



DESIGN

ATAR course examination 2021

Marking key

Marking keys are an explicit statement about what the examining panel expect of candidates when they respond to particular examination items. They help ensure a consistent interpretation of the criteria that guide the awarding of marks.

Section One: Short response

30% (41 Marks)

Question 1

(10 marks)

- (a) Identify and describe how the designers have used **two** dominant design elements and/or principles to connect Figure 1 to its environment. (6 marks)

Description	Marks
2 elements and/or principles x 3 marks each	
Detailed and considered description on how the designers have used a dominant design element or principle to connect Figure 1 to its environment.	3
Clear and valid description on how the designers have used a dominant design element or principle to connect Figure 1 to its environment.	2
Adequate and general description on how the designers have used a design elements or principle to connect Figure 1 to its environment.	1
Incorrect /No response	0
Subtotal	3
Total	6
<p>Notes:</p> <ul style="list-style-type: none"> To reach the top shelf responses must reference how the elements and/or principles have been used to connect Figure 1 to its environment. This is different from a definition, commenting on how the element/principle is visible. Answers should reflect consideration of communication environment relevant to the design: physical, economic, social, cultural, geographic, and interpersonal. <p>Answers could include:</p> <p>Elements:</p> <ul style="list-style-type: none"> Line has been used in the sweeping curves and arches to connect the structure with the physical environment as in – shorelines, waves, city verticals and forms. Shape has been used to link in with organic/natural forms such a snakes' vertebrae or fish skeleton, linking the cultural environment with the structures. Colour has been used to connect the geographic environment in the way that the changing colours reflect the way light changes on the landscape. <p>Principles:</p> <ul style="list-style-type: none"> Repetition of linear forms implies movement experienced in the city and also the waves on the water surface. This informs the connection between the social environment and the structures. Pedestrians can access the walkway and boats travel under the bridge illustrating, through proximity how the interpersonal connection with the structure – scale here working to strengthen the link. <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

- (b) Explain how semiotics have been used to convey meaning in Figure 1. (4 marks)

Description	Marks
Detailed and considered explanation of how semiotics have been used to convey meaning in the design.	4
Clear and valid explanation of how semiotics have been used to convey meaning in the design.	3
Adequate and general explanation of how semiotics have been used to convey meaning in the design.	2
Limited explanation of how semiotics have been used to convey meaning in the design.	1
Incorrect/No response	0
Total	4
<p>Semiotics:</p> <ul style="list-style-type: none"> Relevant discussion of symbols, signs and images and how they are used to create meaning. The use of terms 'sign, signifier and signified' may be used when referring to the use of semiotics. <p>Answers could include:</p> <p>Icon:</p> <ul style="list-style-type: none"> Has a physical resemblance of the signifier, i.e. the repeated vertical lines representing a fish or snake skeleton. Bridge as a whole - connects two spaces, signifying a journey. Arches frame the environment/view – city, river. <p>Index:</p> <ul style="list-style-type: none"> Shows evidence of what is being represented i.e. curves reflect the water/waves and movement. Paving shapes could refer to water or water/land environment. Use of curves implies natural forms, fluid, non-angular, soft linear supports draw the eye to the "S" curve. <p>Symbol:</p> <ul style="list-style-type: none"> Has no connection with the signifier – must be learned culturally i.e. the "S" curve, symbolising 2 cultures, yin yang, rainbow serpent. Soft curves representing peace. Colours – adds drama, refers to rainbows (peace, LGBTQIA+), city, life, energy Repetition of graduating forms (angular lines) could represent the Wagyl rainbow serpent reflecting the First Peoples of Western Australia. Double curves inter-twined represent a joining of histories/journeys/paths. <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

