higher education & training

Department:
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REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

SURFACE ELEMENTS THEORY AND PRACTICAL N4

31 MAY 2019

This marking guideline consists of 19 pages.

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SECTION A

QUESTION 1

1.1	1.1.1	G		
	1.1.2	H		
	1.1.3	I		
	1.1.4	F		
	1.1.5	D		
	1.1.6	J		
	1.1.7	A		
	1.1.8	C		
	1.1.9	E		
	1.1.10	B		
			(10 × 2)	(20)
1.2	1.2.1	True		
	1.2.2	False		
	1.2.3	True		
	1.2.4	False		
	1.2.5	True		
	1.2.6	True		
	1.2.7	True		
	1.2.8	False		
	1.2.9	True		
	1.2.10	True		
			(10 × 1)	(10)
1.3	1.3.1	C		
	1.3.2	B		
	1.3.3	A		
	1.3.4	B		
	1.3.5	C		
	1.3.6	C		
	1.3.7	A		
	1.3.8	B		
	1.3.9	C		
	1.3.10	B		
			(10 × 2)	(20)
				[50]

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QUESTION 2

2.1 2.1.1 Veneers are thin sheets of wood sliced from a log;✓ these vary from paper-thin slices to 3 mm thick.✓ Veneers can be trimmed from a log as a continuous sheet (rotary cutting)✓ or sliced as flinches.✓ Veneer flinches are edge trimmed, matched in grain pattern,✓ and glued to thicker backings, such as plywood or particleboard.✓ Veneers that come from a particular log are kept in order so they can be matched later in various grain patterns.✓ The part of the tree and the manner of the cut will produce different veneer patterns.✓

2.1.2 Plywood is a laminated or layered wood✓ panel composed of veneers or wood plies,✓ the grains running at right angles to one another.✓ Most plywood is manufactured as three, five, or seven plies,✓ depending on the panel thickness. This alternation of plies (always an uneven number) gives added strength in two directions to reduce warping, splitting, and shrinking of the panel.✓ This stability is useful for construction of floors, walls, roof sheathing, panelling, and furniture.✓

(2 × 5) (10)

2.2 A metal roller is used to press a design into paper✓ to give it a raised surface.✓ Embossed paper should be hung on a 'lined' wall✓ which is lined with soft thin paper✓ to give the heavy cover a foundation to hang on to.✓ When hanging this paper care should be taken not to press too hard✓ and stretch it when wet.✓ (Any 5 × 1) (5)

2.3 2.3.1 Natural materials are those found in nature,✓ either as organic✓ or as inorganic substances.✓ Organic materials are those that come from plants and animals;✓ inorganic (non-living) materials are those, such as soil, clay, and stone, that exist in a natural state.✓ Although either type might be modified by cutting a tree (plant) into lumber✓ or stone into rectangular blocks,✓ both are nevertheless considered natural materials.✓

2.3.2 A composite material (also called composition material or shortened to composite, which is the common name) is a material made from two or more constituent materials with significantly different physical or chemical properties that, when combined, produce a material with characteristics different from the individual components. The individual components remain separate and distinct within the finished structure, differentiating composites from mixtures and solid solutions.

The new material may be preferred for many reasons: common examples include materials which are stronger, lighter, or less expensive when compared to traditional materials.

More recently, researchers have also begun to actively include sensing, actuation, computation and communication into composites, which are known as Robotic Materials.[2]

Typical engineered composite materials include:

- Reinforced concrete and masonry
- Composite wood such as plywood
- Reinforced plastics, such as fibre-reinforced polymer or fiberglass
- Ceramic matrix composites (composite ceramic and metal matrices)
- Metal matrix composites and other advanced composite materials

Composite materials are generally used for buildings, bridges, and structures such as boat hulls, swimming pool panels, racing car bodies, shower stalls, bathtubs, storagetanks, imitation granite and cultured marble sinks and countertops.

