



Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

SEPTEMBER 2015

**DESIGN P1
MEMORANDUM**

MARKS: 100

This memorandum consists of 31 pages.

SECTION A: DESIGN LITERACY**QUESTION 1 (30 marks)**

- **Understand design theory and use design terminology correctly.**
- **The recognition of the characteristics of each movement in all four categories of design.**
- **Understand and interpret signs and symbols, stereotyping, bias and prejudice in design.**

1.1 1.1.1 (Allocate 6 marks)

Candidates must discuss THREE of the given elements and principles.

ELEMENTS**Colour:**

- The entire 'skin' or body of the horse is made up of a single colour – brown. This brings unity to the design so that as the horse is seen as a single unit rather than a series of working parts. ✓
- The mane and some of the textural and structural lines are a light beige in colour. The beige has been used as a contrast to break the monotony of the overall brown. ✓

Line

- Geometric and organic lines encircle the body of the horse. The geometric lines create a feeling of solidity and structure, while the repetition of organic wavy line gives the puppet a lively appearance. ✓
- The repetition of line leads the eye around the design. There is repetition of lines around the body as well as along the back of the horse and down the face. This adds to the unity of the design and gives the feeling of movement. ✓
- The line of the bridle that curves backwards around the lower part of the face of the horse breaks the directional line and leads the eye back to the body. The downward repetitive line of the mane echoes the downward pointing face of the horse. This directional line helps to unify the bottom half of the design with the top half. ✓

PRINCIPLES**Emphasis:**

- There is more emphasis on the head, neck and upper part of the horse due to greater contrasts of brown and beige. The mane is light beige and creates a solid shape. This draws attention away from the body towards the head. ✓
- There is also a greater attention to detail in the head. For example the small dark eye of the horse creates a strong focal point which immediately captures the viewer's attention as do the expressive, organically formed ears. The organic shape of the ears brings a lifelike quality to the puppet. ✓

Proportion and scale:

- The design principle 'proportion refers to the comparative harmonious relationship between two or more of the elements such as size, colour and quantity. The size of the body of the horse is in proportion to the size of the legs ensuring that the different parts appear harmonious in their relationship to each other. This ensures that the puppet is seen as a single unified entity by viewers. ✓
- It could be argued that proportionally the head is too small in relation to the rest of the body which makes it work less harmoniously with the main body of the horse. But it could also be argued that this is deliberate in that it draws the attention away from the main working parts of the horse, the legs, towards the more delicate detail of the head. ✓

Credit any well-reasoned answer.

(6)

1.1.2 (Allocate 2 marks)

Any one of the following THREE Gestalt principles can be applied to the design in FIGURE A.

DEFINITION OF A GESTALT (PRINCIPLE)

The word Gestalt is German and can be translated as 'seeing the whole picture all at once.' It is based on the idea that the whole is more than the sum of its parts.

THE GESTALT LAW OF UNIFORM CONNECTEDNESS

This law states that elements that are connected by uniform visual properties, (such as line or colour), appear more connected, i.e. they appear as a group or chunk of information. ✓ In the War Horse the uniform visual property that appears throughout the design is the use of brown. This has the effect of making the horse appear as a single solid form. ✓

THE GESTALT LAW OF PROXIMITY

This law states that elements that are close together are seen as more related than elements that are further apart. ✓ The lines on the horse are close together and appear to form a grid within which the body is contained. ✓

THE GESTALT LAW OF SIMILARITY

This states that a group of elements that are similar, are seen to be more related than elements that are not. They may be similar in one or more of the following elements: size, shape, colour, texture or form. ✓ In the design of the War Horse the repetition of the element line helps the eye to group elements so that the image appears unified and therefore easier to read as a shape and to understand. ✓

Credit any other valid Gestalt principle that is correctly applied and well-reasoned.

(2)

1.1.3 (Allocate 2 marks)

CATEGORY OF DESIGN:

- The 'War Horse' is a puppet that exists as a form in space. ☒ This places it in the category of Three-dimensional Craftwork. ☒
- As part of a set design it also falls within the category of Environmental Design. ☒

(2)
[10]

Q1.1 LEVEL	COGNITIVE SKILLS	WEIGHTING	QUESTIONS	MARKS
Lower order	Observation/ Comprehension	30%	Part of 1.1 .1 and 1.1.3	1+2
Middle order	Application	40%	Part of 1.1.1 and Part of 1.1.2	3+1
Higher order	Analysis Synthesis Evaluation/ Deduction	30%	Part of 1.1.1 and Part of 1.1.2	2+1

1.2 1.2.1 (Allocate 8 marks)

SHAPE: (Allocate 2 marks)

- FIGURE B makes use of flat, stylised, geometric shapes in the form of triangles of various sizes. These can be seen in the shape of the roof on the African huts, the smaller triangles above the huts as well as the elongated triangles above and below. The different sizes and shapes of the triangles bring variety to the design. ☒

PATTERN: (Allocate 2 marks)

- Pattern occurs when shapes are repeated. In FIGURE B patterns are evident in the alternating bands of geometric shapes in the form of different sized triangles. The repetition of these patterned bands gives the work unity. ☒
- The emphasis on the repetition of similar shapes to form a horizontal pattern is also apparent in the repeated, flat, organic shapes of the animals at the bottom of the design. One of the two rows of organic animal shapes, is a mirror image of the other. Together they provide a pleasing contrast to the rigidity of the varied rows of geometric patterns. ☒

CONTRAST: (Allocate 2 marks)

- Contrast is created through the use of the complementary colours, orange and blue. The predominantly orange band of huts contrasts with the elongated blue triangles. Orange and blue are also repeated in the rows of triangles above the huts. ☒

- Contrast is also created between the bands of different geometric shapes and the organic, stylised shapes of the animals. This creates a pleasing tension without upsetting the unity of the design. ☒
- There is also a contrast between the two rows of animals in that one row is the mirror image of the other. This creates the effect of a reflection in water, because of the blue elongated triangles behind the animal shapes. ☒

INSPIRATION/INFLUENCES: (Allocate 2 marks)

- The geometric patterns, stylised cattle and indigenous huts with their pitched roofs suggest a strong Xhosa influence. ☒ This is further emphasised by the fact that the design was created in the Eastern Cape. ☒

Credit any other well-reasoned answer.

(8)

1.2.2 (Allocate 2 marks)

POSSIBLE SUITABLE ENVIRONMENTS:

- The bold use of colour and the geometric shapes give the wallpaper design an African feel. ☒ An African game lodge with an emphasis on natural building materials and colours would complement the design. It would add to the natural warmth of the materials, which could include, wood, stone and thatch. ☒
- The contemporary African wallpaper design would also complement the interior of up market boutique hotel which has a minimalist feel and bright warm African traditional craftwork, such as woven fabrics, pots or carvings. ☒ In this environment contemporary designs that incorporate traditional craftwork will also work well with the wallpaper design. Examples could include, the Zulu Mama chair by Haldane Martin or a pot by Imiso. This would extend the theme of the wallpaper and enhance the wallpaper design without being overpowering. ☒
- Candidates may also argue that it could be used to bring any contemporary plain environment to life if it was used to create a focal point on a single wall of a room, for example a dining room or entrance area. ☒ This would work best if something else in the room echoed at least one of the colours in the wallpaper design. ☒

Credit any well-reasoned answer.

