



NATIONAL SENIOR CERTIFICATE EXAMINATION  
NOVEMBER 2011

**DESIGN: PAPER I**

**MARKING GUIDELINES**

Time: 3 hours

150 marks

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These marking guidelines were used as the basis for the official IEB marking session. They were prepared for use by examiners and sub-examiners, all of whom were required to attend a rigorous standardisation meeting to ensure that the guidelines were consistently and fairly interpreted and applied in the marking of candidates' scripts.

At standardisation meetings, decisions are taken regarding the allocation of marks in the interests of fairness to all candidates in the context of an entirely summative assessment.

The IEB will not enter into any discussions or correspondence about any marking guidelines. It is acknowledged that there may be different views about some matters of emphasis or detail in the guidelines, and different interpretations of the application thereof. Hence, the specific mark allocations have been omitted.

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**INSTRUCTIONS TO MARKERS**

- Please mark clearly in RED pen.
- Place a tick above each substantiated fact.
- Indicate total marks PER QUESTION at the end of the question as a circled total.
- Where a script has been marked, but the information is either irrelevant/does not answer the question OR is over and above information required, please indicate that marking has occurred in the margin as a squiggled line.
- Please record relevant comments per centre as to specific problems/credits encountered PER CENTRE, and not per candidate.

**SECTION A – DESIGN LITERACY****50 marks****QUESTION 1.1****QUESTION TYPE/COGNITIVE SKILLS: Recall/ Comprehension (5 marks) Application (5 marks)**

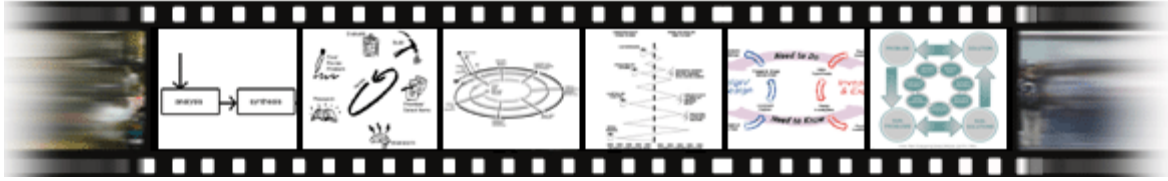
<b>LO 1 AS 1</b>	<b>Demonstrate a sound understanding of the interrelated nature of the planning, action and reflection cycle which informs the design process.</b>
<b>LO 2 AS 1.1</b>	<b>Apply and provide evidence of the design process.</b>
<b>LO 2 AS 1.4</b>	<b>Demonstrate an awareness of the various materials and production processes relevant to the chosen discipline/s.</b>
<b>LO 2 AS 1.7</b>	<b>Present and effectively communicate a design solution.</b>
<b>LO 2 AS 1.8</b>	<b>Interpret, use and explain the choice of design elements, principles and materials in the final product, service or environment.</b>
<b>LO 3 AS 1.2</b>	<b>Understand design theory and use design terminology correctly.</b>
<b>LEVEL:</b>	<b>Lower (5) Middle (5)</b>

**This answer can take many forms: written, schematic or diagrammatic. Use the underlying information as a guideline.**

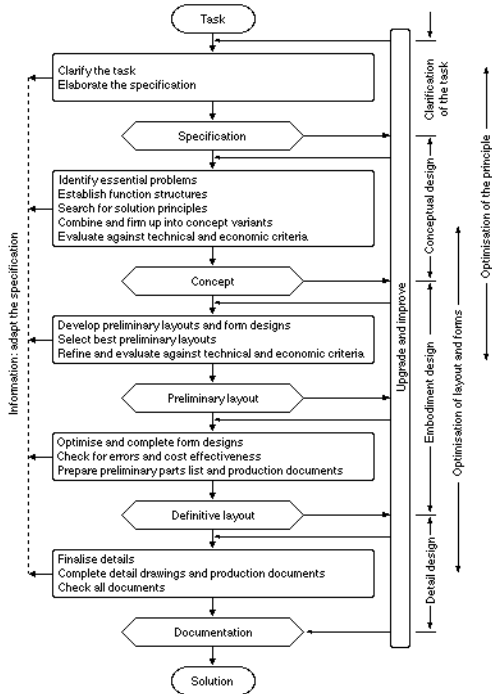
**Clear description of design process of ONE model only. One mark per substantiated fact.**

Models of the Design Process

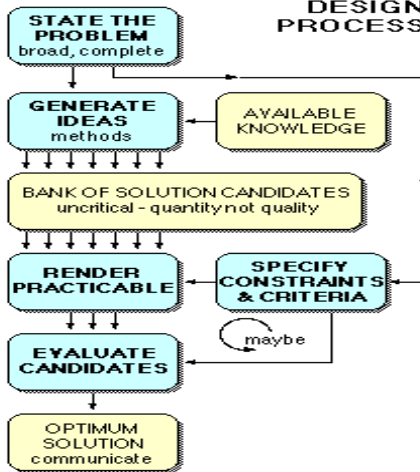
- Linear Design Models
- Cyclic Design Model
- Spiralling Design Cycle
- Dialectical Design Model
- Conversation-with-Materials Model
- Learning By Design™ Cycle
- Symmetric Design Cycle
- SEED model
- Pahl-Beitz model



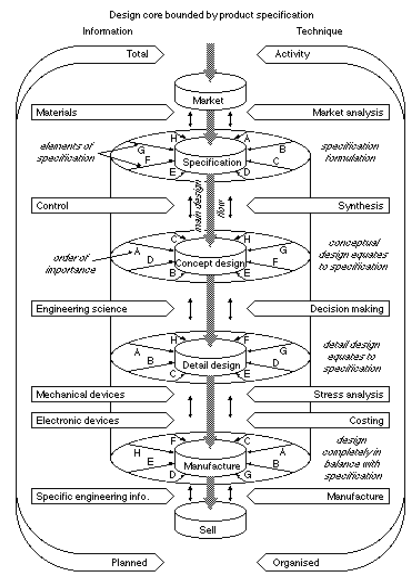
**Pahl & Beitz's model of the design process**



**RUDIMENTARY DESIGN PROCESS**



**Sharing Experience in Engineering Design (SEED) model of the design process**



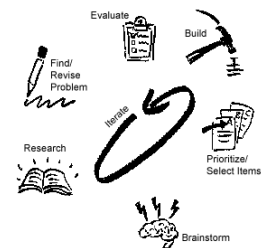
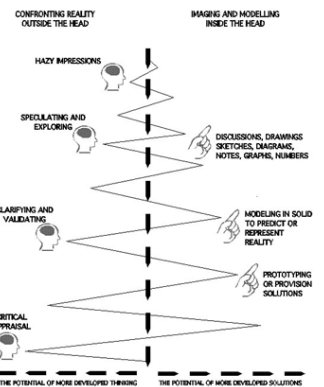
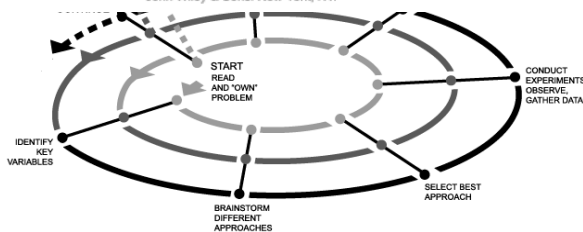
Bloom, B. (1950). A Taxonomy of Educational Objectives: Handbook 1, The Cognitive Domain. New York: David McKay. ISBN: 0582280109.



Frye, Ellen. (1997). Engineering Problem Solving. Hanover, NY: Dartmouth Project for Teaching Engineering Problem Solving.



Cross, Nigel. Engineering Design Methods, 2nd Ed. (1994). John Wiley & Sons: New York, NY.



**QUESTION 1.2****QUESTION TYPE/COGNITIVE SKILLS: Application (4 marks)**

<b>LO 2 AS 1.4</b>	<b>Demonstrate an awareness of the various materials and production processes relevant to the chosen discipline/s.</b>
<b>LO2 AS 1.8</b>	<b>Interpret, use and explain the choice of design elements, principles and materials in the final product, service or environment.</b>
<b>LO3 AS 1.2</b>	<b>Understand design theory and use design terminology correctly.</b>
<b>LEVEL:</b>	<b>Middle</b>

**1 mark per correct fact related to materials and related techniques. Choose ONE material only.**

- 1.2.1 Paper  
Fragile, easily damaged by water, different types of paper, vast selection, can take various surface treatments, affordable. (4)
- 1.2.2 Card  
Strong, harder to cut, need sharp cutting knife, must score to bend, versatile, vast selection, can take various surface treatments, affordable. (4)
- 1.2.3 Perspex  
Difficult to cut, brittle, cracks, need a jigsaw cutter, laser-cutting, fab-lab is great, but need template/pattern on rhino CAD programme, longevity. (4)
- 1.2.4 Glass  
Need to cut with glass-cutter, diamond cutter, must use oxy-acetylene torch to heat, careful use of protective clothing and equipment, breaks easily, dangerous in use, expensive. (4)
- 1.2.5 Cotton  
Need sewing machine/needles, can be hand-sewn, scissors, cost of textiles, need for specialised cutting, joining and finishing skills, can dye easily, absorbent. (4)
- 1.2.6 Aluminium  
Need to cut with tin snips/metal cutter. Secure sheet beforehand, bends easily, but also leaves marks, expensive. (4)
- 1.2.7 Wood  
Must use specialised equipment and tools; need power supply powertools and safety; cost, need for specialised cutting, joining and finishing skills; rigid material, good longevity if treated with finishing techniques, strong aesthetic appeal; endangered woods ... (4)
- 1.2.8 Clay  
Must fire in a kiln for longevity, keep moist during modelling, careful during firing, knowledge of glazes and technical issues of firing; safety. (4)
- 1.2.9 Satin  
Need hand sew/sewing machine/needles, cost of textiles, difficult to sew, slipping, must edge. (4)
- 1.2.10 Composites  
Plastic ceramic clay, EPU, assorted. Advantages are specialised properties, disadvantages usually cost-related. (4)