2.3.3 Synthetic materials are created by man-made processes that produce new substances.✓ Plastics are one of the best examples, since they are artificially created from petroleum and chemicals.✓ Plastics cannot be found in nature as a distinct product but are made from a combination of natural elements.✓ Materials that are created with artificial properties that may not be found in nature are termed metamaterials.✓ A lot of these are found in specialised fields such as aerospace and electrical engineering, including smart solar power management and acoustical controls.✓

(3 × 5) (15)

2.4 Granite is an igneous stone is cooled molten rock found near the surface of the earth.✓ It is very dense,✓ hard,✓ and durable;✓ is fine- or coarse-grained✓ and is found in shades of green, pink, yellow, and light to dark gray/black.✓ Igneous stone can be precision-cut✓ and left with a coarse finish or polished to a highly reflective surface. Granite,✓ an igneous stone, is used for wall veneers, table tops, steps, flooring, and other applications that require considerable wear.✓ Granite is harder than limestone, a sedimentary stone, and marble, a metamorphic stone, and is recommended for high-traffic uses.✓

Marble on the other hand a metamorphic stone is formed by intense pressure and heat✓from igneous or sedimentary rock.✓ Marble results from the crystallisation of limestone✓ and is very hard (but softer than granite) and durable.✓ It comes in many colours✓ and is usually polished into shiny, smooth surfaces.✓ Marble is used for decorative✓ wall panels, fireplaces, flooring, countertops, and table tops.✓ The colour variations differ from quarry to quarry. Cracks are reinforced with fibreglass.✓ (15)

2.5 Glass blocks were developed about 1900 and were widely used during the 1920s and 1930s, to allow natural light into factories.✓ These units are made largely from limestone and sandstone, and consist of two hollow half-blocks of glass that have been pressed together, with the centre partially evacuated of air or other gases added to the cavity.✓ Some glass blocks are made as solid glass units✓ for strength and are used in places where forced entry is to be prevented. Glass blocks come in many sizes, shapes, and surface finishes.✓ Different light transmission through them can be created by varying the type of glass finish,✓ such as frosted, rippled, textured, or clear. These variations can be made inside or on the surface of the block.✓ Glass blocks are used on both the interior and the exterior of buildings, are non-structural, and can be laid in curved sections.✓ (5)

[50]

QUESTION 3

3.1 The method of construction and the materials used in the process has a direct effect on the cost of the end product.✓ Quality is determined by the type of fibre,✓ the pile✓ density and the base material.✓ The deeper the pile✓ and the greater the fibre content, the better the carpet should be.✓Carpets with a low resilience will show paths of wear.✓ Carpets should be stain resistant.✓ The carpet should be easy to clean✓ and be dirt resistant.✓ The carpet should be colourfast not only to light✓ but to shampooing and wear.✓ Static electricity✓ can accumulate when walked on in areas with low humidity and can cause a harmless shock when metal objects are touched.✓ Fibres with low absorption cause this,✓ but anti-static finishes are now available.✓

All manufactured fibres resist moisture, some a great deal more than others. This factor determines the fibre's capacity to accept dyes,✓ its stain resistance, and its maintenance characteristics.✓ Manufactured fibres do not actually burn but tend to melt or stick at different temperatures.✓ Mod acrylics, the most heat resistant of all, will not support combustion but will shrink at high temperatures.✓ Polyester is claimed to be self-extinguishing, and polypropylene is the least heat resistant of any of the manufactured fibres.✓ (10)

3.2
- Acrylic
- Nylon
- Polyester
- Polypropylene
- Rayon (5)

3.3 Tufting is the process of creating textiles, especially carpets, on specialised fast multi-needle sewing machines.✓ Several hundred needles stitch hundreds of rows✓ of pile yarn tufts through a backing fabric✓ called the primary backing.✓ The needles push yarn through a primary backing fabric, where a loop holds the yarn in place to form a tuft as the needle is removed.✓ The yarn is caught by loopers and held in place for a loop-pile carpet✓ or cut by blades for a cut-pile carpet.✓ Secondary backings of various types are applied with adhesive to render a variety of performance properties.✓ They can be made in any size or shape.✓ (Any 5 × 1) (5)

3.4 Rubber was developed in the 1940s and used for interior applications. Today, it is primarily a combination of synthetic materials,✓although it can also be obtained from rubber trees.✓ Rubber is used in flooring in varying thicknesses,✓ types, and colour.✓ It can be made as solid sheets✓ with raised circular or ribbed patterns✓or as interlocking tiles.✓ Rubber flooring is used in locker rooms, air terminals, malls, elevators, and offices.✓ Rubber can be combined with various nylon fibres✓ and used for stair edges.✓ Rubber flooring can be installed in seamless applications, ✓making it ideal for surfaces that require frequent cleaning,✓ because the joints are minuscule in width.✓ Rubber flooring has good colour uniformity✓ and is wear-resistant because its colour permeates throughout the entire thickness, not just a surface layer.✓Used for underlay's beneath carpeting.✓ Rubber is a good insulator on a floor.✓
Rubber flooring is made of butadiene styrene rubber and other synthetic materials.✓ Recycled rubber flooring is made with discarded automobile and truck tires.✓ Rubber is very resilient and durable,✓ has good dent resistance,✓ and is available in two forms: a flat surface with a marbleised pattern✓ or a solid colour with a variety of raised surfaces.✓ The raised surface was designed to knock dirt and mud off shoes✓ and to provide water drainage from the face to prevent slippage.✓ Rubber tiles are excellent for entrances where dirt and mud can be tolerated and where traction is needed on wet floors.✓ (5)