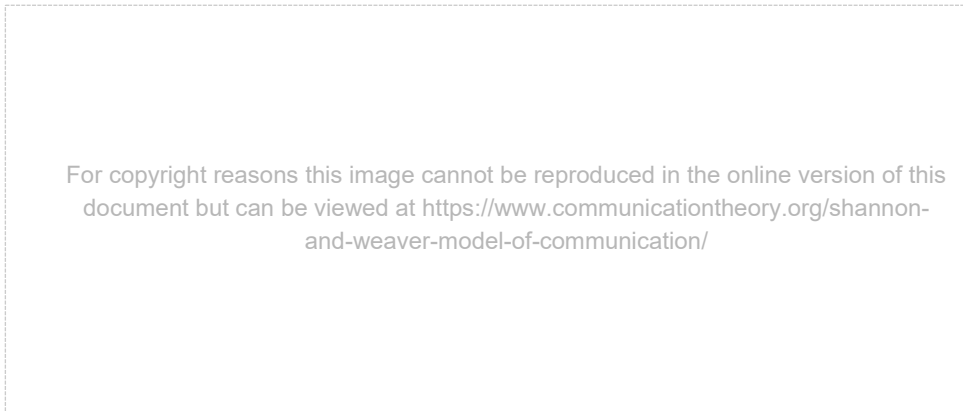
Question 2

(7 marks)

- (a) Draw and annotate the stages of a communication model you have investigated this year. (3 marks)

Description	Marks
Clear and valid drawing of a communication model with annotated stages.	3
Adequate and general drawing of a communication model with some annotated stages.	2
Limited or partly accurate drawing of a communication model with minimal annotation.	1
Inappropriate/incorrect response	0
Total	3

Answers could include:
 Revised Shannon and Weaver (Modern Communications Formula) including feedback:

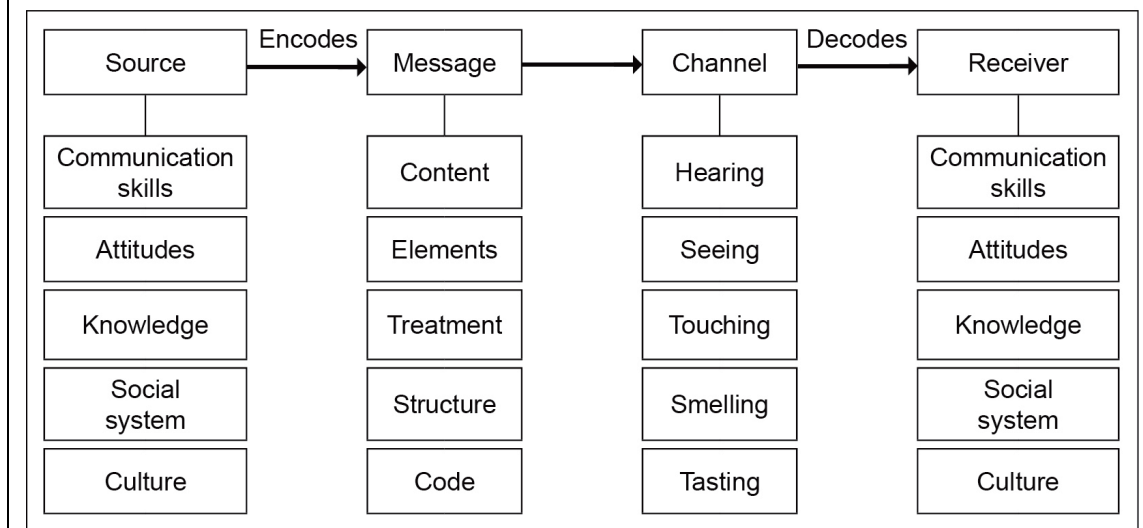


Shannon and Weaver Communication Model:

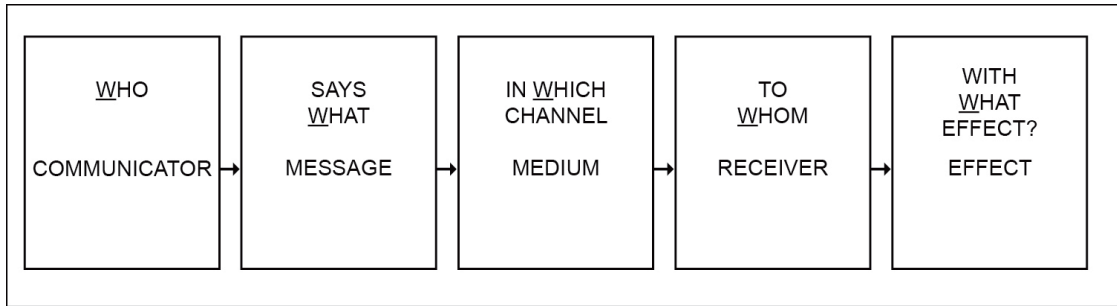
1. Sender/source
 2. Encoder
 3. Channel/transmitter/message
 4. Decoder
 5. Receiver/destination
 6. Noise (affecting Channel)
- Feedback is optional.