(2)

Q1.2 LEVEL	COGNITIVE SKILLS	WEIGHTING	QUESTIONS	MARKS
Lower order	Observation/ Comprehension	30%	Part of 1.2.1 1.2.2	1+2
Middle order	Application	40%	Part of 1.2.1	4
Higher order	Analysis Synthesis Evaluation/ Deduction	30%	Part of 1.2.1	3

QUESTION 2 (10 marks in total)**2.1 (Allocate 7 marks)****CREATION OF AN AFRICAN IDENTITY THROUGH THE USE OF SYMBOLISM, IMAGERY, TEXT AND LAYOUT.**

Any seven of the following:

- The word AMANDLA has strong African connotations. It means power in Swahili (Zimbabwean), Zulu and Ndebele and in this context it also symbolises the power of communication through design. ✓
- The raised, closed fist represents a black power salute which is a stereotypical African symbol of defiance and resistance. ✓
- In the poster the raised, closed fist is holding a paintbrush and reflects the Nairobi youths' optimism and belief in using creativity not only for growth, but also as a 'vehicle for social change and upliftment'. ✓
- The rows of geometric patterns in the background are part of a traditional art forms in many African cultures. ✓
- The composition is asymmetrically balanced with the focal point being the head and shoulders of a black figure. This contributes strongly to the feeling of an African identity. ✓
- Attention is drawn to the face of the figure by the strong upward diagonal of the paintbrush. It also draws attention to the African word AMANDLA in the background. The word AMANDLA is emphasized because it forms a parallel diagonal with the paintbrush. The repetition of the diagonal draws attention to the word. ✓
- The word AMANDLA also has a pattern-like quality which helps to integrate it into the diagonal rows of geometric patterns in the background. These patterns are typical of the geometric patterns found on Zulu pots and Ndebele wall paintings. ✓
- The face of the man is made up of faceted planes which give it the striking, stylised, mask-like quality of an African sculpture. ✓
- The manner in which the head and shoulders fill the full length of the design gives the figure a monumentality reminiscent of African sculptures. This monumentality is reinforced by the way the figure becomes the main focal point in the asymmetrical composition. ✓
- The eyes of the figure are focused on the downward diagonal of the paintbrush which effectively directs the viewer's eye to the bottom left-hand corner of the design and towards the fist holding the paintbrush. The fist is closed in the manner of a black power salute and conveys the message that the figure is 'creative' in line with the intentions of the designer. The paintbrush is considered a stereotypical symbol of an artist/designer and in this way the message is reinforced. ✓

Credit any valid and well-reasoned answer.

(7)

2.2 2.2.1 (Allocate 1 mark)

Stereotyping:

- A 'Stereotype' is a fixed impression or idea of a group or individual based on the experience of an individual that is portrayed as true. Frequently seen in advertisements showing groups of people or individuals as having certain characteristics, or fulfilling prescribed roles. Stereotyping is generally more negative in its message than positive and therefore it should be avoided in design as it can be insulting. ☑

Credit any well-reasoned answer.

(1)

2.2.2 (Allocate 2 marks)

Any TWO of the following or any other well-reasoned answer:

- Viktoria Modesta Moskalova breaks the stereotypical view of a model as someone who has to be physically perfect. ☑
- Viktoria Modesta also breaks the stereotypical view that a prosthetic is not a thing of beauty by creating a range of eye-catching prosthetic designs that complement her outfits and make a fashion statement all of their own. ☑
- Many disabled people are seen as being incapable of leading a normal life. Viktoria Modesta breaks this stereotype and forces people to look at disability in a new way. ☑

(2)

Q2 LEVEL	COGNITIVE SKILLS	WEIGHTING	QUESTIONS	MARKS
Lower order	Observation/ Comprehension	30%	Part of 2.1	3
Middle order	Application	40%	Part of 2.1.1 2.2.2	2 + 2
Higher order	Analysis Synthesis Evaluation/ Deduction	30%	Part of 2.1.1	2 + 1

[10]

QUESTION 3 Candidates must answer either **QUESTION 3.1** or **QUESTION 3.2.**
(10 marks in total)

3.1 (Allocate 10 marks)

Candidates must write a single essay, without the use of bullets, to show their ability to evaluate and compare through the application of factual information. Bullets have only been used in this memorandum to facilitate marking.

**EXAMPLE: THE ROMAN FORUM AND THE FORUM SHOPS MALL,
CAESAR'S PALACE, JOHANNESBURG.**

INSPIRATION/INFLUENCES:

Both the Roman Forum and the Forum Shops Mall at Caesars Palace had their roots in ancient market squares such as those of Greece. ☑ The Forum Shops Mall design was also inspired by the covered medieval market places that existed between the 12th and 15th centuries. ☑ The Roman Forum was a smaller, more orderly version of the original Greek town square. It was a market or trading place whose goods would have been inspired by the needs of the community. ☑ The Forum Shops Mall was also inspired in its theme and architecture by the grandeur of the Roman Forum. It is designed to evoke the magnificence and grandeur of a market place at the height of the Roman Empire. Visitors entering through the hall's grand archway are greeted by rows of marble columns, elegant fountains and storefronts crowned with statues of Roman philosophers and military heroes just as in the Roman Forum. ☑ The function of both the Roman Forum and the Forum Shops Mall was inspired by the needs of their respective communities. ☑ The Roman Forum served the needs of the people of ancient Rome and the development of the modern day mall was initially a response to the large housing complexes that developed outside business districts in urban areas after the Second World War. It responded to the need to have essential shops such as grocery stores and pharmacies within close proximity of each other. The Forum Shops luxury shopping mall of Caesar's palace is part of the Caesar's Palace Hotel and Casino complex and is a response to the needs of the hotel and casino guests. It is also a way to entice people to the complex in general. ☑

PURPOSE/FUNCTION:

The Forum served one of the most vital functions of ancient states. It created and continually reinforced a sense of community belonging and a social hierarchy. In this way it was central to the function and identity of the city of Rome and the wider Roman Empire. ☑ It began as trading place and gradually evolved into the key political, ritual and civic centre of Rome. It was a relatively small space but it served all sectors and levels of Roman society, from priests and politicians to prostitutes. ☑ It contained a variety of temples where community rituals could be performed and observed. This served the larger purpose of group unity. For example the temple of Castor completed in 484 B.C.E. ☑

The Forum Shops Mall is not just a shopping centre, it is also a cultural hub to entertain, serve and assist. ☑ It may not be a judicial centre in the style of the Roman Forum, but it does include service centres such as shoe repair, postal, banking, internet cafes, eye care, travel agents, health and beauty and emergency medical help. ☑

Both the Roman Forum and the Forum Shops Mall were designed to excite the senses and entertain. At the peak of Roman power the Forum was used for triumphal marches. Prominent Romans reinforced their status through a display of monumental art and architecture around the Forum and victories were celebrated by building triumphal arches. ☑ The arch of Septimius Severus is one of at least three triumphal arches built at the Forum. ☑ The Forum Shops Mall on the other hand is not about propaganda and political display. It is designed to encourage people to stay and shop and also enjoy themselves. To achieve this the Forum Shops is themed to appeal to the senses. Entertainment areas consist of child play spaces, virtual reality games, live shows, movie houses and restaurants and fast food venues. They have achieved this by modelling it on the grandeur and scale of the Roman Forum around large areas of open space like the plaza at the Roman Forum. ☑ Visual appeal is through colour, posters, textures and a variety of shapes and forms. Aural senses are stimulated through music. Food courts which provide an array of fast food and restaurants appeal to taste and smell. ☑