3.5 It is an easy and inexpensive way to add more colour to your wall,✓ you can change your mind and remove the cloth much easier than wallpaper,✓ and all you need is some choice fabric and a little starch.✓ This method does not damage the wall.✓ The fabric is also easily removable.✓ You can cover a whole room in fabric,✓ just one wall, or part of a wall for a mural.✓ Mount fabric on a wooden frame to cover architectural flaws.✓ (5)

3.6 Quarry tiles are unglazed ceramic tiles.✓ Quarry tiles are used for kitchens and pathways because it has a naturally coarse surface.✓
Ceramic tiles.✓ Glazed or printed. Can be applied to countertops. Kitchens bathrooms or flooring throughout a house.✓
Porcelain✓ is a manufactured tile from natural clay, it is a denser floor tile that can be used indoors and outdoors as well as on countertops✓
Marble.✓ A classic top is fit for any room in your home, but susceptible to acids and staining – not a good idea for kitchen tops – but does make for a good pastry working surface.✓
Stainless steel✓ – Sleek and modern, metal polished or brushed✓ used in the medical industry✓ as well as in kitchens backsplashes,✓ bathrooms✓ or fireplaces.✓
Granite ✓is an igneous rock. The result of the cooling and solidification of lava✓used for flooring,✓ walls✓ and counter tops.✓ Durable surface for kitchen countertops.
Quartzite✓ is a metamorphic rock many available in different colours and textures.✓ it is suitable for both commercial and residential applications ✓and can be used indoors or out.✓ Durable countertop – popular Caesarstone application.

Learners can go on to mention solid woods, laminates, formica – mark on merit.✓ (20)
[50]

SECTION B

QUESTION 4

4.1 Identify traditional South African dwellings and discuss their construction of:

4.1.1 Walls

4.1.2 Roofs and Ceilings

4.1.3 Floors

4.1.4 Structural Appearance

(4 × 5) (20)

CAPE COTTAGE ARCHITECTURE

The Cape cottage is a domestic form derived from the European medieval 'longhouse' tradition, prevalent in countries surrounding the North Sea, and introduced into southern Africa by early white settlers to the Cape. It usually consisted of a two-cell unit, one being used as a family bedroom, whilst the second functioned as a cooking and multi-purpose space. The roof was thatched and usually followed a ridged and hipped form, but it could also be ridged and gabled. The Cape cottage may be seen as a forerunner to both Cape Dutch architecture as well as the more humble flat roofed house of the southern African interior.

CAPE DUTCH ARCHITECTURE

A regional style of domestic architecture evolved in the Cape Colony by Dutch, Flemish and Huguenot settlers during the seventeenth, eighteenth and early nineteenth centuries. It was based upon a short span gabled roof and symmetrical plans, usually with an I, T, H or U configuration. Farmhouses were largely single stories with thick lime-washed walls and relatively narrow and well-disposed door and window openings. Roofs were thatched with local reed and terminated by characteristic gables, the latter undergoing, over the years, a number of stylistic changes. Town houses could reach two storeys in height and, after the 1750s, were invariably flat-roofed.

CAPE DUTCH REVIVALISM

Began in southern Africa during the late 1890s and lasted through until the early 1930s. The architecture of this period is marked by the reintroduction of such elements as small-paned timber sash windows and, more generally, the poor re-interpretation of the earlier gable tradition. Perhaps the most prominent of its proponents was Herbert Baker who, following his arrival at the Cape in 1892, began to use the buildings of early Dutch settlers as inspiration for many of his designs.

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CAST IRON ARCHITECTURE

Cast iron is a term generally applied to pig-iron which has been re-melted in a crucible, or furnace, and cast into moulds. It began to find architectural applications in Europe from 1815 onwards and reached the Cape as early as 1820. During the Victorian era it was most commonly used in such elements as decorative trims and motifs, windows, balcony pieces and street lamps, although its strength under compression made it pre-eminently suitable for columns and structural supports. It also found use in the field of prefabricated building where structures framed in cast iron members and clad with corrugated iron sheeting were exported by Britain to its colonial markets.