**QUESTION 2.1**

**QUESTION TYPE/COGNITIVE SKILLS: Recall/Comprehension (5 marks)**

- LO 3 AS 1.3**      **Discuss, explain and demonstrate the context and purpose of the products, images, signs and symbols used in design to convey overt and hidden messages that reinforce or challenge stereotypes, biases and prejudices, past and present.**
  - LO 3 AS 1.5**      **Analyse, interpret and critically reflect on examples and relate them to their cultural, historical and contemporary contexts.**
  - LO 3 AS 2.1**      **Demonstrate an understanding of the ways in which design can be used to reinforce or challenge social, cultural, environmental and ethical issues.**
- LEVEL:            Lower**

1.      A. Blind    B. Sign Language    C. Paraplegic    D. Deaf    E. Cognitive disability      (5)

**QUESTION 2.2**

**QUESTION TYPE/COGNITIVE SKILLS: Application (2 marks)**

- LO 3 AS 1.3**      **Discuss, explain and demonstrate the context and purpose of the products, images, signs and symbols used in design to convey overt and hidden messages that reinforce or challenge stereotypes, biases and prejudices, past and present.**
- LEVEL:            Middle**

- 2.2      Signs – instruction/statement to public; pictograms that are globally recognised, indicating a set of instructions, directions, purpose/use/non-verbal/gives instruction.      (2)

**QUESTION 2.3**

**QUESTION TYPE/COGNITIVE SKILLS: Analysis (4 marks)**

- LO 3 AS 1.1**      **Make value judgments informed by a clear understanding of design.**
  - LO 3 AS 1.3**      **Discuss, explain and demonstrate the context and purpose of the products, images, signs and symbols used in design to convey overt and hidden messages that reinforce or challenge stereotypes, biases and prejudices, past and present.**
  - LO 3 AS 1.5**      **Analyse, interpret and critically reflect on examples and relate them to their cultural, historical and contemporary contexts.**
- LEVEL:            Higher**

Reflects the rise of a global nation, strong group identity, black power, the presence on T-shirts indicates a more liberal approach, young target market, fashionable retro styling, sense of approval and wearing of T-shirt as a slogan, rise of Black Power, negative perceptions of 'black' are no longer applicable, strength of the negative stereotype. (3)  
**[10]**

**QUESTION 3**

<b>QUESTION TYPE/COGNITIVE SKILLS: Application (5 marks)/Analysis (5 marks)/Synthesis (7 marks)</b>	
<b>LO 2 AS 1.8</b>	<b>Interpret, use and explain the choice of design elements, principles and materials in the final product, service or environment</b>
<b>LO 3 AS 1.2</b>	<b>Understand design theory and use design terminology correctly</b>
<b>LO 3 AS 1.5</b>	<b>Analyse, interpret and critically reflect on examples and relate them to their cultural, historical and contemporary contexts</b>
<b>LEVEL:</b>	<b>Lower (5 marks) Middle (5 marks)/ Higher (7 marks)</b>

This answer is not a straightforward analysis question, but should use a **comparative** methodology to analyse the three products. These are the higher order skills of comparison, classification, contrasting. If the answer uses separate analyses, award a **maximum** of 10 marks only. The use of design vocabulary is important in the answers to this question and a suitable level of design-speak should be evidenced in the answer. However, it is important that allowance be made for some variation in the interpretation of the image. One mark per substantiated fact, with an extra 2 marks for stylistic treatment.

Use the following points as a guideline:

	A Package for Tribeca coffee The President	B Bokkie Rocking Horse Joom	C Out in Africa SA Gay and Lesbian Film Festival poster 2006
<b>Line</b>	Limited use of line for typo only, rest is a colour-fill	Geometric white line runs along outside of form and down the spring	Outline, black, use of black drop shadow on red typo
<b>Balance</b>	Asymmetrical balance of buck on top of a horizontal base, movement to top left	Actual balance in spring, lower cross balanced by top structure	Asymmetrical balance, movement to lower right
<b>Use of colour in the product as a whole</b>	Complementary contrast, blue and orange – 2 colour print job (black and orange on base colour blue) reversed out typo process colours CMYB spot colours	Neutrals, wood, with black and white enamel, spray painted or powder-coated	Analogous hues of yellow and red with focal complementary green of eye
<b>Stylistic treatment of the springbok motif itself. (5)</b>	Stylised, elongated, sleek, stretched (star) silhouette of bok art deco styling	Simplified flat shapes of laminated wood arranged perpendicularly creates a geometric 3-dimensional springbok, implied motion through horizontal legs	Simplified, stylised, cartoon-style rendering of head only, Disney-style animation technique
<b>Functionality of the product as a whole.</b>	Vacuum packaging for coffee – sheen shows plastic laminated paper, waterproof, strength for vacuum packing, simple centralised motif for on-shelf recognition	Child's toy – Flat back creates seat to ride on, horns to hold onto, large metal spring (flexibility) for rocking horse, cross-supported base painted pine with enamel for cleaning, durable	Strong tonal contrast draws attention to poster

[17]

**QUESTION 4****QUESTION TYPE/COGNITIVE SKILLS: Comprehension (9 marks)****LO 3 AS 1.2 Understand design theory and use design terminology correctly.****LEVEL: Lower (9 marks)****Answer THREE only.**

- 4.1 **Skeleton steel frame**  
Steel framework used in architectural construction. (3)
- 4.2 **Eclecticism**  
Borrowing (1) and assimilating (1) from many different sources (1), historically and contemporarily (1). (3)
- 4.3 **Cantilever**  
An object/beam which projects horizontally into space, supported at only one end. The beam carries the load to the support where it is resisted by moment and shear stress. A radically overhanging form that is counter-balanced. Cantilever construction allows for overhanging structures without external bracing. Cantilevers can also be constructed with trusses or slabs. (3)
- 4.4 **Harmony**  
Harmony in design is the visually satisfying effect (1) of combining similar, related elements, (1) e.g. adjacent colours on the colour wheel, similar shapes, etc. (1) Harmony can affect the emotional response (1) to the work. Harmony is a way of combining elements of art to accent (1) their similarities and bind (1) the picture parts into a whole. Harmony is subtle. (3)
- 4.5 **Universal design**  
Universal design, also known as inclusive design and design for all, is an approach to design in general and an element of business strategy that seeks to ensure that mainstream products, services and environments are accessible to the largest number of people. In recent years there has been a shift in attitude, away from treating disabled and older people as special cases requiring special design solutions, and towards integrating them in the mainstream of everyday life through a more inclusive approach to the design of buildings, public spaces and, more recently, products and services. This is important for social equality but is also a significant opportunity for business growth through new products and services. Universal design is related to user-centered design, human-centred design, ergonomics, usability studies, design for disability, rehabilitation design, gerontechnology, transgenerational design. (3)
- 4.6 **Standardisation**  
Standardisation is the process of developing and agreeing upon standard, regularised (1), uniform (1) specifications, units, criteria, methods, processes or practices (1). (3)
- 4.7 **Flatpak design**  
Flatpak alludes to DIY furniture and other products, that, in the store, come in a flat box, but are easily assembled at home. Usually consists of flat sheet materials. (3)

**4.8 Ergonomics**

Ergonomics, also known as human factors engineering, deals with the interface of human and machine, counteracting repetitive strain injuries, creating an optimal working environment, deals with comfort and efficiency. It is a multidisciplinary field devoted to optimising human performance and reducing human error. It incorporates the methods and principles of the behavioural and social sciences, engineering, and physiology. It may be described as the applied science which studies people working together in concert with machines. Human factors involve variables that influence individual performance, as well as team or crew performance.

(3)

**4.9 Ideogram**

An **ideogram** or **ideograph** (from Greek *ἰδέα* idea 'idea' + *γράφω* grafo 'to write') is a graphic symbol that represents an idea or concept. Some ideograms are comprehensible only by familiarity with prior convention; others convey their meaning through pictorial resemblance to a physical object, and thus may also be referred to as **pictograms**. Examples of ideograms include wayfinding signs, such as in airports and other environments where many people may not be familiar with the language of the place they are in, as well as Arabic numerals and formal languages

(3)

**4.10 Infographic**

Information graphics or infographics are graphic visual representations of information, data or knowledge. These graphics present complex information quickly and clearly, such as in signs, maps, journalism, technical writing and education.

(3)

**4.11 Modular design**

Modular design is design that is constructed on a modular basis, i.e. one unit joined onto another and another, etc. allows for contemporary social structure, movable ...

(3)

**[9]**

<b>50 marks</b>
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**SECTION B DESIGN IN CONTEXT – HISTORICAL**

**50 marks**

**Answer TWO QUESTIONS from this section in essay format.** (Suggested length of essays – two and a half to three pages.)

Make sure that you address the question directly and structure your essay as follows:

- an introduction, in which you discuss the context of the question
- a main body where you refer to relevant styles, designers and their works that are pertinent to your answer
- a conclusion

The underlying rubric will be used to mark your essays.

Context	Appropriate contextual relevance to the answer	5
Structure	Logical flow of introduction, body, conclusion	3
Content	Depth of factual discussion and reference to designers and works that are pertinent to the answer	7
Visual analysis	Detailed discussion of strategic works	7
Terminology	Relevant use and level of 'design-speak'	3
<b>Total marks: 25</b>		

**You may not repeat the same information in different essays.**

**A GENERAL NOTE ON ESSAYS:**

This section of the paper examines the learner's understanding of design history, and NOT history. This distinction must be made clear. Answers to essay questions should contain a discussion of actual designs produced by specific designers, and should not rely merely on the historical factors surrounding the products. While the socio-cultural, economic, technological and environmental circumstances certainly impact greatly on the designed products, learners must be able to directly apply such contextual information to ACTUAL designs, and be able to discuss the construction of the designed product/s and design factors surrounding them. Reference to the biographical details of designers are mostly irrelevant, unless they apply to the designs themselves.