Both the Roman Forum and the Forum Shops Mall were designed to protect shoppers from the weather and danger. The Mall is monitored by a 24 hour closed circuit security system. The Forum Shops Mall is also air-conditioned and heated in the manner of all modern day closed malls. ☑ The Forum Shops Mall shops, restaurants and entertainment areas take place within the mall. The Roman Forum provided cover in the form of basilicas and covered walkways. ☑

LAYOUT/PLAN:

Situated in the Tiber valley the Roman Forum is a rectangular forum (plaza) surrounded by the ruins of several important ancient government buildings. It is at the centre of the city of Rome. It was entered through a large triumphal arch, the Arch of Titus, along a road known as the Via Sacra (the Sacred Way). ☑

Like all Roman Fora it had a Temple of Jupiter at the north end. The forum complex also contained a number of other temples, as well as several Basilicas. The basilica was a public building. A basilica would have functioned as a meeting place for administration, or as a law court or market place. It also provided cover from the weather. ☑ The Forum Shops Mall floor plan consists of a central plaza and three halls of stores extending from it like spokes. Each area features the mall's signature roman style barrel-vaulted sky ceiling. ☑

The Roman Forum was all at ground level but the Forum Shops Mall is multi-storeyed, to save space. The Forum Mall layout is also true to the spatial arrangement of modern closed malls in that it consists of different sized spaces. Small intimate areas contrast with large open areas. ☑ The different areas or units are interconnected through a series of walkways.

Other contemporary malls are open and all the shops and service areas are at ground level in the style of the Roman Forum. Modern day research has shown that consumers prefer shopping at ground level. ☑ In an open mall the shops will be at ground level and the walkways will be covered. The Roman Forum also grouped a variety of buildings and services together even though they were not all under one roof. ☑

MATERIALS AND BUILDING TECHNIQUES:

The Roman Forum was built on marshland in the Tiber Valley. The land was first drained by a large covered canal with a vaulted covering known as the Cloaca Maxima, ("Great Drain"). This was accompanied by a deliberate landfill project during the sixth century B.C. to create usable dry levels on which the Forum was built. The Forum Shops Mall was built on a stable land mass. ☑

Forum buildings, like all Roman buildings are based on the arch, the vault and the dome. A typical example is the Roman basilica. A basilica is constructed from a series of arches joined together to form a building with a large open interior space and an arched roof on the inside. They had clerestory windows, an apse at one end and interior colonnades that divided up the space into aisles. The oldest known basilica, the Basilica Porcia, was built at the Roman Forum. ☑ Concrete and bricks began to replace stone structures. Marble was used more as a cladding for concrete or as tiles. The central square of the Roman Forum was covered in Travertine marble tiles. Ceramic tiles were used for roofs. The Romans developed concrete as we know it today and it was made from a mixture of limestone, sand, water and 'tuffo', (volcanic rock). The volcanic rock not only made it crack resistant but also reduced the carbon emissions of the concrete. ☑ The Forum Shops Mall at Caesars Palace also makes use of marble and concrete. There are roman arches and clerestory lighting. Although it is multi-storeyed it is reminiscent of a basilica with its round arches. Corinthian/composite marble columns in the Roman style add to the Roman theme and help create the sense of Roman grandeur. The ceiling is domed. Sophisticated modern uplighting adds to the dramatic effect of the Roman style interior. The central plaza's domed ceiling is also lit by the same ColourReach Powercore fixtures installed both on store façades and on the Fountain of the Gods in the plaza's centre. ☑ Due to the broad colour palette offered by the Philips Colour Kinetics fixtures, the mall's sky transitions from dark blue to pink to amber in the morning, while evening shoppers are treated to a fiery red sunset. ☑

Credit any other well-reasoned information.

(10)

Q3.1 LEVEL	COGNITIVE SKILLS	WEIGHTING	QUESTIONS	MARKS
Lower order	Knowledge, Comprehension	30%	Part of 3.1	3
Middle order	Application	40%	Part of 3.1	4
Higher order	Analysis Synthesis	30%	Part of 3.1	3

[10]

OR

3.2 (Allocate 10 marks)

Candidates must write a single essay, without the use of bullets, to show their ability to evaluate and compare through the application of factual information.

PATTERN:

Both FIGURE A and FIGURE B combine patterns made up of organic and geometric shapes. In FIGURE A the traditional Zulu zigzag pattern is repeated around the base of the hat in contrast to the repetition of the leaf/petal shape around the top. This brings rhythm to the design. FIGURE B on the other hand makes use of a smaller and less dominant zigzag pattern around both the base and the top of the hat which has a unifying effect. In FIGURE B the repetition of a small flower shape also forms a pattern, but it appears less regular in that the organic flower shapes are made up of different colours. ✓

The combination of organic and geometric pattern brings variety and contrast to both designs. Further the patterns in FIGURE A are simpler, purer and bolder than the patterns in FIGURE B. This is in keeping with the different sizes and shapes of the hats. FIGURE A is larger and the shape is purer which lends itself to simple, bold, patterns. The use of such large patterns in FIGURE B would overwhelm the smaller and more delicate hat design. ✓

COLOUR:

Both FIGURE A and FIGURE B make use of complementary colour to create contrast and emphasise the decorativeness of their designs. In FIGURE A the orange zigzag contrasts with the light navy blue of the hat body. In FIGURE A there is also a strong contrast between the primaries, yellow and blue which gives the design a striking quality. In FIGURE B strong contrasts are created by green leaf patterns contrasted against a complementary red background. In FIGURE B there are also contrasts between blue and yellow, but again it is not as definite. The use of yellow behind a small area of blue foliage is used for emphasis and to also bring clarity to the design. ✓

In both FIGURE A and FIGURE B colour is used to unify the design. In FIGURE A yellow and orange is repeated throughout. The yellow in the band at the base is repeated in the yellow stitching on top. The orange zigzag is repeated in the orange thread used to secure the yellow thread in the leaf/petal design on top. In FIGURE B red is the main unifying colour as it is the overall base colour of the hat. The repetition of black in the two separate bands of zigzags and in other decorative detail adds to the effect. The green of the foliage forms a band/line along the sides of the hat and is repeated in the ribbon at the back. ✓

FORM AND FUNCTION:

Because both FIGURE A and FIGURE B have decorative surface patterns it cannot be said that 'form follows function'.