CORBELLED STONE ARCHITECTURE

A type of stone shelter found predominantly on the southern Highveld and parts of Lesotho before 1822 when its construction appears to have come to an end, probably as a result of the Difaqane. The relatively small size of such dwellings indicates that they could have been built to house herd-boys and their activities. Larger corbelled stone structures were also used as lime kilns in parts of the eastern and western Cape by early white settlers.

CORRUGATED ARCHITECTURE

Derisory term applied during the colonial era to timber framed dwellings clad in corrugated iron sheeting. It was also sometimes referred to as Ironic Architecture. This material was introduced in England during the late 1830s in the form of cast sheets and reached this country in the mid or late 1840s. Its relatively light weight made it an ideal material for the production and export of pre-fabricated housing to the colonial markets of India, Australia and South Africa.

EDWARDIAN ARCHITECTURE

Although a large measure of overlap may be perceived to have occurred between Victorian Eclecticism and the Edwardian era, the latter period was generally marked by a simplification of building styles and of applied decoration. Structures conformed to neo-classical principles using such elements as roof parapets, pedimented windows and imposing porticos supported by classical columns. In domestic architecture sash windows were replaced by casement openings, verandas became simpler and greater use was made of plaster work, pargeting and mouldings.

ENGLISH SETTLER ARCHITECTURE

A modified English vernacular tradition brought by British settlers to the eastern Cape region after the 1820s. Farm buildings were generally single storied but town houses often reached two floors. Walls were thick and built in stone and the ridged roof, thatched or tiled, was terminated at either end by simple linear parapet gables. In many instances fireplaces were located at either end of the building and the resultant chimney flue projecting through the gable apex gave it its characteristic square capping. Subsequently, when buildings began to be erected with only one fireplace, placed either centrally or at one end of the dwelling, the square capped gable was often retained as a stylistic feature.

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FORTIFIED FARMHOUSE ARCHITECTURE

Generally comprised of a single-storey dwelling flanked on either side by two fort-like towers. Although the first such structures were recorded in the Outeniquas by Henry Lichtenstein as early as 1803, they only became widespread on the eastern Cape frontier region following the border conflict of 1835.

GEORGIAN ARCHITECTURE

A style of construction imported to the Cape by colonial administrators after the British annexation of the Colony from the Dutch in 1806. Based upon a Palladian interpretation of classical principles popular in England at that time, its careful proportioning, dignity of form and elegant interiors struck a responsive chord in Cape society whose distance from Europe made the importation of luxuries prohibitively expensive. It was typified by a plain facade treatment, parapeted roof lines, regular fenestration and, apart from an elaboration of the main entrance, a virtual absence of applied decoration.

GRIQUA HOUSE

Stereotypical noun applied to a form of dwelling built by Griqua Khoikhoi immigrants into Griqualand East. It was based upon the Cape cottage built by Dutch colonists and consisted of a single, rectangular cell approached through a raised stoep at the front, with a large, open fireplace and massive external chimney stack at one end. Built in stone with a thatch roof it normally had no windows. The same group of people are known to have built similar structures but with flat roofs at their former homesteads in the northern Cape.

HARDBEESHUIS

(pl. -e). From the Dutch, literally meaning 'house made from hard reeds'. A dwelling form built in southern Africa up to the turn of the twentieth century by both white settlers and indigenous residents. It consisted of a series of modified A-frame trusses placed on the ground and thatched over with reeds. See also kapsteylhuis.

HIGHVELD DWELLING

Rectangular plan structure, usually a single cell covered by a lean-to roof falling to the rear of the building from a raised parapet facade. Historically this domestic form originated in Cape Town during the latter half of the eighteenth century where it subsequently also became associated with Malay or slave dwellings. Its form and constructional technology made it a highly efficient residential form in warm, dry climates such as that of the Karoo where it flourished during the nineteenth century. It became associated with the Trekboer culture of that era and was transplanted to the highveld by Dutch farmers emigrating there after 1836. During that time it also became associated with the Griquas of the northern Cape. The introduction of corrugated iron in the southern African interior after the 1860's assisted in its spread and after the Anglo-Boer conflict of 1899-1902 it became associated with Afrikaner rural culture. During the 1940s it began to be adopted by black farmers on the highveld where it predominates to the present day. In more recent times however, it has also become associated with urban squatter camps such as those found at Thaba 'Nchu in the OFS and Winterveld near Pretoria.