As a general rule all essay questions should be structured into an introduction, main body and a conclusion.

- The introduction should set the context and clearly respond to/address the issues being asked in the question. Students cannot merely write a rehearsed essay on a movement, and must respond to the specific question directly. Any extraneous facts outside of the reference of the question should be ignored.
- The main body of the text should also refer directly to the specific question, using appropriate examples of designers and their works to substantiate the answer. Certain design products crucial to the argument should be discussed in detail, using analysis.  
The argument/discourse should flow logically and should be written in full, logical sentences with no point-form listing of facts or headings, unless the question specifically asks for them.  
The use of correct design terms, language and references will be an indicator of the quality of the answers. No marks should be awarded for unvalidated value judgements.
- The essay should have an appropriate and relevant conclusion.

In an essay, marks should be awarded for a maximum of the names of 4 designers/3 works each to avoid listing (one mark per correctly spelt designer/design product). If other works are discussed in detail, marks should be awarded for the discussion, but not for the name of the work.

Assessment of the essays should take into account the following breakdown:

Section of essay	Marks	Criteria	Cognitive skills	Level	Marks
Structure	3	Introduction, body and conclusion	Evaluate Synthesis	Higher order	1
				Higher order	2
Context	5	Understanding of contextual background to the question	Synthesis Evaluation	Higher order	3
				Higher order	2
Content	7	Depth of discussion, body of works, accuracy of information	Recall Application Analysis	Lower order	2
				Middle order	4
				Higher order	1
Visual analysis	7	Visual analysis, discussion of actual works	Recall Application Analysis	Lower order	2
				Middle order	3
				Higher order	2
Terminology	3	Design-speak, terminology	Application	Middle order	3
	25				25

Q5	WEIGHTING %	MARKS
Higher order	44%	11
Middle order	40%	10
Lower order	16%	4

The following detailed rubric with level descriptors should be used to assist in the marking of questions in this section:

LEVEL	Section of essay	Criteria	Marks	Total
7	Context (5)	Clear response to question, appropriate contextual framework relevant to the answer, shows insight well above expected levels of cognitive thinking, new viewpoints, shows insight into higher cognitive thinking	4 or 5/5	23 – 25
	Content/Facts (7)	Substantial depth of factual discussion, provided all the important, relevant points in a factually correct, accurate discussion	7/7	
	Analysis (7)	Discussion of works reveal an excellent understanding of analysis of works	7/7	
	Structure (3)	Introduction and conclusion directly address question, argument flows logically Well-structured, sound, sensible writing	2 or 3/3	
	Terminology (3)	Excellent use of appropriate terminology/vocabulary	2 or 3/3	
6	Context (5)	Clear, accurate understanding of the topic, good insights expressed	4 or 5/5	20 – 22
	Content/Facts (7)	Substantial depth of factual discussion, provided most of the critical points, names of designers and works, factually correct, spelt correctly	6 or 7/7	
	Analysis (7)	Good and substantial analysis of works	6 or 7/7	
	Structure (3)	Well-structured essay, introduction and conclusion directly address question	2 or 3/3	
	Terminology (3)	Good use of appropriate terminology/vocabulary	2 or 3/3	

5	Context (5)	A fair response to the question, some good insight	4 or 5/5	16 – 19
	Content/Facts (7)	Mostly factually correct; enough relevant and correct facts that are substantiated with evidence in works, names of designers and works spelt correctly	4 or 4/7	
	Analysis (7)	Enough relevant works discussed and some good analysis	4 or 5/7	
	Structure (3)	Structured essay with introduction and conclusion	2 or 3/3	
	Terminology (3)	Use of adequate appropriate terminology	2 or 3/3	
4	Context (5)	An adequate response to the question, but lack of contextual clarity, lost focus in places; but manages to mention some important facts	3 or 4/5	12 – 15
	Content/Facts (7)	Provided some good factual content but missed some critical focus in places; some factual omissions	3 or 4/7	
	Analysis (7)	Enough relevant works discussed and some analysis	3 or 4/7	
	Structure (3)	Structured essay with introduction and conclusion	2 or 3/3	
	Terminology (3)	Use of adequate appropriate terminology	1 or 2/3	
3	Context (5)	A confused response, gets lost in places and loses focus	1 or 2/5	8 – 11
	Content/Facts (7)	Provided some good facts but not always relevant; factual omissions or errors	3 or 4/7	
	Analysis (7)	Some limited analysis of works	2 or 3/7	
	Structure (3)	Some structure, fragmented discussion	1 or 2/3	
	Terminology (3)	Some use of terminology	1 or 2/3	
2	Context (5)	Poor understanding of context	1 or 0/5	5 – 7
	Content/Facts (7)	Large gaps in knowledge; repetition and irrelevance present	1 or 2/7	
	Analysis (7)	Insubstantial analysis of works	1 or 2/7	
	Structure (3)	Poorly structured, no introduction or conclusion	1 or 0/3	
	Terminology (3)	Basic use of terminology	1 or 0/3	
1	Context (5)	Little evidence of contextual understanding	1 or 0/5	0 – 4
	Content/Facts (7)	Large gaps in knowledge; little factual information	1 or 0/7	
	Analysis (7)	Does not refer to analysis of works	1 or 0/7	
	Structure (3)	Very poorly written, unstructured, no introduction or conclusion	1 or 0/3	
	Terminology (3)	Insubstantial use of terminology	1 or 0/3	

**QUESTION 5**

**QUESTION TYPE/COGNITIVE SKILLS: Comprehension, Application, Analysis, Synthesis, Evaluation (25 marks)**

<b>LO 2 AS 1.8</b>	<b>Interpret, use and explain the choice of design elements, principles and materials in the final product, service or environment.</b>
<b>LO3 AS 1.1</b>	<b>Make value judgments informed by a clear understanding of design.</b>
<b>LO3 AS 1.2</b>	<b>Understand design theory and use design terminology correctly</b>
<b>LO3 AS 1.3</b>	<b>Discuss, explain and demonstrate the context and purpose of the products, images, signs and symbols used in design to convey overt and hidden messages that reinforce or challenge stereotypes, biases and prejudices, past and present.</b>
<b>LO3 AS 1.4</b>	<b>Investigate, reflect on and interpret information from a variety of sources that show global influences in shaping the development of design.</b>
<b>LO3 AS 1.5</b>	<b>Analyse, interpret and critically reflect on examples and relate them to their cultural, historical and contemporary contexts.</b>
<b>LEVEL:</b>	<b>Higher (11 marks), Middle (10 marks), Lower (4 marks)</b>

The answers to this question will vary substantially. However, all should refer quite clearly to the specific question, tracking the theme of diversity and inclusivity in PoMo design. There are no right or wrong answers, but the candidate must justify his/her position with clear discussions of designers and their works.

Good examples – James Stirling Stuttgart Museum for use of ramps, etc.

Charles Moore, Piazza d'Italia for cultural inclusivity, e.g. use of classical orders, different materials

Humour, wit, etc. in Stefano Giovannoni's product designs

Phillippe Starke's titles, referential products, focus on diversity

Discretion is required in the marking to allow for personal interpretation (to some extent) of the variety of trends in design during each era. Students must refer to relevant and appropriate designers of each movement in question. Specific issues of eclecticism, physical access, cultural diversity and the human element must be addressed.

Use the rubrics suggested at the beginning of this section for marking the essay.

**[25]**

**Postmodernism:**

The last quarter of the twentieth century saw a surge of unbridled consumerism manifested in a number of diverse, often contradictory, design currents. Some architects and designers chose to conform to the previously established intellectual strictures of modernism, seeking expression through form rather than applied ornament. Others, inspired by texts that denounced the cool aridity of modernism—including Robert Venturi's *Learning from Las Vegas* (1972), *Collage City* (1973) by Colin Rowe and Fred Koetter, and Rem Koolhaas' *Delirious New York* (1978)—developed a postmodernism that celebrated the vernacular and reinterpreted motifs of the past. Still others used the design of objects as a means to make countercultural social or political statements. Many of the leaders of the Studio Craft Movement consciously abandoned the creation of useful objects in favour of nonfunctional art. Toward the end of the 1980s, designers, recognising the inherent beauty of materials developed for science, began to employ them in a wide range of consumer products. In the century's last decade, the environment became a major concern for designers offering 'green,' socially responsible solutions to design problems.

A rejection of the sovereign autonomous individual with an emphasis upon anarchic collective, anonymous experience. Collage, diversity, the mystically unrepresentable, Dionysian passion are the foci of attention. Most importantly we see the dissolution of distinctions, the merging of subject and object, self and other. This is a sarcastic playful parody of western modernity and the 'John Wayne' individual and a radical, anarchist rejection of all attempts to define, reify or represent the human subject.

Postmodernism is difficult to define, because to define it would violate the postmodernist's premise that no definite terms, boundaries or absolute truths exist. In this article, the term 'postmodernism' will remain vague, since those who claim to be postmodernists have varying beliefs and opinions on issues. To the postmodernist, Western world society is an outdated lifestyle disguised under impersonal and faceless bureaucracies. The postmodernist endlessly debates the modernist about Western society needing to move beyond its primitiveness of ancient traditional thought and practices.

Their concerns, for example, often include building and using weapons of mass destruction, encouraging an unlimited amount of consumerism thus fostering a wasteful throwaway society at the sacrifice of the earth's resources and environment, while at the same time not serving the fair and equitable socioeconomic needs of the populace.