The form of FIGURE A is completely different to that of FIGURE B. In FIGURE A the top part of the hat curves up and outwards creating a vase shape. The use of clean, curving geometric line emphasises the purity of the form, which gives the design and a stately feel. This design will make the wearer appear more dignified. ✓

FIGURE B is shaped to hug the head of the wearer and the form does not have as much height as FIGURE A. In this respect it makes the hat appear less formal, which is further emphasised by the very decorative, but less formal arrangement of the decorative surface patterns. ✓

MOVEMENT:

In FIGURE A movement is created through the repetition of the zigzag pattern around the base of the hat. This creates a pleasing rhythmical effect. The petal/leaf shape repeated in the top half of the design adds to the feeling of movement in that the tip of the shape folds over the top rim of the hat at regular intervals, drawing the eye downwards towards the base. ✓

In FIGURE B movement is also created through the repetition of the zigzag, but unlike FIGURE A this does not form the dominant feature of the design. The flower shape is repeated in white, blue and yellow which provides some movement, but because of the different colours there is less of a rhythmic feel to the pattern and therefore less movement within the design. ✓

AESTHETIC APPEAL:

In FIGURE A the effective use of clean lines and limited colour scheme create a very striking effect. Because of this the design has a strong feeling of unity which adds to its aesthetic appeal. ✓

Because of a more cluttered design FIGURE B does not have the same flow and rhythm as FIGURE A. Its aesthetic appeal lies in its use of brightly coloured floral detail and effective use of colour which creates a rich decorative effect. This is further emphasised by the less regimented shapes of the floral and leaf shapes. The hat itself is softer in appearance and the form is less rigid which serves to draw even more attention to the organic plant shapes that create the surface design. While not as immediately noticeable as FIGURE A, there is a strong unity of design in FIGURE B which is created through colour, shape and pattern. This adds to its aesthetic appeal. ✓

Credit any other well-reasoned answer.

(10)

Q3.2 LEVEL	COGNITIVE SKILLS	WEIGHTING	QUESTIONS	MARKS
Lower order	Knowledge, Comprehension	30%	Part of 3.2	3
Middle order	Application of elements	40%	Part of 3.2	4
Higher order	Analysis Synthesis Evaluation	30%	Part of 3.2	3

TOTAL SECTION A: 30

SECTION B: DESIGN HISTORY

- **History of design: Including Greece, Rome, Gothic, Baroque, Neoclassical, Victorian, Arts and Crafts, Art Nouveau, Bauhaus, Art Deco, Scandinavian, De Stijl, Pop/New Age.**
- **An overview of architecture, in which classical examples are compared with contemporary works.**
- **Visual Analysis (unseen examples of design): basic terminology that describes and underpins design and characteristics, to be used with confidence.**

QUESTION 4 (30 marks)

4.1 (Allocate 20 marks in total)

LEARNERS MUST CHOOSE TWO MOVEMENTS/STYLES/TIME PERIODS FROM THE GIVEN LIST.

NOTE: Candidates must write using an essay format showing constant linking of their answer to the quote. If facts are not linked to the quote a total of 6 marks can be allocated for lower order knowledge.

TWO POSSIBLE MOVEMENTS: DE STIJL AND BAROQUE:

DE STIJL:

The statement is true for the De Stijl movement. De Stijl artists rejected figurative art and strived to achieve fundamental simplicity and purity through abstraction. ☒ This emphasis on simplicity led to pure and simple forms and lines which emphasise the structure and function of objects. ☒ No unnecessary details are used to distract from this structure. ☒ The aesthetic appeal of these works lie in their perfectly balanced, simple structures. ☒

They **aim** to create a classical style that emphasises clarity, simplicity and order. ☒ The purity of form and the clean lines of their works create a quiet beauty that does not need any extra pattern or decoration or texture to attract attention. ☒

Cezanne and the Cubist's reduction of form to basic geometric shapes **influenced** the De Stijl movement. ☑ They were also influenced by Dutch logic and order and by the mathematical philosophies of Schoenmaeker, a Dutch philosopher and theosophist. ☑ These influence all emphasise function rather than decoration. ☑

De Stijl artists and designers only used the three primary **colours**; red, blue and yellow and the three 'non colours'/neutrals, black, grey and white in their work. ☑ The use of only these basic colours allows the structure of the work to be evident. At the same time the works are bright, strong, pure and visually appealing. ☑

De Stijl art and design is purely abstract with no reference to the outside world. This abstraction together with **smooth surfaces** help to express a sense of calm and order. ☑ Because there is no texture or surface pattern the attention is placed on the underlying structure or function of a product.

Lines had to be in a **horizontal and vertical** relationship only also adding to the sense of order and stability. ☑

Their belief in **balance, harmony, order, logic and purity** ☑ ensures works that are free of any gimmicks. ☑

Architectural spaces were arranged according to a system to create function and to ensure harmony. ☑

All **shapes/forms** are abstract blocks/shapes of **squares and rectangles** ☑ in keeping with the aim of simplicity and geometric order.

The **Red and Blue Chair by Gerrit Rietveld** ☑ is functional but at the same time aesthetically pleasing because it is a perfectly balanced open structure ☑ design with supporting parts jutting out into the surrounding space in a visually exciting way. ☑

AND/OR

BAROQUE:

The statement is not true for the Baroque style as this style relies on dramatic, elaborate surface effects to achieve its aims. The Catholic Church **aimed** to use Baroque art and design to reach out to the people and promote their faith in reaction to the Protestants who were working hard to spread their beliefs. ☑ They believed that the dramatic, emotional quality of Baroque design would appeal to the senses of people and would attract them back to the Catholic religion. ☑ Baroque art also appealed to the wealthy and the aristocracy who were drawn to its drama, scale and ability to impress. ☑ Both the Catholic Church and the wealthy aristocracy used the impressive, grand surface effects of Baroque art to impress and were not interested in pure functionality. ☑

Baroque architecture aimed to apply the architectural elements to create a sense of grandeur and drama rather than to expose the function and structure of the building. ☑

Stylistically Baroque shows the **influence** of Medieval and Renaissance styles. ☑ The emotional character of the Gothic Age is seen in the exaggeration of poses and the use of rich colour and pattern. ☑ The solid, monumental figures and architectural features like columns and colonnades of the Renaissance are borrowed but reinterpreted to fit into curving and bulging structures and scenes. ☑ Baroque design is characterised by a **rebellion against the order and restraint** of the Renaissance period. ☑ Many designs refer to religious content, (also a move away from the pure Renaissance focus on logic and reason). ☑

Baroque designs aim to attract and impress using multiple devices such as **dynamic compositions**, ☑ **theatrical effects**, ☑ strongly contrasting colour and **interplay between light and shadows** ☑. The viewer is confronted by complicated structures and **elaborately decorated** surfaces and therefore these designs cannot be said to rely on function for its aesthetic appeal. ☑ Surfaces and spaces show **angels, cupids and saints** as sculptures, figurines, wall décor and fountains. ☑ Ferdinand Porsch would consider Baroque design to be full of 'gimmicks' that detract from the function. ☑

Baroque buildings are **colossal** with dramatic proportions, ☑ displaying **massive staircases** ☑ and columns and **complicated**, elaborate decorations. ☑ Baroque style is also known as the 'Heavy Style' ☑ A variety of swelling rounded and curvy forms were used. ☑ Windows are irregular and columns are often twisted to form fantasy figures. ☑

Designers made use of **wealthy, glossy materials** such as marble, gilding and bronze. ☑ There are **dramatic combinations of architecture, sculpture, silver, silks, rich tapestries and luxurious finishing**. ☑ The furniture designs are imposing and are the work of sculptors not carpenters. ☑ Lots of ovals with sweeping highly ornamented decoration are visible. ☑ The use of gold, precious metals, mirrors and marble predominates. ☑ This dominant use of lavish, extravagant materials also focus the attention on surface detail rather than on function. ☑

The **Hall of Mirrors at Versailles by Hardouin Mansart and Le Brun (1678)** ☑ is a good example of Baroque design's dramatic combination of glossy, shiny surfaces and luxurious finishing. The viewer is overwhelmed by many mirrors and crystal chandeliers as well as a spectacular, painted ceiling filled with dramatic scenes and dominated by curvilinear gold edging. ☑ These elaborate decorations, lavish textures and complicated curvilinear forms completely conceal the inner structure of the building. The structure is a pretext to use decorations and bizarre ornaments. ☑ (2 x 10)

[20]

Q4.1 LEVEL	COGNITIVE SKILLS	WEIGHTING	QUESTIONS	MARKS
Lower order	Observation/Recall/Comprehension	30%	Part of 4.1	6
Middle order	Application	40%	Part of 4.1	8
Higher order	Analysis Synthesis Evaluation	30%	Part of 4.1	6

4.2 4.2.1 (Allocate 10 marks)

Candidates must compare point for point using paragraphs and may not write in table form or use bullets.