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IRONIC ARCHITECTURE

Derisory term applied during the colonial era to timber framed dwellings clad in corrugated iron sheeting. See also under 'Corrugated Architecture'.

KAKEBEENWA

(Dutch kakebeen, meaning 'jawbone', and wa meaning 'wagon'). This name is believed to have originated during the nineteenth century from Dutch farm children who, at one time, used to fashion toy wagons from animal jawbones. More commonly called an 'oxwagon' or a 'voortrekker wagon', it originated from Sweden, Esthonia, parts of Germany, Holland, Poland and Rumania and was used by Dutch migrant farmers of the Cape interior. Although intended primarily as a means of transport, it also became adapted by the trekboers as a highly specialised form of travelling dwelling. Instances of such wagons being converted to more sedentary residential functions have also been recorded. Ultimately it gained political symbolism, becoming associated with the growth of Dutch Republics in the southern African interior.

KAPSTEYLHUIS

(pl. -e). From the Dutch, literally meaning 'house of steep trusses'. A dwelling form built in southern Africa up to the turn of the twentieth century by both white settlers and indigenous inhabitants. It consisted of a series of A-frame trusses placed on the ground and thatched over with reeds. Structures of a similar form but roofed over with corrugated iron have also been recorded more recently in parts of the northern Cape and Lesotho. See also Hardbeeshuis.

KAROO HOUSE

See under 'Highveld Dwelling'.

KHOIKHOI ARCHITECTURE.

The Khoikhoi were migrant pastoralists who, before the arrival of white settlers to southern Africa, inhabited the Cape, Orange Free State and southern Botswana. The term is thought to mean, quite literally, 'men of men'. In keeping with their economic system their dwellings were easily dismountable and transportable, consisting of a hemispherical framework of saplings overlaid by reed matting or animal skins. Such structures were also known to the Dutch settlers as maantjiehuise, believed to mean 'small, moon houses'. The Khoikhoi, together with the San, are also known to have used another form of transportable housing, consisting of a reed mat arched into a barrel vault pegged at either end, with a second mat being placed upright in a semi-circle behind it, thus creating a wind break.

LOBEDU

Indigenous southern African group inhabiting a region of Limpopo immediately south of Venda. The people are more correctly known as the vaLobedu.

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MATABELE

Shona adaptation of the noun amaNdebele. This was the name given by the Sotho/Tswana to the Nguni group who, under the leadership of Mzilikazi, moved out of northern Zululand in 1822 and eventually settled down in western Zimbabwe in 1837. The word stems from the Tswana root tebele meaning 'plunderer' or 'stranger'. The Matabele should not be mistaken with the Ndebele groups of the Transvaal.

MAT SHELTERS

Temporary shelters used by KhoiSan migrant pastoralists and hunter gatherers in the central Cape region. They consisted of a grass mat arched into a barrel vault and pegged down at either end by two sticks. A second mat was placed upright in a semi-circle behind the mat vault, thus creating a wind break. Under certain circumstances either mat could be used independently of the other to provide an overnight shelter for travellers.

MFENGU

Collective name for the Nguni-speaking groups, mostly originating from the Zululand area, which fled into the southern Eastern Cape regions between 1822 and 1837. The name, meaning 'beggars' or, perhaps more kindly, 'homeless wanderers', was applied to them by the Xhosa upon whose lands they eventually settled. They are also more popularly known as the Fingos, this being an anglicising of the noun amaMfengu.

MPONDO

Nguni-speaking group originating from the coastal region of the north-eastern Transkei. They are more correctly known as the amaMpondo but have also been known to white settlers as the Pondos.

MPONDOMISE

Nguni-speaking group inhabiting the Qumbu district of central Eastern Cape. They are more correctly known as the amaMpondomise.

NDEBELE

Sotho/Tswana noun which has been applied in various contexts to indigenous groups who have either settled on or moved through the highveld region of southern Africa. Its roots have been attributed to the Tswana noun tebele meaning 'plunderer'. At one time it was believed to have been an appellation created by the Sotho/Tswana as a general term for the Nguni but more recent research has shown that its use has also been made in a Sotho/Tswana context. Various groups are known, both currently and in the past, to have used this noun or its derivatives. This includes the Matabele of western Zimbabwe, the South Ndebele of the south and eastern Transvaal, the North Ndebele of the central Transvaal and the Hlubi clan of the Tlokwa, living in the Nqutu district of KwaZulu. Their language is referred to as isiNdebele.

