	83
B	143	71	71
C	120	59	59
D	97	48	48
E	74	37	37

Grade boundaries are the lowest mark with which a grade is achieved.

Students receive a grade for the core exam sub-component as whole, and although there are no official grades for the individual assessments in the core exam, it can be useful for students and teachers to see how the core exam grade was achieved. The grade boundaries given for each assessment are known as 'notional grade boundaries', as they are for illustrative purposes only. For further information on notional grade boundaries, please see our guide *T Levels: Notional Boundaries for the Core Exam Assessments* available on the qualification page of the NCFE website.

For further detail on how raw marks are scaled, and the aggregation of the core component, please see refer to the Qualification Specification.

### Standard of student work

I would have anticipated a better outcome of achievement by preparation for this subject through improving study skills, revision skills and potentially a period of sustained support of Exam techniques, to raise the overall standards and approach to core knowledge and understanding across sections A, B, C and D.

This approach has aligned with the student's response to questions. Improved performance could be gained across the range of questions and the variety of marks available. This was evident through a lack of understanding of the questions or in the detail of the responses provided. It was evident that the questions had not been clearly read and/or analysed before addressing the detail. Students continue to leave the question blank or put a line through it. They should be encouraged to leave the question(s), at this stage and then return at the end of the paper, to consider the question(s) again.

## Responses to the external assessment questions

### Core Paper A

#### Section A: the roles and responsibilities within healthcare sciences

The questions informed a wide range of marks, indicating that some students found these questions not easy to answer compared to others. A lack of ability to pick up single/double marks was evident for the questions below:

Q1: The students did not secure all marks in lacking an understanding of the purposes of pharmacy services' which will require improved revision techniques.

Q2: The students did not secure all the marks in lacking an understanding of the key features of making every contact count (MECC), which require improved revision techniques.

Q4: The students did not secure all marks in lacking justification of the GP action on a patient with mental health difficulties. The key points had not been clearly demonstrated, which required improving analytical skills.

Q6: The students did not secure all marks. The key points had not been clearly demonstrated which required an improved written interpretation of the response to 'urgent referral'.

Q9: Most students included relevant internal policies such as grievance, recognising fair treatment, considers employment legalisation and the Equality Act 2020. Most students applied the principles of fair and consistent treatment and training. Students would have benefited from further applying the use of appeals, disciplinary actions such as HR, Trade Unions, and Advisory, Conciliation and Arbitration Service (Acas). A small number of students provided reasoned judgement and conclusions to the Equality Act. Further work is required in discussion for the areas ensuring equality and eliminating discrimination.

#### Section B: personal and patient safety

The questions informed a wide range of marks, indicating that some students found these questions not easy to answer compared to others. A lack of ability to pick up single/double marks was evident for the questions below:

Q12: The students did not secure all marks, thus requiring an improved understanding of the Health and Safety (Display Screen Equipment) which will require 'practical scenarios and revision techniques.

Q13: The students did not secure all the marks in lacking an understanding of the key principles of managing Infection Control – Dress Code which require improved revision techniques.

Q14: The students did not secure all the marks due to a lack of understanding of the recycling. The key points had not been clearly demonstrated, which require improved revision techniques.

Q16 (a): The students did not secure all marks. The key points had not been clearly demonstrated based on the purpose of the Health and Care Act 2022 which required improved revision techniques.

The extended response question has provided the students with the opportunity to apply knowledge, application, and discussion for section B.

Q17: Most students identified the Health and Safety at Work etc. Act 1974. Showing knowledge based on employer/employees training within the workplace. Reporting hazards to the employers, storage of material, PPE and others. Further work could include the various breaches of the act. Students required further development in

the application of knowledge and understanding which included disciplinary action, safety representations, legalisation, compliance and others such as risk assessments. All students needed to develop reasoned judgement and conclusions concerning workplaces such as National Examination Board in Occupational Safety and Health (NEBOSH), anonymous reporting, and legislation.

### **Section C: data handling and confidentiality**

The questions informed a wide range of marks, in which the students performed remarkably well in section C, with only one subject area requiring further attention.

Q19 (a)/(b): The students did not secure consistency of marks in their response to the 'Confidentiality/Data Breach. Further work is required in this important subject and improved revision skills.

The extended response question has provided the students with the opportunity to apply knowledge, application, and discussion for section C.

Q22: The question of knowledge of various qualitative data collection techniques were demonstrated and addressed with good detail, showing advantages and disadvantages. Across data collecting scenarios, the students' application levels relating to data collection is good.