INFLUENCES:

The Glaspaleis in FIGURE A shows the influence of De Stijl with emphasis on the vertical and the horizontal and geometric shapes. This is apparent in the visible grid-like structure on the outer surface of the building which divides the exterior surface into a series of rectangles. ☑ It reflects the Bauhaus Machine Aesthetic because the design has been reduced to the essentials and the materials have all been mass produced in the tradition of 'Machine Aesthetic Design'. The lack of colour and reference to historical detail is also part of the Bauhaus/Modernist tradition. ☑ FIGURE B on the other hand is a perfect example of Deconstructivist architecture which focuses on exploring the relationship between the different parts of a building. Gehry has shown the building as a series of planes of steel and glass that have been pulled apart to show what lies beneath the surface. The planes lie in different directions in line with the Deconstructivist theory of interaction of opposites to reflect a naturally unstable environment. This adds to the feeling of movement and space within the design. ☑

(2)

FUNCTIONALISM:

FIGURE A is a perfect example of 'Form follows Function'. The beauty is in the purity of the design which has been streamlined to suit its function. It also has no additional decorative detail or ornament because decoration is not functional. The detail lies in the grid like structure underlying the transparent glass surface of the building. ☑

FIGURE B has rejected the Functionalism of Modernism as cold and impersonal. Instead of an authoritarian design formula Gehry has emphasised creativity, variety and individuality. This is apparent in the twelve separate 'sails' that encase the building and which obscure its function. In this way the design rejects pure function and the traditional ideas of harmony, unity and stability. Even viewers participate in the creative process of the building as they wonder at its unusual design. It has been described as a "cathedral of light" and a "Glass Cloud". ☑

(2)

SHAPE AND FORM:

FIGURE A reflects the International Style in that the design is simple and is made up of pure geometric shapes; the cube, the rectangle, the square and the circle. The building is square in shape and this is repeated in the metal grid that forms the free façade. The repetition of the square gives the building unity. ☑ In contrast the design in FIGURE B shows the form of the building as fragmented and distorted. It reflects a move away from the authoritarianism of Modernism and its traditional ideas of harmony, unity, stability as well as the concept of the perfect form. ☑ This is evident in the sharp, clashing angles, skewed shapes and incomplete forms.

(2)

Forms are set within conflicting geometries and intercepting planes. Flat surfaces appear to cut across each other. This gives the design a dynamic quality. This is in contrast to the more harmonious, structured feel of FIGURE A. which epitomises the 'universally appropriate solution of the International style. ☑ Despite this unity in FIGURE B is created through the repetition of the planes and Like other Deconstructivist works this design blurs the line between architecture and art. ☑

(2)

SPACE:

Both designs have a sense of weightlessness due to the use of glass and metal building materials. FIGURE A reflects the modernist focus on weightlessness through the use of the metal framework and ribbon windows that form a free façade all around the exterior of the building. FIGURE B fragments the traditional boxlike exterior so that the emphasis is no longer on mass. ☑ In FIGURE A the space is clearly defined, structured and boxlike giving the building a safe solid feeling. This is further emphasised by the typical flat roof of Modernist architecture. The undulating outline of the exterior of FIGURE B gives the impression of a space that cannot be defined. This gives the building a dynamic quality. It is also reminiscent of the Japanese style that seeks to integrate the interior and exterior spaces. ☑

(2)

LINE:

In FIGURE A the horizontal lines of the exterior metal grid are more dominant and give the appearance of a series of ribbon windows running around the surface of the building. The squares created by the horizontal and vertical lines of the grid echo the square shape of the building and create a feeling of unity. The grid also creates a feeling of movement as the repetition of the squares direct the eye around the building. ☑ In FIGURE B the broken lines of the building create a softer more feminine effect than the more masculine square pattern of the building in FIGURE A. Also in the manner of Post Modern architecture the space in FIGURE B appears to have been cut with a diagonal focus which gives the building a sense of movement or dynamism. This also creates a sense of visual chaos which gives the viewer a feeling of uncertainty, unease and shock or disruption as opposed to the clearly defined form of FIGURE A. ☑

Consider any other well-reasoned and supported facts.

(2)

[10]

Q4.2 LEVEL	COGNITIVE SKILLS	WEIGHTING	QUESTIONS	MARKS
Lower order	Recall	30%	Part of 4.2	3
Middle order	Application	40%	Part of 4.2	4
Higher order	Analysis Synthesis Evaluation	30%	Part of 4.2	3

TOTAL SECTION B: 30

SECTION C: DESIGN IN A SOCIO-CULTURAL/ENVIRONMENTAL AND SUSTAINABLE CONTEXT

- Critically reflect on how design shapes the physical and social environment. Choose **THREE** award-winning contemporary International designers whose work demonstrates environmental responsibility.
- An understanding of the ways in which design can be used to reinforce or challenge social, cultural, environmental and ethical issues. Study **THREE** two- and/or three-dimensional South African and African craft designs, past and present whose work demonstrates social responsibility.
- Demonstrate ways in which design can be used to benefit society.

QUESTION 5 (20 marks)

Marks can only be given for EITHER QUESTION 5.1 OR QUESTION 5.2.

5.1 5.1.1 (Allocate 1 mark) SOCIALLY RESPONSIBLE DESIGN

THE ISSUE ADDRESSED BY THE SOCIAL POSTER:

The poster addresses the issue of human dignity and respect. ☒

Credit any other well-reasoned response. (1)

- 5.1.2 (Allocate 2 mark)
- The poster communicates the message that people are not objects that can be bought and sold like a can of sardines. ☒ It does not matter what culture a person belongs to they have the same rights. ☒

Credit any other well-reasoned response. (2)

5.1.3 (Allocate 3 marks)

ANY THREE OF THE FOLLOWING:

- The poster shows an image of men of different races packed into a sardine tin. The repetition of the figure turns it into the focal point. ☒
- Showing people portrayed in the same way as sardines, which are a consumer item, reinforces the written message on the rolled up lid, 'People aren't products'. ☒
- The same shaped figure has been repeated which suggests that when you stop seeing people as individuals with feelings it is easier to abuse them. ☒
- The figures are portrayed in different colours which suggests people of different cultures. This implies that the message, 'People aren't products' must apply to everyone. ☒

Credit any other well-reasoned response. (3)

5.1.4 (Allocate a total of 14 marks for one essay on two designers)

Candidates can choose a South African designer or design group and an International designer. They must be concerned with helping to bring about change in ANY social issue. Examples are: poverty; capitalisation; gender issues; health issues; social injustices; racism and marginalisation.

Note: A learner may use any example from an LTSM as prescribed in the LPG (i.e. the Woolworths Book ‘*Living with Design Daily*’ or ‘*Craft Art in SA*’ by E. Coetsee) or any documented source.