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PEDI ARCHITECTURE

The Pedi are a Sotho/Tswana speaking group inhabiting the Sekhukhuneland region of the central and northern Gauteng. Their architecture resembled closely that of their Tswana neighbours and consisted largely of a circular plan cone on cylinder surrounded about its perimeter by a wide veranda. See also 'Tswana Architecture'. Their settlements followed a characteristic circular fan shape with a central cattle byre, which also served as a meeting place for the men as well as an area of burial and religious worship.

PREFABRICATED ARCHITECTURE

The concept of prefabricating buildings within a factory environment appears to have begun in Britain during the early years of the nineteenth century when colonial expansion created a ready market for high quality transportable housing. Although these structures were initially in timber, the subsequent introduction of industrialised building elements such as corrugated sheeting and cast iron served to enlarge and enrich the range of textures and forms possible under such a system of construction.

SAN ARCHITECTURE

The San were an indigenous group of migrant hunter-gatherers who inhabited the southern African region up to the early part of the nineteenth century. Their name is drawn from the Khoikhoi and is believed to signify 'a person without domestic stock'. Their architecture was largely pre-determined by the migrant nature of their society and included rock caves and overhangs, temporary shelters made out of branches and clumps of vegetation, as well as more formal mat screens and shelters such as those also used by Khoikhoi migrant pastoralists of the central Cape region. These consisted of a grass mat arched into a barrel vault and pegged down at either end by two sticks. A second mat was placed upright in a semi-circle behind the mat vault, thus creating a wind break. Under certain circumstances either mat could be used independently of the other to provide an overnight shelter for travellers. Cases of San building a type of Khoi mat beehive hut were also recorded by travellers during the early part of the nineteenth century.

SHONA

A group of people indigenous to Zimbabwe, although in the past their lands are thought to have included large areas of Limpopo. They are more correctly known as the maShona and their language is referred to as chiShona. The Venda is currently believed to be part of a larger Shona grouping.

SOTHO ARCHITECTURE

The Sotho is indigenous to the interior of Southern Africa who today inhabit the Lesotho and southern Highveld region. Their architecture has undergone extensive changes in recent years. At one time this area was noted for its grass beehive dwellings with extended, snout-like entrances but since the 1920s it has undergone widespread change and today the thatched cone on cylinder and the lean-to highveld house rival each other for pre-eminence. The latter dwellings often display richly decorated facades.

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SOUTH NDEBELE ARCHITECTURE

The South Ndebele inhabit the Mphumalanga region located north-east of Pretoria, between Middelburg and Groblersdal. Historically their architecture has been based upon that of their northern neighbours and political allies, the Pedi. Their dwellings were circular with a veranda running about the external perimeter but in recent years these have largely been superseded by square plan, lean-to, parapet structures, much like those found on the southern Highveld. Since the 1940s their women have developed a distinctive style of polychromatic wall art which draws deeply from the patterns of urban life they have observed in the towns about them.

STICK STYLE

A style of domestic timber construction prevalent in the United States during the latter part of the nineteenth century. Its aesthetic is roughly comparable to that of Late Victorian Eclecticism. (Afrikaans: Amerikaanse Lat).

STILT ARCHITECTURE

Although stilt structures have been built in the past by many of southern Africa's rural groups, most have functioned as either grain stores or chicken coops or, in some instances, as weapon stores. The only exceptions to this rule were recorded in the 1830s by travellers to the Northwest Province and eastern Botswana region where grass huts were placed either upon a stilt platform or within the branches of a tree.

SWAZI ARCHITECTURE

The Swazi, Nguni-speaking group are inhabitants of the north-eastern part of the southern African region, also known as the Kingdom of Swaziland. They are more correctly known as the amaSwazi and their language is referred to as isiSwati. Their architectural traditions are similar to those of their Zulu neighbours in the south, and make extensive use of the grass covered beehive form. In more recent times however these have begun to give way to cone on cylinder dwellings.

TEMPORARY SHELTERS

May have been erected for a variety of reasons such as providing overnight shelter to travellers or to house a dying person's final hours.

THEMBU

Nguni-speaking group residing in the central region of the Eastern Cape. The people are more correctly known as the abaThembu.