All six above are required for full 3 marks. Although most people feel that 'message' and 'channel' are both required, many models online contradict and use these interchangeably.

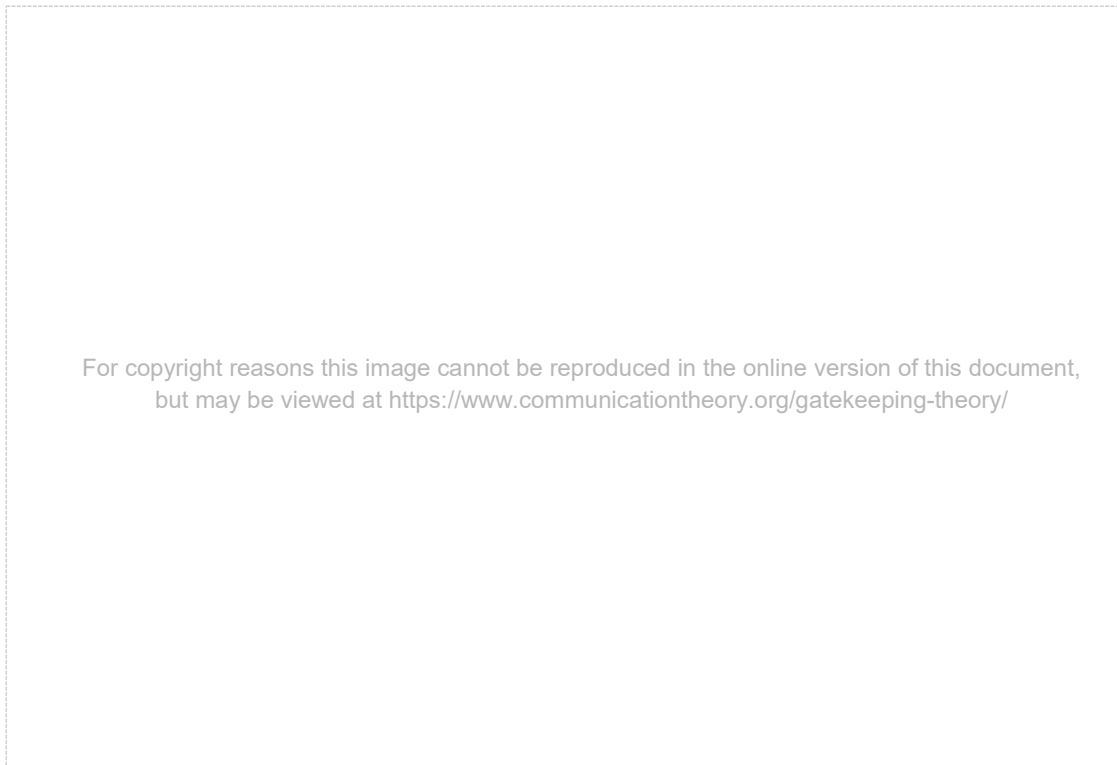
Berlo/SMCR Model of Communication:



Harold Lasswells Communication Model:



Gate Keeping Theory:



Solutions are not exhaustive and candidate's responses should be considered.

Question 2 (continued)

- (b) Explain how this communication model could be used to improve the effectiveness of a possible design solution. (4 marks)

Description	Marks
Detailed and considered explanation of how a designer could use this communication model to improve the effectiveness of their design solution.	4
Clear and valid explanation of how a designer could use this communication model to improve the effectiveness of their design solution.	3
Adequate and general explanation of how a designer could use this communication model to improve the effectiveness of their design solution.	2
Limited explanation of how a designer could use this communication model to improve the effectiveness of their design solution.	1
Inappropriate/incorrect response	0
Total	4
<p>Answers could include: Explanation on how the specified communication model could improve the effectiveness of a design solution including the following:</p> <ul style="list-style-type: none"> • the consideration of differences in understanding from the sender and receiver • how misconceptions occur and how these forms could have disrupted the effective communication of a message to or from the intended audience (receiver) • highlighting the value of feedback in ensuring that the intended communicated message, has been accurately interpreted by the intended audience • feedback also allows for the designer to gain insight and information from the intended audience on the whole design, not just the message • having a clear idea of who your receiver is, can focus you as a designer to produce a message that will have impact on that specific group. <p>Note: 'effectiveness' indicates more than one example. Do not award full marks if only one example is given.</p>	
Solutions are not exhaustive and candidate's responses should be considered.	