LOCAL DESIGNER**EXAMPLE (LOCAL):****THE JUPITER DRAWING ROOM** (Design Group)

- It is an award-winning South African advertising agency. ☑

They believe that:

- With the wide choice of products offered today, as well as the diverse range of media available to promote these, the need for powerful, relevant, compelling and integrated communications have never been greater.

INFLUENCES

Their campaigns are influenced by the wide range of media and variety of methods available to communicate a message. The essence of Jupiter drawing room philosophy is: ‘If you can communicate a single-minded proposition across a number of media, you stand a greater chance of your brand being noticed, remembered and acted upon.’ ☑

The agency therefore uses all the major media categories as well as new and innovative media to promote a brand, product or company, for example:

- Television and Cinema
- Outdoors: includes billboards and moving vehicles
- Graphic Design and Print: includes posters, letterheads, envelopes, business cards and packaging
- Radio: for commercials
- Digital Media: includes website design
- Campaigns: make use of a combination of the above-listed media and are set up as a long-term promotion of a product or business. ☑

SOCIAL RESPONSIBILITY:

They seriously believe in the motivation and empowerment of their workers; the agency has moved way beyond the 26% empowerment ratio in their staffing and shareholders. ☒

Several of the agency's campaigns show a commitment to the use of powerful and poignant images and slogans to address social concerns: ☒

Their Poster Campaign for the UN World Food Programme and Posters for the Musica Deaf Awareness Week. ☒

SHAPING SOCIETY

Through their multi-media approach and their involvement in campaigns that address serious social issues they increase the general public's awareness of these issues. ☒

Their Campaigns:

The UN World Food Programme

Four posters highlight the plight of the hungry and each one depicts one of the following items:

- An egg, a wedge of cheese, a plastic bag and a carrot. ☒
- Each poster uses the benefits and cliché's associated with the displayed item to bring the issue of starvation starkly to the fore. ☒

Posters for the Musica Deaf Awareness Week:

- Music evokes a certain type of feeling or emotion to those who can hear. Those who can't hear do not ever feel these feelings. ☒
- Boxer, Tank and Dog are three very powerful posters: Each image was specially chosen to represent the emotions that a particular song evokes, so that both deaf and hearing people can feel these feelings. ☒

EXAMPLE (INTERNATIONAL):

KRIVANEK: ☒ (International designer)

He aims to:

Add public and poetic dimensions to the flood of commercial messages in the modern urban landscape. ☒

Krivanek integrates the written word into built environments. ☒

SOCIAL RESPONSIBILITY

Designs monuments that celebrate groups who are ignored, shunned or marginalised by society. ☒

He gives a voice to 'embattled and stigmatised urban/city communities' as a way of reaching out to them and give them dignity. ☒

INFLUENCES

He draws the content of his project from the history of a site and also through outreach to community members. ☑

He revives the tradition of architectural inscription used on classical public buildings that for centuries featured texts to commemorate and instruct. The generously spaced classical inscriptions were usually in capital letters and written by people in power or dominant social groups. ☑

METHOD:

He combines sculpture, architecture and design to make environmental installations that commemorate the invisible outsider rather than known people.

Krivanek's text is generously spaced and carefully arranged in lines to maintain the real value of the message. ☑

Font styles are in keeping with the surrounding architectural structures to reflect the history and character of the site and to give that area a voice. ☑

His themes do not instruct, instead they reflect contemporary social issues and his messages go against the official viewpoint of the day. ☑
He works with a team of collaborators.

SHAPING SOCIETY

He enriches people's experiences of the place they live in. ☑

He increases people's knowledge of the history of a place and the events that have occurred in that place through single words. ☑

He gets people to think critically about themselves and situations in a positive way.

WORKS

'FAMILY VOICES, AUSTIN'. ☑

Aim:

To adapt and renew the signs in and above the local shop buildings. ☑

To express the collective and previously unheard public voice of the multi-generational community of mainly mothers, daughters and caregivers that make up the African-American neighbourhood. ☑

To draw attention to the myths and stereotypes of the outside world about the neighbourhood. ☑

Method:

Reuses abandoned double-sided sign structures from the area. ☑

Combines large scale 'declaratives' easily read by the outside community passing by in their cars, with longer statements in a smaller typeface aimed at pedestrians. These messages incorporate the words of mothers and caregivers from the community into the reclaimed commercial facilities. This is to make people inside and outside the community think and question the stereotypical ideas that people have about the community. ☑

Credit any other relevant examples and information.

(14)

Q5.1 LEVEL	COGNITIVE SKILLS	WEIGHTING	QUESTIONS	MARKS
Lower order	Observation/ Recall, Comprehension	30%	Part of 5.1.2	6
Middle order	Application	40%	Part of 5.1.1 Part of 5.1.3 Part of 5.1.4	1 + 3 + 4
Higher order	Analysis Synthesis Evaluation	30%	Part of 5.1.2 Part of 5.1.4	2 + 4

5.2 5.2.1 (Allocate 2 marks)

The nests in FIGURE B have been inspired by the traditional craft of weaving using natural materials. ☒ The method of weaving is not traditional, but rather mimics the way weaver birds build their nests, by cross-weaving the strands in different directions. This makes the structure of the 'Cozy Human Nest' much stronger than a traditional woven article and enables it to carry a weight which is large in relation to its size. ☒

Credit any other well-reasoned response.

(2)

5.2.2 (Allocate 8 marks)

EXAMPLE: ZULU WEAVING

ORIGINS

During the 1800's under Chief Shaka traditional Zulu baskets were woven by men. ☒

Women learned this traditional craft when their men had to go away to work in the mines. ☒

FUNCTIONS

The form and function of Zulu basketry are closely related. There are five basic shapes of woven artefacts that are constructed for domestic utilitarian purposes. ☒

These include:

The Isichumo – Water Basket (*water tight*) a rigid, bottle-shaped basket used for carrying and storing liquids (usually water), it has a lid, which fits over the neck like a cap. One of the more difficult designs to create, because of the narrow neck. Typically two sizes of this style of basket were created – a large one that would be kept in a hut and hold about 30–40 gallons of water (typically about two days' worth for a family and its animals) and smaller ones (holding about 5–15 gallons (about 50–150lbs!) that would be used to transport (on top of the women's heads and from a distance of up to 5 miles each way) water from its source to the larger container. ☒

The Isisquabetho – Winnowing/Grain Basket (*not water tight*) this is a large flat bowl (up to four feet or more wide!) made for carrying and storing grain. They are also called "dough bowls" because dough for bread are made in them - often in very large quantities. Smaller flat baskets are also used for serving food. They are also used for kneading bread. ✓

The Isilulu – Large grain Basket (*not water tight*) Large baskets are used to hold grain for long periods. The basket is woven with alternating closed (tight) weave and open weave (breathing weave) that allows air to circulate so the grain won't mould but keeps insects out. These baskets are typically squat, and either round or bell shaped, depending on the area and weaver. ✓

Products of grass and ilala palm weaving (such things as sleeping mats) and basketry are associated with the widest possible range of activities throughout a Zulu's lifetime, touching virtually every domestic, social, and religious function. ✓

Baskets served as containers to store things in. ✓

MATERIALS AND TECHNIQUES

Traditionally these early utilitarian baskets were plain, the colour of the palm fronds from which they are made. Only the beer pot was highly decorated with colourful designs. ✓

The Ilala Palm fronds are used to make watertight baskets for the purpose of holding liquids such as water and beer. ✓

Today many Zulu baskets have **patterns** based on traditional Zulu or Ndebele beadwork designs. ✓

They also include **contemporary motifs** based on other South African tribes or other new and completely different ideas. ✓

Zulu weavers are also continuously developing **natural pigments and dyes** which make help to make each design even more unique. ✓

Zulu basket designs are characterised by **symmetry, precision and organisation**, the same qualities that characterise their social patterns. ✓.