Further consideration to inaccuracies of data and analysis process would have enhanced this section and students marks. A small number of students worked to a good level of discussion providing reasoned judgements and conclusions such as evaluation and analysis of qualitative statistical techniques.

### **Section D: regulatory and professional framework**

The questions informed a wide range of marks, in which the students performed remarkably well in section D, with only one subject area requiring further attention.

Q25: The students did not secure a consistent range of marks in their response to this question based on 'vaccine storage'. The students would benefit from an improved understanding of 'quality of vaccines', and improved revision skills.

The extended response question has provided the students with the opportunity to apply knowledge, application, and discussion for section D.

Q28: The student demonstrated a good level of response to 'good manufacturer practice only'. A small number of students were unable to indicate recall systems, processes and record keeping while others applied principles such as defective wrist supports and patient engagement. Students were unable to assess patient conditions, good products, documentation practices, processes and recall systems.

## **Core Paper B**

### **Section A: Biology**

The questions informed a wide range of marks, indicating that some students found these questions not easy to answer compared to others. A lack of ability to pick up single/double marks was evident for the questions below.

Q1 (b and c): The students did not secure all marks due to a basic lack of understanding of the naming of structures and function. It is important that a full answer is incorporated, and this is clearly addressed by improving revision techniques.

Q2 (b): The students did not secure all the marks due to a basic lack of understanding of respiratory structures/components. This requires improved revision techniques such as practice labelling or naming components.

Q3 (a and b): The students did not secure all the marks due to a basic lack of understanding of the 'digestive enzyme for breaking down starch' which required improved revision to differentiate the different types of enzymes and its purpose.

Q5 (a and b): The students did not secure all marks due to a basic lack of understanding. The key points had not been clearly demonstrated based on ECG traces from the same person at different times such as physical activity and how this is measured such as a time scale.

This will require improved revision techniques on the Anatomy and Physiology of the Heart.

Q6: The students did not secure all the marks due to a basic lack of understanding of the 'Endocrine function of the ovaries in reproduction' which required improved revision skills but also the need to develop evaluation skills, judgements and drawing on conclusions from presented statements. The use of scenario-based sets/discussion would enhance this approach.

The extended response question has provided the students with the opportunity to apply knowledge, application, and discussion for section A.

Q7: A good number of students showed knowledge in the identification of when infection occurred and the barriers. More development is required in relation to involuntary inflammatory responses, phagocytosis and T and B Cell responses. The principles of application need to be developed such as mechanism in linking prevention and responding to infection. Students need to develop further discussion, inclusive of the detail of the mechanism in linking prevention and responding to infection.

### **Section B: Physics**

The questions informed a wide range of marks, indicating that some students found these questions not easy to answer compared to others. A lack of ability to pick up single/double marks was evident for the questions below.

Q8 (a and b): The students did not secure all the marks due to a basic lack of understanding of the key principles of nucleus/beta particle, and basic range of a particle which require improved revision techniques.

Q9: The students did not secure all the marks due to a basic lack of understanding of the key principles of calculations relating to  $I = V/R$

The key points had not been clearly demonstrated, which require improved revision techniques and practice in values and equations.

Q11 (a): The students did not secure all the marks due to a basic lack of understanding of the use of 'Electromagnets'. Further practise in interpretation skills is required thus providing the ability to identify trends and description.

The extended response question has provided the students with the opportunity to apply knowledge, application, and discussion for section B

Q13: The knowledge of most students provided an overview of 'gamma radiation'.

However, in the application process, only a small number of students reviewed the table, recognising the link between gamma radiation and food production. Control tests, observation, chemical spray. Further development was required to apply data of this nature by other students. The evaluative approach was evident in a small number of students defined by one treatment using the preservation spray per day and the validation of data. The need to draw on a conclusion would support the evaluative process.

### **Section C: Chemistry**

The questions informed a wide range of marks, in which the students performed remarkably well in section C, successfully achieving a good range of marks.

The extended response question has provided the students with the opportunity to apply knowledge, application, and discussion for section B

Q18: The knowledge provided by the students was clear in recognising separation techniques incorporating chromatography, HPLC and column chromatography.

Students incorporated strength in application such as mass spectrometry and chromatography. A small number of students further evaluated decision making on the use of mass spectrometry, but the conclusion was not addressed.

### **Section D: Chemistry, Physics and Biology**

This extended Q19 (12 marks and 3 marks for QWC) the students perform remarkably well, based on reasoned judgements and conclusions.

## **Administering the External Assessment**

The external assessment is invigilated and must be conducted in line with our [Regulations for the Conduct of External Assessment](#).

Students must be given the resources to complete the assessment, and these are highlighted within the [Qualification Specific Instructions Document](#) (QSID).