Question 3

(8 marks)

- (a) Identify **two** similarities and **two** differences in the type used in Figures 2 and 3. (4 marks)

Description	Marks
For each similarity	
Accurately identifies two similarities in figures 2 and 3.	2
Identifies one similarity in figures 2 and 3.	1
Inappropriate/incorrect response	0
Subtotal	2
For each difference	
Accurately identifies two differences in figures 2 and 3.	2
Identifies one difference in figures 2 and 3.	1
Inappropriate/incorrect response	0
Subtotal	2
Total	4
<p>Notes:</p> <ul style="list-style-type: none"> Focus here is on type. Responses should use typographic language. <p>Answers could include:</p> <ul style="list-style-type: none"> Figure 2 'Opeth' is a serif typeface and Figure 3 'Orange Caramel' is a sans serif typeface. Figure 2 'Opeth' has loose tracking and Figure 3 has tighter tracking. Figure 2 is in sentence case and Figure 3 is in capitals. Figure 2 uses a drop capitals and descenders. Figure 3 has no descenders. Both Figure 2 and 3 are capitalised with the letter O, are display fonts and feature a decorative circular motif. Both Figure 2 and 3 use symbolism in their capitalised O- figure 2 resembles a musical instrument while figure 3 a slice of orange fruit. <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

Question 3 (continued)

- (b) From Figures 2 and 3, choose the more effective logo and evaluate its use of colour and type to communicate with an audience. (4 marks)

Description	Marks
Detailed and considered evaluation of how colour and type have been used to communicate to an audience.	4
Clear and valid evaluation of how colour and type have been used to communicate to an audience.	3
Adequate and general evaluation of how colour and/or type have been used to communicate to an audience.	2
Limited description of how colour and/or type have been used.	1
Inappropriate/incorrect response	0
Total	4
<p>Answers could include:</p> <ul style="list-style-type: none"> • A drop cap capitalised O in a decorative and ornate serif type from the Blackletter type family is featured in Figure 1. Opeths' music could be considered serious due to the focus on black line. The use of black fine line creates highly stylized flourishes to ligatures and swashes. The O uses a calligraphic, handwritten style linking to pre-industrial or medieval time period. Calligraphic style implies a more personal human connection. • Opeths' metal musical style could include intricate instrumentation such as operatic vocals and/or guitar solos. The descender of the letter P and H could be viewed as sharp and knife-like making connections to metal and associated subgenres. The type style and its decorative effects are reminiscent of tattoo artwork reinforcing the sub-culture of metal/rock music genre. • Figure 2 uses large 3D effect display font in the shape of an orange slice in place of a capital O. The use of analogous warm colours' of orange and brown, curves of the letter forms and the graphic underline meanings of warmth. The band name connects to sweets and or desserts which could refer to the musical style being from the pop genre. • The soft brown forms of Orange Caramel's logo could also connect to pop music genres such as disco or RnB. The band logo uses a Broadway Lights retro typeface, with the inner dots resembling lights around theatre mirrors, street neon lights or a child's painting. The dots and the graphic add to a sense of playfulness and fun. The use of sans serif reflects a modern timeframe. This type style combined with the use of analogous colours' of orange and brown associates it with Retro sub-cultures, and the eras of 1970s/1990's. 	
Solutions are not exhaustive and candidate's responses should be considered.	

Question 4

(10 marks)

Refer to one design project you have undertaken this year.