Postmodernists believe that the West's claims of freedom and prosperity continue to be nothing more than empty promises and have not met the needs of humanity. They believe that truth is relative and truth is up to each individual to determine for himself or herself. Most believe nationalism builds walls, makes enemies, and destroys 'Mother Earth', while capitalism creates a 'have and have not' society, and religion causes moral friction and division among people.

Postmodernists are typically atheistic or agnostic while some prefer to follow eastern religions, thoughts and practices. Many are naturalist including humanitarians, environmentalists and philosophers. They challenge the core religious and capitalistic values of the Western world and seek change for a new age of liberty within a global community.

From the late 1970s through the 1980s, many architects and designers, reacting against the dictates of modernism, looked to Neoclassical forms and materials for inspiration. Visual references derived from art and architecture superseded functionalism and overt historical references and decoration transformed architecture, furniture, tabletop accessories, even jewelry, into objects of fantasy. Well-known architects Michael Graves, Robert Venturi, and others accepted commissions to design products for such diverse international companies as Knoll, Alessi and Formica.

**QUESTION 6**

**QUESTION TYPE/COGNITIVE SKILLS: Comprehension, Application, Analysis, Synthesis, Evaluation (25 marks)**

<b>LO 2 AS 1.8</b>	<b>Interpret, use and explain the choice of design elements, principles and materials in the final product, service or environment.</b>
<b>LO 3 AS 1.1</b>	<b>Make value judgments informed by a clear understanding of design.</b>
<b>LO 3 AS 1.2</b>	<b>Understand design theory and use design terminology correctly</b>
<b>LO 3 AS 1.3</b>	<b>Discuss, explain and demonstrate the context and purpose of the products, images, signs and symbols used in design to convey overt and hidden messages that reinforce or challenge stereotypes, biases and prejudices, past and present.</b>
<b>LO 3 AS 1.4</b>	<b>Investigate, reflect on and interpret information from a variety of sources that show global influences in shaping the development of design.</b>
<b>LO 3 AS 1.5</b>	<b>Analyse, interpret and critically reflect on examples and relate them to their cultural, historical and contemporary contexts.</b>
<b>LEVEL:</b>	<b>Higher (11 marks), Middle (10 marks), Lower (4 marks)</b>

The answers to this question will vary substantially. However, all should refer quite clearly to the specific question, tracking the use of PLASTICS from the International style right through to Greenism. There are no right or wrong answers, but the candidate must justify his/her position with clear discussions of designers and their works.

A model answer could include a discussion of:

The properties of plastic, ease of mass production and development of consumerist style, use of plastics and fibreglass in Charles and Ray Eames products, developments of colour finishes and surfaces, development of plastics in Pop design, Verner Panton's S-chair, first mass-produced injection-moulded chair, Eero Aarinen glob chair, pastilli chair, plastic blow chair by De Pas et al, Joe Colombo with his wide range of plastics like Universale chair, Hi-Tech and technotronic revolution, Dieter Rams and ABS plastics and electronic goods, Anti-Design movement, Memphis and plastic laminate, formica, Sottsass and Valentine typewriter, Secretary's chair, Ultrafragola mirror, superboxes and furniture for Poltrano, PoMo and development of plastic faux surface treatments and 80's, influence of Alessi and hi-end plastic products, ... new biodegradable plastics, smart plastics ... Zaha Hadid and rapid prototyping.

Actual relevant examples of designs should be discussed. Discretion is required in the marking to allow for personal interpretation (to some extent).

Use the rubrics suggested at the beginning of this section for marking the essay.

**[25]**

Plastic – Verner Panton, nylon fabrics

Pop design rejected the idea that designed objects needed to last forever, and introduced the idea of fashion and ephemerality. The desire was to express a youth culture in rebellion towards conservatism, identity became a main focus, reflected in patterns, motifs and materials. Materials were cheap and expendable, surfaces were brightly coloured, patterned.

Characteristics – plastic, popular mass culture.

Expendable and gimmicky, Pop furniture burst open the world's design bubble with its departure from Modernism's safe, utilitarian mode of expression. Drawing from the comic-strip style of 1950s commercial art, Pop furniture became a symbol of the 1960s economic success. Pop designers deliberately focused on a piece's disposability by using low-cost, flimsy materials. Characterised by such whimsical constructions as Peter Murdoch's disposable paper chair (1964), the furniture of the age was a cheap yet glamorous approach to contemporary design.

Worldwide economic prosperity led to an overall sense of optimism that infused artistic sensibilities. During the mid-1960s, Italian designers marked a path for deliciously frivolous furniture. Bean-bag chairs, inflatable furniture and even a sofa fashioned in the shape of a giant pair of lipsticked lips (based on Salvador Dali's famous surrealist painting) emerged from the innovative Italian scene. Designer Pedro Freideberg introduced his now-infamous Hand Chair in 1963 – in a bizarre twist, an Italian firm created the Joe Lounge Chair, a tribute to Joe Dimaggio in the shape of a catcher's mitt. Pop furniture's tendency to use bright colours and kitschy themes encouraged designers to expand furniture's possible playfulness. Eventually, Memphis style was born, turning Modernist logic on its head with avant-garde and frivolous conceptions.

**Memphis** – Italian design collaborative led by Sottsass, Memphis was a reaction against the slick, black humourless design of the 1970s. It was a time of minimalism with such products as typewriters, buildings, cameras, cars and furniture all seeming to lack personality and individualism, disagreed with and challenged conformist design approach, Sottsass and his collaborators longed to be liberated from the tyranny of smart, but soulless 'good taste' in design. Created shocking, bright, kitsch, polychrome, plastic, vibrant, eccentric, ornamental – untasteful. Sottsass' aim to reinvigorate radical design, de Lucchi, eclectic influence from art deco and pop, kitsch and futuristic themes. exhibited first in 1974 in Milan, mainly clocks, lighting, furniture and ceramics. Experimented with unconventional materials, historic forms, kitsch motifs, gaudy colours.

Furniture made from flashy coloured plastic lamintes emblazoned with kitsch geometric and leopard-skin patterns usually found in comic books and cheap cafes. Other pieces of furniture and lights were made from industrial materials – printed glass, celluloids, fireflake finishes, neon tubes and zinc-plated sheet-metals – jazzed up with flamboyant colours and patterns, spangles and glitter. By glorying in the cheesiness of consumer culture, Memphis was 'quoting from suburbia,' as Sottsass put it.

Their main aim was to reinvigorate the Radical Design movement. The group intended to develop a new creative approach to design. They drew inspiration from such movements as Art Deco and Pop Art, styles such as the 1950's Kitsch and futuristic themes. Their concepts were in stark contrast to so-called 'Good Design'. The work of the Memphis Group has been described as vibrant, eccentric and ornamental. It was conceived by the group to be a 'fad', which like all fashions would very quickly come to an end. In 1988 Sottsass dismantled the group.

### **The Anti-Design Movement**

A movement that is often called the Anti-Design Movement (1965 – 1976) was essentially a rebellion against the interdisciplinary theories of modernism and German functionalism. The Pop-cultures and Anti-cultures were emerging and the market focused on this new, youthful energy. With new upholstery techniques there was a revolution in the manufacture of padded sofas, pouffes and easy chairs. The introduction of PVC in the mid 1960s was particularly suited to Pop Culture. With PVC new inflatable chairs, sofas, pillows appeared, even tables and lighting. They were a now a medium of sculpture. Legendary designer Gaetano Pesce's 'UP' sofa in 1969 and his 'Donna ' chair symbolising femininity in 1968 were in themselves works of art. They also happened to be functional and comfortable to sit on!

**QUESTION 7**

**QUESTION TYPE/COGNITIVE SKILLS: Comprehension, Application, Analysis, Synthesis, Evaluation (25 marks)**

<b>LO 2 AS 1.8</b>	<b>Interpret, use and explain the choice of design elements, principles and materials in the final product, service or environment.</b>
<b>LO 3 AS 1.1</b>	<b>Make value judgments informed by a clear understanding of design.</b>
<b>LO 3 AS 1.2</b>	<b>Understand design theory and use design terminology correctly</b>
<b>LO 3 AS 1.3</b>	<b>Discuss, explain and demonstrate the context and purpose of the products, images, signs and symbols used in design to convey overt and hidden messages that reinforce or challenge stereotypes, biases and prejudices, past and present.</b>
<b>LO 3 AS 1.4</b>	<b>Investigate, reflect on and interpret information from a variety of sources that show global influences in shaping the development of design.</b>
<b>LO 3 AS 1.5</b>	<b>Analyse, interpret and critically reflect on examples and relate them to their cultural, historical and contemporary contexts.</b>
<b>LEVEL:</b>	<b>Higher (11 marks), Middle (10 marks), Lower (4 marks)</b>

The answers to this question will vary substantially. However, all should refer quite clearly to the specific question and the emphasis of the essay **MUST** be on the idea of 'superstar' designer and justification must be credible.

Because of the vast breadth of this question, works from any significant designers from the latter half of the 20<sup>th</sup> century should be allowed in the essay.

Mark should be awarded at one mark per substantiated fact, backed up with reference and discussion of a specific product and/or process. **THREE** actual designs must be discussed in detail.

Use the rubrics suggested at the beginning of this section for marking the essay.



**QUESTION 8**

**QUESTION TYPE/COGNITIVE SKILLS: Comprehension, Application, Analysis, Synthesis, Evaluation (25 marks)**

<b>LO 2 AS 1.8</b>	<b>Interpret, use and explain the choice of design elements, principles and materials in the final product, service or environment.</b>
<b>LO 3 AS 1.1</b>	<b>Make value judgments informed by a clear understanding of design.</b>
<b>LO 3 AS 1.2</b>	<b>Understand design theory and use design terminology correctly</b>
<b>LO 3 AS 1.3</b>	<b>Discuss, explain and demonstrate the context and purpose of the products, images, signs and symbols used in design to convey overt and hidden messages that reinforce or challenge stereotypes, biases and prejudices, past and present.</b>
<b>LO 3 AS 1.4</b>	<b>Investigate, reflect on and interpret information from a variety of sources that show global influences in shaping the development of design.</b>
<b>LO 3 AS 1.5</b>	<b>Analyse, interpret and critically reflect on examples and relate them to their cultural, historical and contemporary contexts.</b>
<b>LEVEL:</b>	<b>Higher (11 marks), Middle (10 marks), Lower (4 marks)</b>

The answers to this question will vary substantially. However, all should refer quite clearly to the specific question – how Deconstructivist design echoes the ideas and technologies of our times.