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TREKBOER ARCHITECTURE

The name of trekboer was given to migrant Dutch pastoralists who, during the eighteenth and early nineteenth centuries, settled in the more arid regions of the Cape. Their architecture tended to be functional and was largely related to their migrant pastoralist lifestyle. As a result they used a variety of domestic forms including their oxwagons, Khoi-like mat beehive huts, Cape cottages, hardbeeshuise, kapsteylhuise and flat roofed houses. Such structures were invariably poorly built and were seldom designed to meet long term economic needs or high social expectations.

TSONGA ARCHITECTURE

The Tsonga are an indigenous group inhabiting the eastern littoral belt of southern Africa from Kosi Bay in the south to Sofala in Mocambique. As a result of the Difaqane some groups moved westwards and settled in an area immediately south of Venda which is today known as Gazankulu. The people are more correctly known as the vaTsonga and their language is referred to as siTsonga. Their architecture makes predominant use of circular, cone on cylinder dwellings surrounded by wide verandas with low sweeping eaves and sturdy supporting pillars. In more recent times their women have also begun to decorate their homestead walls with bold polychromatic designs.

TSWANA ARCHITECTURE

The Tswana are indigenous to the interior of southern Africa and belong to a larger Sotho/Tswana grouping. Although they originally populated much of the Highveld region, the events of the Difaqane forced many of them to move westwards. Today they inhabit Botswana, parts of the Northwest Province, the northern Cape as well as a small enclave in the Thaba 'Nchu district of the Orange Free State. The Tswana are best known for their use of circular plan, cone on cylinder dwellings surrounded about their perimeter by a wide veranda. This form is known to have been built by them in the Northwest Province, northern Cape and eastern Botswana region since the 1600s and probably earlier. Although most such structures today comprise a single living cell, in the past they are known to have reached a high degree of sophistication, including in their plan a number of sleeping and storage areas. Settlement is generally made according to clan affiliations, but the scarcity of water in the region has led to the growth of large urban centres which, in the past, have been estimated to have achieved populations of between 10,000 and 20,000 persons.

VENDA ARCHITECTURE

The Venda is an indigenous group inhabiting Limpopo in an area bordering eastern Zimbabwe. Their domestic architecture is perhaps best noted for its broad eaves, often supported by veranda posts running the full perimeter of a cone on cylinder dwelling, and the use of stone in the construction of fortified villages for local chiefs and headmen. Wall decorations painted by women feature strongly on the perimeter walls of their homesteads which differ from the circular pattern predominant throughout the rest of southern Africa.

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VERANDA DWELLINGS

Generic term used to describe any dwelling with an attached veranda. This may be a partial veranda, covering one or more facades of a building, or a full veranda, as in the case of the cone on cylinder, where it runs the full perimeter of the structure. Although the veranda dwelling is indigenous to many parts of the southern African interior, its use as a colonial building can probably be attributed to its introduction into KwaZulu Natal from India during the nineteenth century.

VICTORIAN ARCHITECTURE

Although the Victorian era was typified by an exuberant and richly textured architecture, much of this character relied upon the use of applied decoration. At first it largely took the form of fretted timber work, used in veranda trims, barge boards, gable finials and loft ventilators but the subsequent availability of mass produced cast iron work also gave added richness to roof lines and verandas. Although there was an initial tendency to 'modernise' previous Cape Dutch and Georgian dwellings by the addition of front and rear verandas, a wide range of domestic and public buildings were also erected. Their style is better known for its eclecticism, including elements freely drawn from such varied sources as Medieval Gothic, Italian Romanesque and Byzantine traditions. Wide use was also made of ornamented chimneys, bay windows, sash timber frames, roof-ventilators and patterned brickwork, particularly after the 1870s and the discovery of diamonds and gold deposits in the southern African interior.

XESIBE

Nguni-speaking group originating from the northern part of the Eastern Cape. The people are more correctly known as the amaXesibe.

XHOSA ARCHITECTURE

The Xhosa are a Nguni-speaking group originating from the southern part of the Eastern Cape region. Although the Xhosa-speaking groups of southern Africa cannot by any means be considered as a single entity, their architectural culture has achieved a large degree of homogeneity. At one time most, if not all, are thought to have built hemispherical grass beehive dwellings but, since the early 1900s, these have been replaced with circular plan cone on cylinder structures. Barring a few regional variations in building methods and material textures, these present a uniform architectural style for the region. This has increased since the mid-1920s when local women began to whitewash monochromatic patterns upon their residence facades, leading to some chroniclers making reference to them as being 'white faced'.