- (a) Describe how you applied an inquiry process when selecting materials and/or technologies for your design. (4 marks)

Description	Marks
Detailed and considered explanation of inquiry process applied when selecting materials and/or technologies.	4
Clear and valid explanation of inquiry process applied when selecting materials and/or technologies.	3
Adequate and general explanation of inquiry process applied when selecting materials and/or technologies.	2
Limited explanation of inquiry process applied when selecting materials and/or technologies.	1
Inappropriate/incorrect response	0
Total	4
<p>Notes:</p> <ul style="list-style-type: none"> Using inquiry processes enables designers to discover new and alternate methods of using materials and/or technologies and to develop and enhance current applications of materials and/or technologies. Application of inquiry processes supports innovation and creative meaningful resolutions. <p>Answers could include:</p> <ul style="list-style-type: none"> Use of mind-maps, brainstorms or other ideation processes to initially source inspiration on potential materials and/or technologies to use. Client based research and investigation on cost constraints which will influence selection and use of preferred materials/technologies. Using the Internet and other sources to research and investigate relevant materials and/or technologies considering constraints of the brief such as issues of environmental impact, sustainability, trends, cultural and social context. Exploration, testing and experimentation of materials and/or technologies in the form of prototypes. Surveying, questioning and interviewing of intended audience attitudes, values, lifestyle choices and opinions on proposed materials and/or technologies including concerns on sustainability, costs, and lifecycle. <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

Question 4 (continued)

- (b) Explain how your design brief influenced the selection of **two** production materials and/or technologies used in your design. (6 marks)

Description	Marks
For each of two production materials and/or technologies x 3 marks each	
Clear and valid explanation of how their design brief influenced the selection of production materials and/or technologies used in their design.	3
Adequate explanation of how their design brief influenced the selection of production materials and/or technologies used in their design.	2
Limited explanation of how their design brief influenced the selection of production materials and/or technologies used in their design.	1
Inappropriate/incorrect response	0
Subtotal	3
Total	6
<p>Notes:</p> <ul style="list-style-type: none"> Explanation should reference specific production materials and/or technologies used to reflect the brief. <p>Answers could include:</p> <ul style="list-style-type: none"> Lighting/studio setup, manipulation of camera settings to create desired effect. Paper stock/finish, ink type, printing/binding details to enhance meaning. Design software and associated tools to create desired aesthetic. (Lightroom, Photoshop, Adobe Illustrator, Affinity). Examples of specific construction materials and/or technologies for construction. (CAD, SketchUp, Autodesk Revit). Explanations on constraints of the brief and how these influenced selections. These could include time frame, sustainability, lifecycle, costs, design context, brand relevance, intended audience appeal, survey/market research results, response to and connection to trends such as contemporary, modern, futuristic, subcultural. 	
Solutions are not exhaustive and candidate's responses should be considered.	

Question 5

(6 marks)

Discuss the application of the concept, 'form follows function' in this design.

Description	Marks
Comprehensive and insightful discussion of how the design can be applied to the concept, form follows function.	6
Detailed and considered discussion of how the design can be applied to the concept, form follows function.	5
Clear and valid discussion of how the design can be applied to the concept, form follows function.	4
Adequate and general discussion of how the design can be applied to the concept, form follows function.	3
Superficial discussion of how the design can be applied to the concept, form follows function.	2
Limited discussion of how the design can be applied to the concept, form follows function.	1
Inappropriate /Incorrect Response	0
Total	6
<p>Notes:</p> <ul style="list-style-type: none"> <div style="border: 1px dashed gray; padding: 5px; text-align: center;"> <p>For the copyright reasons this text cannot be reproduced in the online version of this document, but may be viewed at https://en.wikipedia.org/wiki/Form_follows_function</p> </div> <p>The design function has priority over aesthetic. This means that the purpose of a product should be the starting point for its design.</p> <ul style="list-style-type: none"> In this design the function is to provide school children with chairs that provide good posture and encourages movement to maximise the health and well-being of the children. Many children tend to fidget and to move around in their chairs and these designs recognise and encourage children's' free movement. The design actively inspires children to move so they are comfortable. This could improve teachers' classroom management and address behaviour issues in the classroom as movement is not discouraged. Poor posture can also lead to health issues. The design therefore shows application of ergonomics to support children's learning, health and well-being. The seats in figure 4 have been created using a light-coloured wood which could be farmed timber or recycled. One stool features a narrow, curved body that resembles the shape of a horse saddle. Both designs support children to move and enjoy play based interaction with the stools. The designs seem to encourage the child in figure 4 to sit upright, and to adjust their positions to be comfortable. The stools would be able to fit under desks and so could easily be used in an everyday classroom environment. It is evident from the images that each stools supports various and different seating positions. The design would shape the movement of the students throughout the lesson, leading to healthier classrooms and children. The form of the Active Classroom stools certainly follows the function of this design. Absence of colour – removing the distracting elements. It is in proportion to child's body, foot/knee/leg ratio. <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

Section Two: Extended response

70% (59 Marks)

Question 6

(13 marks)

Refer to one design project that you have undertaken this year. Use this project to answer all parts of this question.