Specifics of the timeframe could refer to:

- Consequences of 9/11 and the fragmentation of public security/threat of political destabilisation
- 1991 – Gulf War after Iraqi invasion of Kuwait
- 1992 – Balkan war
- 1994 – Rwanda civil war
- Rise of the digital era, the matrix
- Proliferance of CAD/CAM
- Developments of space-age materials and technologies like aerogel concept of 'dematerialisation'
- Deconstructivism, use of glass, new materials, insane geometry

There are no right or wrong answers, but the candidate must justify their positions with clear discussions of designers and their works. Discretion is required in the marking to allow for personal interpretation (to some extent) of the variety of trends in design.

- Deconstructivism – incl. Frank Ghery, Zaha Hadid, Rem Koolhaas, Santiago Calatrava, Peter Eisenman, Bernard Tschumi, Daniel Libeskind, David Carson, Tibor Kalman, Rei Kawakubo, Norman Foster, etc.

Use the rubrics suggested at the beginning of this section for marking the essay. [25]

[25 + 25 = 50]

**50 marks**

**SECTION C DESIGN IN CONTEXT (CONTEMPORARY)****50 marks****QUESTION 9.1****QUESTION TYPE/COGNITIVE SKILLS: Comprehension (3 marks), Analysis (3 marks), Synthesis (3 marks)**

<b>LO 1 AS 2.1</b>	<b>Display knowledge and appreciation of responsible design by taking into consideration human rights issues throughout the process, such as: use of materials that are safe and accessible to all; environmental issues.</b>
<b>LO 2 AS 1.8</b>	<b>Interpret, use and explain the choice of design elements, principles and materials in the final product, service or environment.</b>
<b>LO 3 AS 1.1</b>	<b>Make value judgments informed by a clear understanding of design.</b>
<b>LO 3 AS 1.3</b>	<b>Discuss, explain and demonstrate the context and purpose of the products, images, signs and symbols used in design to convey overt and hidden messages that reinforce or challenge stereotypes, biases and prejudices, past and present.</b>
<b>LO 3 AS 1.4</b>	<b>Investigate, reflect on and interpret information from a variety of sources that show global influences in shaping the development of design</b>
<b>LO 3 AS 1.5</b>	<b>Analyse, interpret and critically reflect on examples and relate them to their cultural, historical and contemporary contexts.</b>
<b>LO 3 AS 2.1</b>	<b>Demonstrate an understanding of the ways in which design can be used to reinforce or challenge social, cultural, environmental and ethical issues.</b>
<b>LO 3 AS 3.2</b>	<b>Demonstrate an understanding of responsible design by taking into consideration human rights and environmental issues throughout the process.</b>
<b>LEVEL:</b>	<b>Middle (3 marks) Higher (3 marks) Lower (3 marks)</b>

The prejudices and stereotypes refer to ideas on race and equality

- First image – black woman nursing white child, nannies, caregivers; idea of shock at such an intimate exchange, but nannies bring up many white children ... in SA and globally (3)
- Second image – Black child as 'devil' symbolised by hairstyle cones white child with angelic curls ...? (3)
- Third image – White, black heart – different – no, all the same (3)

All of these conflicts were based on taboos, on the impossibility of co-existence, on differences that separate rather than unite. By acknowledging these differences and prohibitions, the brand appeared more involved. It took sides, rather than presenting a simple 'objective' portrayal of the world; it made a commitment to foster the cohabitation of opposites, to break down barriers and ensure dialogue. Benetton had a plan: to integrate opposites, to unite differences under a single flag, the flag of its own logo. In this phase, the 'product' gradually disappeared from the advertisements. Traditional advertising messages made the product their obvious focus, so that the campaign would have a measurable commercial impact. Benetton took another path, wagering that once the brand's identity had been established, the product would become one of its attributes. The company was now taking hold on all the continents. Paradoxically, the growing popularity and availability of tangible Benetton merchandise – the goods people could buy in more than 5,000 stores worldwide – translated into the disappearance of those goods from its ads.

To commemorate World Anti-Racism Day, Benetton organised a number of special projects, in line with its commitment over the past decade to tolerance and the respect for diversity.

In conjunction with its campaign on racism – an image of three hearts with the slogan 'black, white and yellow' – which culminated in the meeting of the international humanitarian organisation SOS Racisme held at Fabrica on 15th and 16th March, 43 five-second spots on the theme of tolerance will be shown on MTV Europe between 7 o'clock in the morning and 3 o'clock the following day.

On the same day, the French newspaper 'Libération', which collaborated with Benetton in other campaigns on humanitarian issues, and the Italian daily 'Il Manifesto', printed their cover pages white on black.

### QUESTION 9.2

**QUESTION TYPE/COGNITIVE SKILLS: Synthesis (4 marks)**

LO 1 AS 2.1	Display knowledge and appreciation of responsible design by taking into consideration human rights issues throughout the process, such as: use of materials that are safe and accessible to all; environmental issues.
LO 3 AS 1.1	Make value judgments informed by a clear understanding of design.
LO 3 AS 1.2	Understand design theory and use design terminology correctly.
LO 3 AS 1.3	Discuss, explain and demonstrate the context and purpose of the products, images, signs and symbols used in design to convey overt and hidden messages that reinforce or challenge stereotypes, biases and prejudices, past and present.
LO 3 AS 1.4	Investigate, reflect on and interpret information from a variety of sources that show global influences in shaping the development of design.
LO 3 AS 1.5	Analyse, interpret and critically reflect on examples and relate them to their cultural, historical and contemporary contexts.
LO 3 AS 2.1	Demonstrate an understanding of the ways in which design can be used to reinforce or challenge social, cultural, environmental and ethical issues.
LO 3 AS 3.2	Demonstrate an understanding of responsible design by taking into consideration human rights and environmental issues throughout the process.
<b>LEVEL:</b>	<b>Higher (4 marks)</b>

Globalisation – global village of one people, realisation of things that unite us, environmental awareness, all in this together, instant digital communication, global travel, greater mobility across world, live and work all over the planet.

This also highlights our differences, cultural identities, rise of cultural tourism ... (4)

### QUESTION 9.3

**QUESTION TYPE/COGNITIVE SKILLS: Comprehension (4) Analysis (4 marks), Synthesis (4 marks)**

LO 3 AS 1.3	Discuss, explain and demonstrate the context and purpose of the products, images, signs and symbols used in design to convey overt and hidden messages that reinforce or challenge stereotypes, biases and prejudices, past and present.
LO 3 AS 1.4	Investigate, reflect on and interpret information from a variety of sources that show global influences in shaping the development of design.
LO 3 AS 1.5	Analyse, interpret and critically reflect on examples and relate them to their cultural, historical and contemporary contexts.
LO 3 AS 2.1	Demonstrate an understanding of the ways in which design can be used to reinforce or challenge social, cultural, environmental and ethical issues.
LO 3 AS 2.2	Demonstrate an understanding of the designer's responsibilities in relation to environmental issues and sustainable design.
LO 3 AS 3.2	Demonstrate an understanding of responsible design by taking into consideration human rights and environmental issues throughout the process.
<b>LEVEL:</b>	<b>Lower (4 marks) Middle (4 marks) Higher (4 marks)</b>

There are an infinite variety of examples students can use, including:

Garth Walker: Ijusi Magazine, Peet Pienaar: Afromag The president, Ruan Vermeulen: Amicollective <[www.amicollective.com](http://www.amicollective.com)>, Darkie clothing <[www.darkieclothing.co.za](http://www.darkieclothing.co.za)> ... sungoddess ... (12)

The candidates **MUST** include a detailed discussion of actual works, and refer directly to how issues related to identity are addressed.

**[25]**

**QUESTION 10.1****QUESTION TYPE/COGNITIVE SKILLS: Application (2 marks), Analysis (2 marks)**

<b>LO 1 AS 2.2</b>	<b>Display knowledge and appreciation of aesthetics and functionality throughout the design process.</b>
<b>LO 2 AS 1.4</b>	<b>Demonstrate an awareness of the various materials and production processes relevant to the chosen discipline/s.</b>
<b>LO 2 AS 1.6</b>	<b>Demonstrate proficiency in chosen materials and techniques to create design solutions.</b>
<b>LO 2 AS 1.8</b>	<b>Interpret, use and explain the choice of design elements, principles and materials in the final product, service or environment.</b>
<b>LO 3 AS 1.5</b>	<b>Analyse, interpret and critically reflect on examples and relate them to their cultural, historical and contemporary contexts.</b>
<b>LEVEL:</b>	<b>Middle (2 marks), Higher (2 marks)</b>

**One mark/substantiated fact****Ribs** – versatility for good grip, ease and comfort**Variable** size grip makes it adaptable for all types of anthropometric samples**Comfort** – size not too big, convenience of wear**Water-resistant** – device**Curved** blade**Punctured** handle to hang on a hook

(4)