Many people and weavers believe each design has a **specific meaning**.

The Triangle - A masculine symbol, also represented on wedding baskets as the number of steers/cows (and 1/2 cows: calves) paid for a bride price payment. **Two triangles facing each other (in an hour-glass shape)** may be used to show a woman as entering a marriage as a second or third wife and not a primary or first wife. ✓

The Diamond - A feminine symbol. May also designate status of first wife. ✓. **The Double Triangle** -Marriage, man.

Double Diamond - Marriage, woman. ✓

The Zig-Zag - Masculine, represents the spear of Shaka or lightning. Also represents bulls (as in whether a bride will accept bulls as payment on a wedding basket design). ☑

Series of Diamonds - Feminine, represents the shields of Shaka.

Checkerboards, Whirls or Circles - Good news, new baby, good rains, plentiful harvest. ☑

Stepped patterns are typical Ndebele influenced but also represent the rolling hills of Zululand and may also represent the firmament (earth) and the heavens. ☑

NAME AND DESCRIPTION OF ONE PRODUCT

THE UKHAMBAMBA (WATERTIGHT BEER BASKET)

It is a bulb-shaped container made watertight by the tightness of the coil-weave and the weaving material itself, (the Ilala Palm). ☑

It has a lid and it is customary to serve guests a communal basket of beer when they visit. ☑

It is brightly coloured and is usually decorated with geometric or other patterns. ☑

Credit any other well-reasoned response. (8)

5.2.3 (Allocate 10 marks)

No marks must be given to repetition of designers and their work.

EXAMPLE

HALDANE MARTIN, FURNITURE DESIGNER, CAPE TOWN. ☑ (1)

CONTEXT

- He is an award winning furniture designer who is influenced by traditional weaving practices. ☑ (1)

AIMS

As a contemporary designer he tries to meet the needs of the whole human being by designing furniture that is simultaneously meaningful for the spirit, beautiful for the soul, and nurturing for the body. ☑

To combine recycled materials and functional design that celebrate the people and cultures of South Africa. ☑

He also continuously strives to practice sustainable and environmentally conscious design in the following ways:

- He believes that furniture designers should use fewer materials.
- Materials that are environmentally toxic should be avoided altogether.
- He aims to re-use and re-cycle materials. He follows the code that says 'Reduce, Re-use, Recycle, and Avoid. ☑ (3)

INFLUENCES

He is inspired by:

The materials, cultures and the context of South Africa. This is noticeable in his design of the isiZulu Mama Chair with its specific reference to the traditional Zulu Weaving technique in the seat. ✓

The Riempie style of the early Cape Dutch furniture designers. (Riempie: a thin leather strip woven into complex geometric patterns to form the inner part of a seat or backrest). ✓

(2)

CHARACTERISTICS OF HIS STYLE

His designs are sophisticated and simple. ✓

He practices both socially and environmentally conscious design. His work proves that this kind of design can be both sophisticated and beautiful as well as locally and internationally desirable. ✓

He achieves this through the use of clean uncluttered line

Materials: These range from recycled plastic and stainless steel, to natural materials such as feathers and leather. He successfully combines man-made materials with natural ones. For example:

The Fiela Feather lamp. (A light feathery shade is placed at the end of a curved stainless steel 'arm' which can be extended).

The Songolo chair combines leather and steel. The design is adaptable in that it can straighten or curve in an organic way. ✓

(2)

EXAMPLE**THE ISIZULU MAMA CAFE' CHAIR.****INFLUENCES**

The chair design was inspired by African baskets from different African cultures across the African continent, particularly the indigenous amaZulu basket weaving techniques.

(1)

MATERIALS

The chair is woven out of recycled plastic strips from plastic milk bottles. The plastic was melted and extracted in long flat tubes ready for the weaving process. Originally it could only be made in black due to the limited recycling processes available in South Africa.

The frame of the chair is made from 304g stainless steel. The steel is also made from 60% recycled materials and will be able to be a 100% recycled when the chair is no longer suitable for use.

(1)

SOCIAL ISSUES ADDRESSED BY HIS DESIGNS

He was influenced by the need for designers to practice sustainable design. He replaced traditional weaving material (the ilala palm) with recycled plastic to make the seat of the isiZulu Mama chair more durable. It also gives the chair design a contemporary feel.

(2)

The individual seats are woven by 6 township women in rural Limpopo. This is not ideal because of the amount of fuel. This contributes socially in that it provides employment.

Craftsmen from the Mogalakwena Craft Art Project produce the chair by adding the woven seat to the recycled stainless steel frame.

Credit any other factual and well-reasoned response.

(10)

Q5.2 LEVEL	COGNITIVE SKILLS	WEIGHTING	QUESTIONS	MARKS
Lower order	Observation/ Recall, Comprehension	30%	5.2.1 Part of 5.2.2 Part of 5.2.3	2+2+2
Middle order	Application	40%	Part of 5.2.2 Part of 5.2.3	3+5
Higher order	Analysis Synthesis Evaluation	30%	Part of 5.2.2 Part of 5.2.3	2+4

QUESTION 6 (Allocate 20 marks in total)**6.1 6.1.1 (Allocate 2 marks)****CREDIT ANY TWO OF THE FOLLOWING**

The design in FIGURE A can be said to be responsible because it up cycles old shipping containers and grain silos to create low rental student accommodation. ☒

Shipping containers are not biodegradable and by reusing them it reduces the amount of waste. ☒

It contributes to the reduction of carbon emissions because less building materials had to be manufactured for the project.

Credit any other factual and well-reasoned response.

(2)

6.1.2 (Allocate 4 marks)

CREDIT ANY FOUR OF THE FOLLOWING:

SUSTAINABILITY OF THE MILL JUNCTION PROJECT:

It may be argued that the design is sustainable because:

- The design is energy efficient in that it uses manufacturing processes and produce products which make use of less energy. ☒
- It makes use of as much locally available material as possible. ☒
- The project should last a long time because the basic materials are durable if they are cared for. ☒
- There is also emphasis is on communal use, for example the kitchens, recreation areas and the gym are communal. ☒
- Conscious use of up cycled products prevents unnecessary energy consumption and environmental damage. ☒

It can also be argued that it is not sustainable for the following reasons:

- It does not make use of renewable, low impact materials. ☒
- The materials do not come from local, sustainably managed sources that are completely biodegradable when no longer in use. ☒
- The paint may be toxic to the environment. ☒
- The materials may be locally sourced but they are not natural.
Sustainable designs reconnect people back to the natural environment through the use of local, natural materials that are non-toxic and can be recycled. ☒
- Bio mimicry is not part of the industrial production of the project. ☒

Credit any other well-reasoned answer.