- (a) Describe your design brief and proposed design solution. (3 marks)

Description	Marks
Clear and valid description of a design brief and the proposed solution.	3
Adequate and general description of a design brief and/or the proposed solution.	2
Limited description of a design brief and/or the proposed solution.	1
Inappropriate or no response	0
Total	3
Answers could include:	
<ul style="list-style-type: none">The candidate should be able to clearly describe a specific design brief they have worked on and evidence their proposal. This information is also to assist the marker in answering the remainder of this question.	
Solutions are not exhaustive and candidate's responses should be considered.	

- (b) Evaluate the success of your selection and refinement of a production process or method used to create your proposed design solution. (6 marks)

Description	Marks
Comprehensive and insightful evaluation of the success of the selection and refinement of a production process or method in creating a proposed design solution.	6
Detailed and considered evaluation of the success of the selection and refinement of a production process or method in creating a proposed design solution.	5
Clear and valid evaluation of the success of the selection and refinement of a production process or method in creating a proposed design solution.	4
Adequate and general evaluation of the success of the selection of a production process or method in creating a proposed design solution.	3
Superficial evaluation of the success of the selection of a production process or method in creating a proposed design solution.	2
Limited evaluation of the success of the selection of a production process or method in creating a proposed design solution.	1
Inappropriate/incorrect response	0
Total	6
<p>Notes:</p> <ul style="list-style-type: none"> Responses must evaluate the success of their selection offering detailed examples and evidence of success. Simply listing materials and/or technologies is a generalised response. <p>Answers could include:</p> <p>Photography:</p> <ul style="list-style-type: none"> Specific selection and refinement of print or digital production processes such as selection of photography technique requiring set up such as lighting, special effect solutions, lens selection, software techniques/choices, paper type, inks, colour choice CYMK/Pantone, conventions/sizing of final product. Candidates must evaluate how and why they made refinements or changes in creating their design and detail the success of their choices. <p>Graphic:</p> <ul style="list-style-type: none"> Specific selection and refinement of hand-drawn or digital production processes, hand-drawn or software techniques/choices, paper type, inks, colour choice CYMK/Pantone, conventions/sizing of final product. Candidates must evaluate how and why they made refinements or changes in creating their design and detail the success of their choices. <p>Dimensional:</p> <ul style="list-style-type: none"> Specific selection and refinement of material samples and prototyping, software and construction techniques/choices, conventions/sizing of final product. Candidates must evaluate how and why they made refinements or changes in creating their design and detail the success of their choices. <p>Technical:</p> <ul style="list-style-type: none"> Specific selection and refinement of site analysis, material samples and prototyping, construction and software techniques/choices, conventions/sizing of final product. Candidates must evaluate how and why they made refinements or changes in creating their design and detail the success of their choices. <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

Question 6 (continued)

- (c) Outline **two** relevant Occupational Safety and Health (OSH) measures from your own work practice as a designer that ensures a safe workplace for yourself and others. (4 marks)

Description	Marks
For each OSH measure	
Detailed outline of an OSH measure from their own work practice as a designer to ensure a safe workplace for yourself and others.	2
Limited outline of an OSH measure from their own work practice as a designer to ensure a safe workplace for yourself and others.	1
Inappropriate/incorrect response	0
Subtotal	2
Total	4
<p>Notes:</p> <ul style="list-style-type: none"> Reference must be made to specific practices undertaken and how these impacted on design process. Detailed responses should link to OHS measures. Generalised examples without evidence should be considered limited. <p>Answers on safe practices could include:</p> <ul style="list-style-type: none"> Creation of risk assessment plans, safe use of technology training and use of control measures that keep designer, equipment, technologies and materials safe. Site visits, location planning and management. Application of ergonomic principles- workstation design/seating. Designer and design space health and well-being actions such as the taking of regular breaks. Safe lifting using correct lifting/carrying techniques. Application of safety measures such as taping of hazard areas/cabing, no liquids in a workspace, safe use of technologies such as cutting tools, correct storage of materials. Use of protective equipment (PPE) in safe handling of technologies and materials such as use of gloves, masks, eye protection and screens. Heightened awareness and monitoring of ventilation, air flow and circulation in workspaces. <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