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ZULU ARCHITECTURE

The Zulu were originally a small Nguni-speaking group numbering about 2000 persons inhabiting the region of northern KwaZulu Natal between the upper Mhlatuzi and the White Mfolozi Rivers. They rose to political dominance under the leadership of Shaka between 1816 and 1819. Ultimately the Zulu kingdom spread along the eastern littoral from the Pongola in the north to the Tukela in the south. The word amaZulu literally means 'children of the sky'. Their architecture was marked, up to recent times, for its wide use of grass-thatched domed dwellings sited in wide circular settlements about a central cattle byre. This popular stereotype however has undergone extensive revision since the 1950s when the ubiquitous cone on cylinder began to replace the more picturesque but less efficient domed structures.

(Learners may explore any of the following styles – typically South African – however marks should be allocated as the question above allows – FIVE marks for each subsection)

4.2 A – Triple double hung window
B – Picture window (casement)
C – Louvered (Jalousie)
D – Bay window
E – French doors
F – Doors with cathedral windows
G – Dormer windows
H – Clerestory
I – Corner window
J – Double hung window

(10 × 2) (20)

4.3 Most antique hand woven rugs are either referred to as either Persian or Oriental rugs. Often Persian and oriental rugs are used interchangeably.

These hand woven rugs have their own history with ancient and intricate designs, natural wool fibers, durability and extensive workmanship making them most valuable and highly sought after around the world.

Most carpets crafted in Asia or the Middle East, including China, India, Egypt, Afghanistan, Pakistan and Iran, was considered oriental. When the Persian Empire was at its peak, Persian rugs were most popular among European consumers. Since Persian carpets were technically also oriental, the two terms became confused and started being used interchangeably.

However there are some subtle differences between Oriental and Persian rugs. All Persian rugs are oriental rugs but not all oriental rugs are Persian rugs.

Here are few ways Oriental and Persian rugs differ from one another.

Country of origin
Country or origin and location can be one of the major differences for these two distinctive styles of rugs. Hand woven rugs crafted in Oriental countries like China, Turkey, Tibet, India, Pakistan, Iran and Egypt are referred to as Oriental rugs. Any carpet that has been crafted in oriental countries other than Iran can be called as Oriental rug.

Persian rugs are technically oriental rugs that are manufactured in Middle East specifically Iran which was formerly known as Persia.

Knots counts
Another difference is the way rugs are knotted together. True oriental and Persian rugs are hand knotted on looms. Oriental rugs are tied with a symmetrical Ghiordes knot. Persian rugs are most often hand knotted using an asymmetrical or Senneh knot. Persian rugs are usually considered the highest quality oriental rugs in the world and feature high knot counts.

Designs and pattern
Now-a-days, Persian and Oriental refer to the style, technique and design of the rug rather than the region where it was made. Persian rug designs are named after the tribe or city in which they were created. Tabriz, Hamadan, Gabbeh, Heriz, Kashan, and Kerman are some of the most popular designs. Persian rug have unusually thick pile (up to 160 knots per square inch), extremely rich colour combinations and unique designs like husks, pomegranates, jugs, crosses, combs.

On the contrary, the designs of oriental rugs represent distinctive customs and traditions of the region they are produced in. for example silk rugs are a popular product of China characterized by traditional Buddhist motifs and palate of traditional colours.

Material
While there are some common materials used between the two distinctive styles of rugs. Persian rugs, depending on where it was produced and the artisan, are typically made from camel hair wool, kork wool (gained from wool growing on sheep's neck which is higher grade of Persian wool) and Manchester wool and you can also find cotton iterations as well.

Oriental carpets can be pile woven or flat woven without pile using materials such as silk, wool and cotton. Oriental rugs also tend to have higher concentrations of cotton being used in their threads essentially making them less valuable to collectors and more susceptible to damage or dye deterioration.

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Hand washing
The ancient and traditional process of hand washing a rug creates a big difference between oriental and Persian rugs. One of the reasons that Persian rugs are thought to be the softest in the entire world is because they are traditionally hand washed.

Conclusion:
Both oriental and Persian rugs are beautiful and unique in their own way. Both types of rugs increase in value over time. To be considered truly Persian or oriental, rugs must be handmade by skilled artisans. These rugs represent culture and tradition at the centre of making each one and making them heirloom treasure. Today, many elements of the carpet are created by machines, like the dye and thread. However, they are still knotted by hand using the same techniques carpet weavers used for hundreds of years.

(10)
[50]

TOTAL SECTION B: 50
GRAND TOTAL: 200

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