(4)

6.2 (Allocate 14 marks)**EXAMPLE: (Local)**

THE NAME OF THE DESIGNER:

MARTIN KRUGER, Martin Kruger Associates, Architects Urban Designers☑

AIMS:

- Kruger believes in the evolving design process of teamwork, ☑ intense client interaction and a continuous journey towards excellence and simplicity. ☑ His philosophy is: "All buildings are cities and the city a big house". ☑
- He feels that few cities retain a sense of human scale due to their need to expand and maximize use of land. ☑ Skyscrapers often dwarf and humble those that work in their shadows and seal us off from the outside environment. ☑ He aims to create a kinder, more nurturing place to work. ☑
- Martin Kruger's practice is committed to creating buildings and settlements that contribute positively to the environment, to the saving of CO2 emissions and the use of passive energy. ☑
- The studio investigates design problems on a variety of scales and in diverse contexts. Their work includes exhibitions, conservation work, new settlements, public spaces and public buildings, as well as a number of diverse and beautifully crafted private houses and farmsteads. ☑

INFLUENCES ON HIS WORK:

- Vernacular architecture – he is interested in reinterpreting vernacular architecture, i.e. architecture which uses locally available resources and traditions to address local needs and which reflects the environmental, cultural and historical context in which it exists. ☑
- He is also influenced by the ancient Greek idea of an Agora (a public, open space or square, used for assemblies and markets) and is interested in developing an 'African Agora'. ☑
- Modernism influences him in that he includes modernist materials and construction techniques. ☑

THE NAME AND BRIEF ANALYSIS OF ONE DESIGN WITH PARTICULAR REFERENCE TO THE WAY IT ADDRESSES ENVIRONMENTAL ISSUES.

DESIGN: BP SOUTH AFRICAN HEADQUARTERS at the V & A Waterfront, Cape Town. ☑

- The building is a 9500 square-metre triple volume open-plan office space for 600 people. It is a miniature representation of Kruger's ideal city. ☑
- Huge lantern-shaped structures are constructed on the roof to allow light to filter down to the central atrium where trees enjoy an ideal climate. They also allow internal heat to escape as and when necessary. ☑

- Above the windows are box-like shelves that channel natural light in but have the dual capability of being able to create shade at the hottest times of the year. This is energy saving at its most effective as there is no need for energy-draining heaters and air-conditioners. ☑
- A dimmer system automatically regulates how much internal light is needed. ☑
- Photovoltaic cells and thermal solar panels on the roof and the front canopy provide 10 percent of the building's electricity. ☑
- Movement sensitive lights inside the office space mean that the last person to leave does not have to remember to switch off a light. The building automatically senses that there is no movement and shuts down. ☑
- Run-off water from the roof collects in an underground tank with a 1.3 million-litre capacity. This water is used to irrigate the building's garden and is used for ablution purposes. ☑
- Inside bins are centrally placed encouraging employees to recycle their paper, metal and plastic. ☑
- Materials used are, where possible, recycled, durable and low-maintenance. Carpets, for example, are made from 100 percent recycled material and the wall hanging by Adri Schultz is made from waste cotton fabric woven by a women's group living in Khayelitsha. Beautiful rose gum wooden floors throughout the central 'street' of the building and the stairs come from sustainable forests in Zimbabwe. ☑

EXAMPLE (INTERNATIONAL)

HOK AGENCY ☑

- HOK is an international design and engineering agency founded in 1955. They employ over 1600 people and work on design problems ranging from corporate design to design for a sustainable future. ☑
- Their design projects are collaborative and they work with multidisciplinary teams of professionals. Clients come from a variety of countries and range from individuals to corporations and government agencies. ☑
- They are a multi award winning company who for the last three years has been named the "No. 1 Role Model for Sustainable and High-Performance Design" by "Design Intelligence". In 2012 they were voted as one of the Top 100 Green Design Firms in 'Engineering News'. ☑

AIMS:

- They aim to deliver exceptional design ideas and solutions which take into account the most important social, and environmental factors, human need and care of the environment. ☑
- They want to achieve LEED certification for the structures they design. (LEED stands for Leadership in Energy and Environmental Design). LEED redefines the way designers and users think about the spaces we live and work in. HOK's mission states that they have no choice but to be responsible stewards/caretakers of the environment. ☑

- The company aims that they integrate into every company project include:
 - The creation of unique and outstanding environments which reflect the needs of clients. ☑
 - Inspiring and respecting people through their projects and designs by paying attention to the different cultural, organisational and personal value systems of groups and individuals. ☑
 - The connection of individuals and places through creative exploration and varying viewpoints. ☑

INFLUENCES:

- The needs of all people and for sustainability in global environmental issues. In 2009 they implemented a 'Sustainable Operations' plan throughout their agency ☑

CHARACTERISTICS:

- They have adopted many of the principles associated with biomimicry in their design projects. In 2008 they worked with the Biomimicry Group to establish how biomimicry and 'Life Principles' can be used in design. (Life Principles refers to natural systems, patterns and methods which have evolved over time). ☑
- HOK have introduced a number of sustainable practices to industry and continually strive to contribute to responsible design practice.
- In 1999 they published the "HOK Guidebook to Sustainable Design".
- They developed the "Process Zero: Retrofit Resolution". This is a method of making established buildings more energy efficient.
- They promote sustainable social and environmental design at a professional level. They also include volunteers and donors in an attempt to bring designers and communities together to get the best design solutions.

EXAMPLE: "PROCESS ZERO: RETROFIT RESOLUTION"

- A team of architects and engineers from HOK and Vanderweil redesigned the Los Angeles Federal services building in America. The design won the 'Net Zero building retrofit submission for Metropolis Magazine's Next Generation Design Competition 2011. The Los Angeles Federal Services building was 46 years old at the time of the 'retrofit resolution'.
- The aim was to reduce the building's carbon emissions by thirty percent by the year 2020. Large buildings consume vast quantities of electricity. It impacts on natural resources such as coal to generate this electricity. The retrofit plan reduces the building's overall energy demand by eighty four percent.

- Method: Their solution involves biomimicry in that they used energy-producing microalgae to help power the building. This will take the form of a twenty five thousand square foot microalgae bioreactor system that generates nine percent of the renovated building's power supply.
- A modular system of algae tubes wraps the building and absorbs the sun's radiation to produce lipids for fuel production on-site while simultaneously shading interior office spaces. This photo bioreactor transforms the building into a living entity. The algae tubes and the louvers around the building have a strong linear appearance.
- Other proven energy conservation and renewal strategies used in the design include integrated louvers for natural ventilation, a new façade with thirty five thousand square feet of photovoltaic film and thirty thousand square feet of organic shaped rooftop solar collectors that circulate water through floors to help with climate control. This natural ventilation system as well as the shading and cooling systems all contribute to the building's tranquil atmosphere. This creates a healthier, pleasanter working environment.
- Visually the building still has the traditional appearance of an office building and the added design elements were seamlessly integrated into the overall design which results in a unified exterior look.
- The design won first prize for Urban Algae Culture in the Algae Landscape Design. ☑

Consider any other factual and well-reasoned answer.

(14)

Q6 LEVEL	COGNITIVE SKILLS	WEIGHTING %	QUESTION	MARKS. (20)
Lower order	Knowledge/ Comprehension	30%	Part of 6.1.1 Part of 6.1.3	2+4
Middle order	Application	40%	Part of 6.1.2 Part of 6.1.3	2+4
Higher order	Analysis Synthesis Evaluation	30%	Part of 6.1.2 Part of 6.1.3	2+4

TOTAL SECTION C: 30
GRAND TOTAL 100