Question 7

(16 marks)

- (a) Identify how the designers of Figures 5 and 6, have manipulated visual codes and employed communication strategies to present a particular viewpoint to the intended audience. Provide your response by annotating around the advertisements. (6 marks)

Description	Marks
Comprehensive and insightful annotations of visual codes and communication strategies used to present particular viewpoints to the intended audience.	6
Detailed and considered annotations of visual codes and communication strategies used to present particular viewpoints to the intended audience.	5
Clear and accurate annotations of visual codes and communication strategies used to present particular viewpoints to the intended audience.	4
Adequate and general annotations of visual codes and/or communication strategies used to present particular viewpoints to the intended audience.	3
Simple and partial annotations of visual codes and/or communication strategies used to present particular viewpoints to the intended audience.	2
Limited annotations of visual codes and/or communication strategies used to present particular viewpoints to the intended audience.	1
Inappropriate/incorrect response	0
Total	6
<ul style="list-style-type: none"> • Clear, succinct and accurate evaluation of the design solution focusing on success of manipulated visual codes incorporating design elements and principles and strategies for communication. • Communication strategies include shock, metaphor, emotion and humour. • Evaluation indicates how visual codes have been used to convey the communication strategies used to construct points of view around the issues shown in figure 5 and 6. <p>Relevant and accurate understanding of design terminology should be evident.</p>	

Question 7 (continued)

Annotations could include:	
Figure 5	Figure 6
<ul style="list-style-type: none"> • Combination/juxtaposition of the bomb and pencil uses shock tactics. The sharp lead tip of the pencil could be seen as a weapon. • The text also clearly states that words 'kill' wars, using both emotion and shock tactics. • The short stub of the pencil could be seen as humorous, with the bomb becoming a pencil extender or toy attachment. • Using metaphor with a reference to 'the pen is mightier than the sword', i.e. the written word could help stop, 'kill' and end wars without violence. • Small text and plain background places the focal point on the image. • Text links to Ukraine vs. Russia armed conflict, with a focus on dialogue (rather than war) for peace. • Both bomb and pencil use pattern and texture to create a distressed/old appearance hinting that this is far from a new concept, that peaceful means of dialogue between nations in conflict is the only way to move forward • Cold, dark steel of bomb vs. soft, warm wood of pencil • Artificial vs. organic matter • Both images share a colour palette of gradient grey tones with red as a complement and to draw focus. • Both images have a centrally placed single image which is a 3D form with a strongly defined shape. 	<ul style="list-style-type: none"> • The graphic nature of the sliced-up elephant, showing the meaty cross-section of the insides uses shock tactics. It is designed to provoke a strong reaction, targeting our values in relation to the suffering of animals, especially endangered species. • It could be a comment on the meat industry, which also targets the values of the audience. • The 3D printer could be seen as a metaphor for science fiction and future reproduction. It could also be seen as humorous. • The text clearly stating that animal reproduction is not as easy as what you could see in TV shows such as Westworld. • The plain background makes the colour (and graphic nature) of the sliced animal clearly stand out and create a focal point in the image. • Pattern and texture are evident in the folds of the elephant skin and in the whorls of the sectioned body. • Both images rely heavily on emotion to convey a message. They are filled with negative connotations of war and death. They target audience emotions such as fear, love, sadness, outrage and determination. • Both images are 'calls to action' and are designed to influence the viewer to respond.
Solutions are not exhaustive, and candidate's responses should be considered.	