**QUESTION 10.2****QUESTION TYPE/COGNITIVE SKILLS: Application (3 marks), Analysis (2 marks)**

<b>LO 1 AS 2.2</b>	<b>Display knowledge and appreciation of aesthetics and functionality throughout the design process</b>
<b>LO 2 AS 1.4</b>	<b>Demonstrate an awareness of the various materials and production processes relevant to the chosen discipline/s.</b>
<b>LO 2 AS 1.6</b>	<b>Demonstrate proficiency in chosen materials and techniques to create design solutions.</b>
<b>LO 2 AS 1.7</b>	<b>Present and effectively communicate a design solution.</b>
<b>LO 2 AS 1.8</b>	<b>Interpret, use and explain the choice of design elements, principles and materials in the final product, service or environment.</b>
<b>LEVEL:</b>	<b>Middle (3 marks) Higher (2 marks)</b>

**One mark/substantiated fact****Offers good grips** – on handles, wheelchair suitable for strollers, skateboards, in-line skates, roller skates and bicycles**Impact Resistant** – flexible and resilient, rubber surface cushions all impact, the risk of injury when falling is greatly reduced**Can be recycled** – non-toxic**Sound Absorbent** – rubber absorbs sound, rather than being reflected, reduced noise levels**Extremely Safe** – non-slip properties, useful in locations that have a pool, fountains, or other water bodies on the premises or regions with lots of precipitation, rubber, non-slip in conditions where slippage might occur, flooring**Durability** – extremely durable and long-lasting, will maintain its shape**Weather & UV Resistant** – UV resistant, as well as frost and weather proof**Stylish Design** – available in a huge variety of styles, textures and colours**Maintenance** – stain resistant and dirt repellent

(5)

**QUESTION 10.3**

**QUESTION TYPE/COGNITIVE SKILLS:** Comprehension (2 marks) Application (2 marks), Analysis (2 marks)

LO 1 AS 2.2	Display knowledge and appreciation of aesthetics and functionality throughout the design process.
LO 2 AS 1.4	Demonstrate an awareness of the various materials and production processes relevant to the chosen discipline/s.
LO 2 AS 1.6	Demonstrate proficiency in chosen materials and techniques to create design solutions.
LO 2 AS 1.7	Present and effectively communicate a design solution.
LO 2 AS 1.8	Interpret, use and explain the choice of design elements, principles and materials in the final product, service or environment.
LO 3 AS 1.4	Investigate, reflect on and interpret information from a variety of sources that show global influences in shaping the development of design
<b>LEVEL:</b>	Lower (2 marks) Middle (2 marks) Higher (2 marks)

**One mark/substantiated fact**

'zipperless zipper'

- **Ease of use** – Velcro is a fastener providing easy access to openings, etc.; provides independent dressing – for use in handicapped or disabled, arthritis, and other limited hand dexterity applications, children can press surfaces closed, rather than use buttons; used in the aerospace industry to help astronauts manoeuvre in and out of bulky space suits, advantages of a suit that was easier to don and remove, used for sports equipment, scuba and ski gear
- **Close fit** – properly fitting clothing flexible forms and sizes, which can be applied to virtually any affected part of the body, side snap or side zipper pants.
- **Waterproof** – watertight, incontinence clothes, nappies, sports gear
- **Frequently** used items, pouches, wheelchair accessories, back snap clothing
- **Durable** – doesn't need maintenance, can't get stuck, velcro is made from nylon and polyester, doesn't break down, rot, or attract mould, and it could be produced in threads of various thickness.

(6)

**QUESTION 10.4**

**QUESTION TYPE/COGNITIVE SKILLS:** Application (4 marks) Analysis (3 marks), Synthesis (3 marks)

LO 1 AS 2.2	Display knowledge and appreciation of aesthetics and functionality throughout the design process.
LO 2 AS 1.4	Demonstrate an awareness of the various materials and production processes relevant to the chosen discipline/s.
LO 2 AS 1.6	Demonstrate proficiency in chosen materials and techniques to create design solutions.
LO 2 AS 1.8	Interpret, use and explain the choice of design elements, principles and materials in the final product, service or environment.
LO 3 AS 1.4	Investigate, reflect on and interpret information from a variety of sources that show global influences in shaping the development of design
LO 3 AS 1.5	Analyse, interpret and critically reflect on examples and relate them to their cultural, historical and contemporary contexts.
LO 3 AS 3.2	Demonstrate an understanding of responsible design by taking into consideration human rights and environmental issues throughout the process.
<b>LEVEL:</b>	<b>Lower (4 marks) Middle (3 marks) Higher (3 marks)</b>

This question can use a number of examples of materials, ranging from aerogel, rubber, nylon ...  
Technologies for the blind – Braille readers

Assistive Technology for the Disabled allows other disabled individuals to become more interactive with their surrounding world. Any piece of equipment, product, system, or any device that can be used to improve, increase, and/or maintain a disabled person's functional capabilities is defined as an assistive technology device.

These technological tools benefit people with intellectual and physical disabilities by:

- Enabling an individual to have a level of accomplishment and or normal fluency that could not be achieved without these devices and or services.
- Reducing the labour required or increase endurance when attempting to complete routine tasks.
- Enhances some individuals' opportunities for learning or employments tasks.
- Supporting normal social interactions with their environment be it work and or social events.

Various types of assistive technological devices can enable some challenged individuals to live and work independently.

### **Intellikeys USB and Disabilities**

Dr. Bob Segalman, an adult with cerebral palsy is an excellent example of how IntellKeys USP and other assistive technology devices can help an individual function at one's best. Speech-to-Speech (a telephone access service for people with speech disabilities) is a service that provides a communication assistant that revoices what the person with the speech disability is attempting to say over the phone (like ordering a pizza).

Individuals with intellectual and or developmental disabilities can use this technology for:

**Mobility** – Can become mobile by using sophisticated computer controlled wheelchairs

**Communication** – Augmentative and alternative communication (ACC) may involve technology ranging from low-tech message boards to computerised voice output communication aids and or services.

**Control of Environment** – AT can help people with disabilities to control audio/video equipment, turn on and off lights and or electrical appliances; lock and unlock doors; and successfully complete everyday tasks of self-care that years ago were not feasible to do.

The invention of the telephone might not have been useful to a deaf person, but it led to a way to send text messages over a phone line with the use of a teletypewriter, or TTY.

Even something as low-tech as a small piece of soft plastic can be an assistive technology. Attached to a pencil, it might help a child hold the pencil better if the child has trouble writing.

Blind people can have documents read out loud electronically on their computer. And for people who cannot use their arms to type, speech recognition programs may be the answer. These let people give commands to their computer or have their words turned into print.

What about a person who is not able to speak? There are now special devices to help them, too. An American company called Blink Twice produces a device that looks like a handheld computer game. The device is called Tango. Tango was invented by Richard Ellenson, the father of an eight-year-old boy with cerebral palsy. This condition affects a person's ability to move and speak. With Tango, his son Thomas can touch pictures that express his feelings or the words he wants to say. A voice then speaks the words that Thomas has chosen.

Other voices, ideas and words can be added to meet the interests and needs of the individual user. For example, when Thomas watches sports, he can play cheers for his team that were recorded in his father's voice.

Richard Ellenson says he wants Tango to help people with disabilities build relationships, not just sentences. Right now, Tango costs about seven thousand dollars. But this is a new device, and the price of new technology often comes down after a few years.

There are many devices to help people with disabilities use computers. There are ways for people to operate a computer by moving their heads or even just their eyes.

There are also keyboards that can be used with only one hand. One of these small keyboards is called a FrogPad. One young girl used the FrogPad at school. Her mother said the small keyboard helped her daughter work normally at school, and her friends thought the FrogPad was great.

Ben is a fifteen-year-old boy in Maine. He was born with a condition called spina bifida. He cannot move his arms or legs. He uses a small device called a TongueTouch Keypad, made by a California company, newAbilities Systems.

The keypad is placed in the mouth. Ben learned to use his tongue to touch different keys. They operate his telephone, his computer, his electric wheelchair, his bed and his music player.

Ben is able to get in and out of his house without help. And he can even turn his music up loud if he wants to.

Sometimes, all it takes to improve on existing technology is a little imagination. Like adding a voice to clocks and watches so they announce the time. Or printing children's books in Braille with both raised marks and traditional text. That way the parent of a child who is blind can read the same book out loud while the child reads with his or her fingers.

Using a motorised wheelchair requires the ability to operate the controls. But what about people who are not able to use their hands? One solution is to attach a tube to the chair. The person operates the wheelchair by sucking air through the tube or blowing into it. This is called 'sip and puff' technology, and it can also be used to operate other devices.

Think of the millions of people who send and receive messages over cellphones and other wireless devices. This ability to communicate quickly by text messaging or e-mail is very useful. But imagine just how useful it can be to a person who is deaf.

Many times, the technology that helps people with disabilities is invented by people who have disabilities themselves.

TecAccess is a company that helps government offices and companies provide technology for people with disabilities.

TecAccess has fifty-two employees. Forty-six of them have one or more disabilities. The company is in Virginia, but its employees work all over the world.

A man named Don Dalton started a company in Illinois called Assistive Technologies. Mister Dalton became a quadriplegic in a swimming accident almost forty years ago. His company offers computer technology to help people with disabilities become more independent.

His newest product, in fact, is called Independence One. Once the system is put into a house, the user wears a wireless headset to control it. By voice, the user is able to control many devices and systems around the house.

Don Dalton uses the Independence One controller when he rides in the elevator in his office building. The system answers him in a woman's voice.

**If you are blind or visually impaired**

There are different types of computer screen readers available. Some relay back to you, via a synthetic voice, what you are typing. Others read what is on a webpage. You can also get readers that have a Braille output device.

Magnification software products enlarge a particular part of a computer screen.

Closed circuit camera systems can magnify print and text and then display an enlarged version on a television or computer screen. There are also 'standalone' portable versions, which do not require a television or computer.

Stickers can be put onto standard keyboard keys that either present the letters and numbers as Braille or simply increase the size of the characters.

