



**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**FACULTY OF SCIENCE AND TECHNOLOGY EDUCATION**  
**DEPARTMENT OF ART DESIGN AND TECHNOLOGY EDUCATION**  
**MASTER OF TECHNOLOGY EDUCATION IN APPLIED ART AND DESIGN**

**COURSE: PRODUCT DESIGN      COURSE CODE: PDT 6322**

**Main Examination**  
**November 2024**

This examination paper consists of 2 pages

**Time Allowed           :           3 hours**  
**Total Mark             :           100**  
**Special Requirements:       A4 bond paper**  
**Examiner's Name       :           Mr Z Sibanda**

**INSTRUCTIONS**

- 1) Answer **Question One** and any **Three** questions.
- 2) If you wish to use illustrations to aid your answer, use a sheet of A4 bond paper provided for this purpose.
- 3) Begin each question on a fresh page and put all parts of the same question together.

**MARK ALLOCATION**

<b>QUESTION</b>	<b>MARKS</b>
1.	25
2.	25
3.	25
4.	25
5.	25
6.	25
<b>TOTAL</b>	<b>100</b>

**QUESTION 1**

Assess the product life cycle's (PLC) influence on product development design.

**(25 marks)**

**QUESTION 2**

Examine the implications of Just In Time (JIT) and Just In Case (JIC) on design management and manufacturing.

**(25 marks)**

**QUESTION 3**

Evaluate green design influences on material selection, supply chain management and product development.

**(25 marks)**

**QUESTION 4**

Apply Keller's Brand Equity Model to examine the key principles of brand value.

**(25 marks)**

**QUESTION 5**

Examine the effects of **five** analytical skills on design quality.

**(25 marks)**

**QUESTION 6**

Use the Human-Centred Design (HCD) approach to analyse product design decisions.

**(25 marks)**