**If you have a physical disability**

There is equipment to help you use a computer if you have a physical impairment, for example:

- a larger keyboard on your computer may help if you have difficulties with dexterity
- devices are available that take the place of keyboards but are smaller and need less effort to press the keys
- an 'on-screen keyboard' means you only need a mouse to select characters on the screen
- alternatives to using a standard mouse include joysticks or trackerballs, which can be easier to control and use
- pointers and sticks are available that can be attached to the head and used to press keys on a keyboard
- predictive text can help increase the rate of typing – after typing two or three letters, you are given a selection of words to choose from

**If you have a learning difficulty**

There are simple keyboards. For example, they can have just the letters of the alphabet on them. Keyboards can also have larger or coloured keys.

You can get software that shows information more simply on the screen. Also, sounds, voices and music can be played when you do certain things or finish doing something.

Other software can help you with learning skills like literacy, numeracy, music and games.

(10)

[25]



**QUESTION 11.1**

**QUESTION TYPE/COGNITIVE SKILLS:** Comprehension (2 marks), Application (2 marks), Analysis (1 mark)

- LO 1 AS 2.2** Display knowledge and appreciation of aesthetics and functionality throughout the design process.
- LO 2 AS 1.8** Interpret, use and explain the choice of design elements, principles and materials in the final product, service or environment.
- LO 3 AS 1.5** Analyse, interpret and critically reflect on examples and relate them to their cultural, historical and contemporary contexts.
- LO 3 AS 2.2** Demonstrate an understanding of the designer's responsibilities in relation to environmental issues and sustainable design
- LO 3 AS 3.2** Demonstrate an understanding of responsible design by taking into consideration human rights and environmental issues throughout the process.

**LEVEL:** Lower (2 marks) Middle (2 marks) Higher (1 mark)

Size, convenience/ease of use, opening mechanism, protection of condom, smooth edges so as not to tear, cost, recyclability, safety as it doesn't tear. (5)

**QUESTION 11.2**

**QUESTION TYPE/COGNITIVE SKILLS:** Comprehension (2 marks), Application (2 marks), Analysis (4 marks)

- LO 2 AS 1.8** Interpret, use and explain the choice of design elements, principles and materials in the final product, service or environment.
- LO 3 AS 1.3** Discuss, explain and demonstrate the context and purpose of the products, images, signs and symbols used in design to convey overt and hidden messages that reinforce or challenge stereotypes, biases and prejudices, past and present.
- LO 3 AS 1.4** Investigate, reflect on and interpret information from a variety of sources that show global influences in shaping the development of design.
- LO 3 AS 1.5** Analyse, interpret and critically reflect on examples and relate them to their cultural, historical and contemporary contexts.
- LO 3 AS 2.1** Demonstrate an understanding of the ways in which design can be used to reinforce or challenge social, cultural, environmental and ethical issues.
- LO 3 AS 3.2** Demonstrate an understanding of responsible design by taking into consideration human rights and environmental issues throughout the process.

**LEVEL:** Lower (2 marks) Middle (2 marks) Higher (4 marks)

**Symbolism**

UWC – toilet roll, public toilet smut, graffiti reflects how people have multiple partners, infecting each other

I GOT MY MOTHER'S EYES – Am I Collective took the idea of passing things down from generation to generation, physical attributes as well as cherished heirlooms. The piece is an interpretation of a traditional ball and claw cabinet, found in many homes in South Africa. This heirloom piece would be filled with items that a young girl might aspire to inherit from her mother and cherish when she becomes an adult. Bottom drawer, embroidered cloths with words, I got my mother's.

CRASH TEST DUMMIES – don't be a 'dummy', play reckless games with your life

MORGUE TAGS – feet arranged in a coitus position, but they're dead, tags on feet in a morgue (4)

**Style**

UWC – graffiti style, young student target market, bright garish colours

I GOT MY MOTHER'S – hand-rendered illustration, sepia tones of old photograph, distorted perspective like a child's drawing, appeals to females/mothers

CRASH TEST DUMMIES – studio photograph with props of dummies set up, red tones, heat, warmth

MORGUE TAGS – digitally manipulated photograph, realistic (4)

**QUESTION 11.3**

**QUESTION TYPE/COGNITIVE SKILLS:** Comprehension (4 marks), Application (4 marks), Analysis (4 marks)

<b>LO 1 AS 2.1</b>	<b>Display knowledge and appreciation of responsible design by taking into consideration human rights issues throughout the process, such as: use of materials that are safe and accessible to all; environmental issues.</b>
<b>LO 1 AS 2.2</b>	<b>Display knowledge and appreciation of aesthetics and functionality throughout the design process.</b>
<b>LO 2 AS 1.4</b>	<b>Demonstrate an awareness of the various materials and production processes relevant to the chosen discipline/s.</b>
<b>LO 2 AS 1.8</b>	<b>Interpret, use and explain the choice of design elements, principles and materials in the final product, service or environment.</b>
<b>LO 3 AS 1.3</b>	<b>Discuss, explain and demonstrate the context and purpose of the products, images, signs and symbols used in design to convey overt and hidden messages that reinforce or challenge stereotypes, biases and prejudices, past and present.</b>
<b>LO 3 AS 1.4</b>	<b>Investigate, reflect on and interpret information from a variety of sources that show global influences in shaping the development of design</b>
<b>LO 3 AS 1.5</b>	<b>Analyse, interpret and critically reflect on examples and relate them to their cultural, historical and contemporary contexts.</b>
<b>LO 3 AS 2.1</b>	<b>Demonstrate an understanding of the ways in which design can be used to reinforce or challenge social, cultural, environmental and ethical issues.</b>
<b>LO 3 AS 3.2</b>	<b>Demonstrate an understanding of responsible design by taking into consideration human rights and environmental issues throughout the process.</b>

**LEVEL:** Lower (4 marks) Middle (4 marks) Higher (4 marks)

There are many examples that candidates can use to answer this question, ranging from affordable housing, access to education, water, employment, etc. A wide breadth of answer must be allowed. Candidates may refer to the designers used in the q, but may not discuss the specific design examples that have been used in the q.

Focus must be on discussing specific works.

(12)  
[25]

**QUESTION 12.1****QUESTION TYPE/COGNITIVE SKILLS: Comprehension (6 marks)**

<b>LO 3 AS 1.4</b>	<b>Investigate, reflect on and interpret information from a variety of sources that show global influences in shaping the development of design</b>
<b>LO 3 AS 2.1</b>	<b>Demonstrate an understanding of the ways in which design can be used to reinforce or challenge social, cultural, environmental and ethical issues</b>
<b>LO 3 AS 2.2</b>	<b>Demonstrate an understanding of the designer's responsibilities in relation to environmental issues and sustainable design</b>
<b>LO 3 AS 3.2</b>	<b>Demonstrate an understanding of responsible design by taking into consideration human rights and environmental issues throughout the process.</b>
<b>LEVEL:</b>	<b>Lower (6 marks)</b>

The responses to this question may be varied dependant on the candidate's own experience and research. There are literally hundreds of projects/designers that participate in employment-generation. Some designers could be: Mielie, Streetwires, Indalo, Monkeybiz, Heath Nash – recycled plastics, Haldane Martin – recycled plastic Zulu mama chair, bookcase, Zenzulu vessels – wire weaving traditional craft forms, Usisi designs – <[www.usisicraft.co.za](http://www.usisicraft.co.za)> – wire crochet, Vonk en Vaderland – Magda van der Vloed wirework jewellery, Monkeybiz, Heartworks, Ardmore Ceramics

Discretion is required in marking this question to allow for diversity, personal interpretation and design comment/criticism. Credible statements should be backed up with reference to actual designed products. One mark should be awarded per substantiated/relevant fact/issue. It is important that the answer makes reference to actual designers/designs.

**QUESTION 12.2**

**QUESTION TYPE/COGNITIVE SKILLS:** Comprehension (2 marks), Application (4 marks), Analysis (4 marks)

LO 1 AS 1	Demonstrate a sound understanding of the interrelated nature of the planning, action and reflection cycle which informs the design process.
LO 1 AS 2.1	Display knowledge and appreciation of responsible design by taking into consideration human rights issues throughout the process, such as: use of materials that are safe and accessible to all; environmental issues.
LO 2 AS 1.4	Demonstrate an awareness of the various materials and production processes relevant to the chosen discipline/s.
LO 2 AS 1.8	Interpret, use and explain the choice of design elements, principles and materials in the final product, service or environment.
LO 3 AS 1.4	Investigate, reflect on and interpret information from a variety of sources that show global influences in shaping the development of design
LO 3 AS 1.5	Analyse, interpret and critically reflect on examples and relate them to their cultural, historical and contemporary contexts.
LO 3 AS 2.1	Demonstrate an understanding of the ways in which design can be used to reinforce or challenge social, cultural, environmental and ethical issues.
LO 3 AS 3.2	Demonstrate an understanding of responsible design by taking into consideration human rights and environmental issues throughout the process.
<b>LEVEL:</b>	Lower (2 marks) Middle (4 marks) Higher (4 marks)

This answer should describe **ONE** employment generating project/design in detail. The focus should be on describing design/s in detail, discussing the physical characteristics of the design/s being produced, the methods of production and also the philosophical basis of the job creation.

Care should be given to an analysis of actual design and not the generic background of the project only.

**Mapula Outreach Project**

Mapula was started by Prof. Karen Skawran in order to provide employment for rural unemployed women.

It was initially funded by a charitable NGO (the Soroptimists) but is now self-funding.

The women create their own designs based on natural forms such as flowers and trees and also refer to their lives – such as children playing in a rural community. Work can be done at home, which allows the women to take care of the household.

The women were initially taught the skills of surface (2-D) design and embroidery techniques, and now come up with many new designs. One of their favourite stitches seems to be chain stitch. Colours are usually dazzling, bright and happy, e.g. reds, yellows, greens, etc.

They create both functional products such as cushion covers and table runners, as well as one-of-a-kind art pieces such as wall hangings. They create *genre* narrative cloths, e.g. telling the story of the Queen to the school or how they prepare food in the village.

Their work is usually on black cloth (100% cotton), and brightly coloured cotton embroidery threads emphasise the unique African identity of the work. Surfaces are often densely embroidered, and the black negative spaces of the cloth function as the background.

**Monkeybiz Beading outreach project**

Barbara Jackson and Shirley Fintz, ceramicists, founded Monkeybiz in January 2000 with Mathaphelo Ngaka, a crafter.

They saw the potential for marketing and at the same time reviving the traditional craft of beadwork. Mathaphelo got a few unemployed women from the Western Cape (Macassar and Khayelitsha) to make more dolls. Having received a positive response from local shops and tourists, they expanded the business to other communities in order to promote social upliftment. They now have approximately 450 women making dolls with 200 women on their waiting list, and in addition to dolls they make bags, beaded pictures, animals, cushion covers and sculptures. They constantly continue to teach and motivate the crafters, inspiring them to become recognised bead artists, and also help them learn business skills so that they can improve their social and economic status.

In 2003, the Cape Town studio of Monkeybiz received a visit from the directors of ArtAidsArt, a US non-profit organisation, who purchased dozens of dolls and returned to the USA to hold a doll sale fundraiser. With the support of a group of African-American women, the sale generated the funds needed to purchase a container. Now installed and fully outfitted, the container or studio in Khayelitsha has been christened 'The Boat' to acknowledge its role as a place of safety and support for female artists, another social outreach project. The collaboration between Monkeybiz and ArtAidsArt has continued to bear fruit and in 2004 ArtAidsArt hosted the only US exhibit of 'Positively HIV' in Pasadena, California, and held a second sale of bead art to fund the Monkeybiz Wellness Clinic. They formed an Aids Support Group in their building in Cape Town. The women have formed a sewing group and they are busy customising denim jackets, making HIV Love Letters and T-shirts. The artists have formed a non-profit company, so that all profits go directly back into the communities and the women benefit. Carrol Boyes stocks Monkeybiz artwork at her new store in New York to increase sales in order to generate more money for socially disadvantaged women. Their own-initiated Aids clinic is self-sufficient (funded with their own profits) and well attended.

**Mielie** [<http://www.mielie.co.za>] is passionate about innovative and exceptional design, job creation and the environment. This socially responsible handcraft company was founded by designer Adri Schutz in 2002 and operates according to fair trade principles. It provides sustainable employment for 50 experienced craft artists from the greater Cape Town area, allowing them to work from home and start their own businesses.

Mielie's bright, off-beat products are woven from reclaimed pre-consumer textile waste strips from local T-shirt factories, employing a unique combination of traditional fibre-based craft techniques. The finishes on these fashionable products are also locally produced. Mielie specialises in home décor pieces such as rugs, ottomans and cushions, as well as handbags, carry cases and other accessories

Mielie's range of fabulous off-beat handbags and accessories are designed by Adri Schultz and handmade from recycled materials. We use as little machinery as possible, thereby creating as many jobs as we can.

Since we started in 2002, we have grown to a group of approximately 30 people who work from their homes in the greater Cape Town area, some of whom have epilepsy.

Working from home means that mothers can be with their children and transport costs are kept to a minimum. We all meet once a week to drop off completed products, check quality and receive new orders.

To make our products we employ many age-old and time-consuming fibre-craft techniques, such as hooked rugging, crochet and knotting. Mielie works with strips of cotton, hooking it through a backing material.

Adri's enterprise makes bags of different sizes, surface designs and other furniture items in this same technique.

Why Mielie? Mielie is Afrikaans for corn, the staple diet of most South Africans, and probably the first item on most of the weaver's shopping list. The hooked rug products also feel like kernels on a corn cob.

**About the Indalo Project**

Indalo's partnership model connects professional designers and a seasoned marketing team with local craft producers to drive the innovation and sales of cutting edge handcrafted ranges. We believe that extraordinary products can be created when accomplished, market-driven designers join forces with skilled craft artists. Indalo will not only support partner organisations in direct sales, but also in developing focused and proactive marketing strategies. Our objectives? Long-term relational investment, grassroots skills advancement, evidence-based sustainable job creation and the transfer of design and marketing expertise.

The Indalo Design & Marketing Intervention Project was initiated and is curated by Streetwire Artists Collective. The project seeks to address the key market access barriers facing grassroots crafters in Cape Town. By pairing professional designers, with a wealth of design and product marketing experience, with the craft producing organisations, the project aims to develop sustainable, market-driven craft organisations that can effectively produce, market and sell their wares in the local and export craft markets.

The mandate was to work with 9 distinct craft organisations, the ranges now include 11 Studios from primary project producers to auxiliary producers. The studios include:

Mielie, Nuno, Indalo Development Studio (Joseph Diliza managing and including Sharon Bonzaaier Designs,) Streetwires, Netshomi Zam, Wolonani, Motacraft, Iziko Lo Lwazi, Beloved Beadwork, Shumba, Wireworx and Right Mukore WoodWorks.

Liane Mulder, Project Manager, explains the genesis and development of the project.

**Why was it started?**

Streetwires has become recognised as one of the most successful craft organisations in South Africa. Successful in terms of design, process development, production and marketing of craft. The Indalo Design & Marketing Intervention Project looks to build on this success through using our experience to significantly increase the potential sustainability of craft organisations we work with while broadening the range of craft product Streetwires works with and sells.

As Streetwires we have seen how effectively professional design intervention with craft organisations can be in creating saleable craft. Through coupling experienced designers who are in touch with the market place with skilled crafters who understand the materials they work with, ranges can be created that have a much greater chance of being successful both locally and internationally.

**What is the role of marketing in the project?**

The focused marketing of the products is critically important. From our own experience in the industry we believe this type of intervention is one of the most effective mechanisms in creating long term success for craft organisations. Streetwires has built up an established sales and marketing team that sells to corporate and retail clients both locally and internationally. Leveraging off our seven years of experience and developed client relationships we have the capacity to provide marketing assistance and advice for the ranges developed. This would be done both through direct sales brought in by Streetwires and in Streetwires working in a mentorship role with the individual craft organisations to develop their marketing efforts.

**What social impact has Indalo Project had?**

Through focusing on the front end of 'design for sales' we ensure that the development of craft organisations is demand-driven rather than 'donor'-driven. We ensure that development is sustainable and related to the long-term success of each organisation. This maximises

- the income generation potential,
- the artistic and other development opportunities for the artists and
- the wider social impact in terms of poverty alleviation and sustainable job creation.

We believe in working with people to empower themselves, create and build their own organisations. In essence Streetwires has become a hub of entrepreneurship both in our processes and design.

Through the Indalo intervention we will promote this philosophy, by example and in action looking to work with the organisations and individuals so that they themselves will be equipped to grow their organisations and others.

Success attracts success – in design intervention, focus is brought to bear on Streetwires and each craft organisation we work with. Through launch and showcasing, the craft organisations are exposed to new clients and other designers who are then opened up to the potential of working in the different mediums.

The craft industry has become recognised as one of the key areas in which sustainable job creation and poverty alleviation can be effectively addressed. Design development is one of the critical areas through which to do this. Over the last 10 years there has already been substantial development in design sophistication. The potential however is only just beginning to be realised in actual product coming in to market.

**How is the project sustainable?**

Creation of successful ranges will have an immediate impact in terms of direct sales and on a longer term basis, each organisation will be enabled to develop further ranges, having worked with the individual designers and having experienced the success that comes through design development translating into sales.

Innovation – We're looking to do something extraordinary. The aim of the project will be to create original, unique ranges that are cutting edge in the market. There is huge scope for creating more sophisticated design in craft in South Africa. Drawing on the huge depth of traditional craft design that is only now beginning to be tapped to create contemporary craft, we are able to create value based on historical culture. This is a very exciting field.

Appropriately named the Indalo Project – indalo is a Xhosa word for creation or nature – through this initiative Schofield aims to shift craft to a more sophisticated design and decor landscape and to boost the sale of craft.

(10)

**QUESTION 12.3**

**QUESTION TYPE/COGNITIVE SKILLS: Analysis (3 marks)**

- LO 1 AS 2.2**      **Display knowledge and appreciation of aesthetics and functionality throughout the design process.**
  - LO 2 AS 1.4**      **Demonstrate an awareness of the various materials and production processes relevant to the chosen discipline/s.**
  - LO 3 AS 3.2**      **Demonstrate an understanding of responsible design by taking into consideration human rights and environmental issues throughout the process.**
- LEVEL:              Higher (3 marks)**

**QUESTION 12.4**

**QUESTION TYPE/COGNITIVE SKILLS: Comprehension (2 marks), Application (2 marks), Analysis (2 marks)**

- LO 1 AS 2.1**      **Display knowledge and appreciation of responsible design by taking into consideration human rights issues throughout the process, such as: use of materials that are safe and accessible to all; environmental issues.**
  - LO 3 AS 1.4**      **Investigate, reflect on and interpret information from a variety of sources that show global influences in shaping the development of design.**
  - LO 3 AS 1.5**      **Analyse, interpret and critically reflect on examples and relate them to their cultural, historical and contemporary contexts.**
  - LO 3 AS 2.1**      **Demonstrate an understanding of the ways in which design can be used to reinforce or challenge social, cultural, environmental and ethical issues.**
  - LO 3 AS 3.2**      **Demonstrate an understanding of responsible design by taking into consideration human rights and environmental issues throughout the process.**
- LEVEL:              Lower (2 marks) Middle (2 marks) Higher (2 marks)**

The answer should take into account varying interpretations, but should cover issues like building on indigenous skills and production methods, empowering those who cannot work in formal employment, low initial capital expenditure and equipment, small batch production, works with growth of tourism.

(6)  
[25]

**50 marks**

**Total: 150 marks**