- (b) Using appropriate design language and terminology, analyse how communication strategies have been employed to reinforce and/or challenge contemporary representations and values in society in Figures 5 and 6. (10 marks)

Description	Marks
For each image:	
Comprehensive and insightful analysis using consistent and appropriate design language, on how communication strategies have been employed to reinforce and/or challenge representations and values in society.	5
Detailed and considered analysis using appropriate design language, on how communication strategies have been employed to reinforce and/or challenge representations and values in society.	4
Adequate and/or general analysis using some appropriate design language on how communication strategies have been employed to reinforce and/or challenge representations and values in society.	3
Simple and/or partial analysis of the design in reinforcing and/or challenging representations and values in society.	2
Limited analysis of analysis of the design.	1
Inappropriate/incorrect response	0
Subtotal	5
Total	10
<p>Answers could include:</p> <ul style="list-style-type: none"> • Both design solutions use communication strategies such as shock tactics and emotion to highlight specific representations and values of our contemporary society. • Published by the International Fund for Animal Welfare, Figure 5 reinforces the idea that all creatures matter, and that we need to protect all endangered species. Elephants have been hunted to extinction for trophies. Using shock tactics, the designers have cleverly created an image where a new elephant is printed via a 3D printer. As only half the elephant is complete, the exposed flesh of the elephant looks gory, evoking emotion. This design solution challenges the ideas that animals can be easily replaced or hunted and killed for sport, and it reinforces value placed on protecting these endangered animals. It reinforces the representation of the ivory trade as shocking and illegal. Medical, technical and scientific advancements are generally highly valued, but it is not this simple to reproduce endangered animals. The designer might also have considered the fact that although this image might be shocking to most, some might find the idea of 3D printing animals humorous. • Figure 6 uses emotion and shock tactics to reinforce the idea that armed conflict and weapons designed for war don't belong in our society. It links in with values of safety and freedom. Using metaphor, the pencil represents a world where the written word and dialogue is more important than violence. It also challenges the idea that military strength is highly valued in our society. The distressed aged look of the bomb could possibly be seen as a shock tactic, referring to past world wars and all the suffering they brought. Harsh words written in pencil can be erased, but the damage from a bomb is not so easy to repair. 	
Solutions are not exhaustive and candidate's responses should be considered.	

Section Two: Extended response: Context-specific
Question 8: Photography
(30 marks)

- (a) Create a detailed mind map that explores and develops ideas relevant to the design brief. (6 marks)

Description	Marks
Comprehensive mind map exploring and developing creative ideas relevant to the design brief.	6
Detailed mind map exploring and developing creative ideas relevant to the design brief.	5
Clear mind map exploring creative ideas relevant to the design brief.	4
Adequate mind map exploring ideas relevant to the design brief.	3
Superficial mind map exploring few ideas relevant to the design brief.	2
Limited list of ideas making simple connections to the design brief.	1
Inappropriate/incorrect response	0
Total	6
<p>Answers could include:</p> <p>Detailed and top-quality mind maps should explore ideas in at least three levels:</p> <ul style="list-style-type: none"> • level 1: The Brain-dump (primary ideas) – here, the importance is on the quantity of ideas and not quality, even strange ideas are welcome • level 2: Divergent thinking (secondary ideas) – in this phase most ideas focus on concepts and the links between ideas. By making variations and combinations between ideas, we can generate new ideas • level 3: Creative ideation (tertiary ideas) – now the previous ideas become inspiration for actual solutions. The aim is to explore the more inspiring ideas through to original and new design possibilities. <p>Key aspects of the brief should be incorporated in the design that link the design to enhancing visitor experiences. Reference should be made to immersive, sensory and interactive visitor experiences linking to central themes that celebrate connection to community, land, water and sky and educate about our endangered animal and plant species. Of relevance are park visitors' cultural values, ideologies and belief systems and promotion of recreation activities available in the wildlife adventure park.</p> <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

(b) In the space below, create a design proposal of your concept for an interactive display of photographs.

(i) Sketch a possible solution to the design brief. (4 marks)

Description	Marks
Detailed and comprehensive design that successfully addresses all aspects of the brief.	4
Clear and valid design that successfully addresses most aspects of the brief.	3
Appropriate design that relates to the brief.	2
Limited design that partially relates to the brief.	1
Inappropriate/incorrect response	0
Total	4
<p>Drawings should present a proposal with key aspects of the design brief featured in ideation.</p> <p>Exemplar drawings should focus on clear communication of ideas that:</p> <ul style="list-style-type: none"> • are educational • apply contemporary and/or future trends • celebrates connection to community, land, water and sky • are relevant to the cultural values, ideologies and belief systems that are important to society and individuals. <p>The design could incorporate:</p> <ul style="list-style-type: none"> • imagery, content, features which engage the characteristics of the intended audience – visitors to Karlup Gnagagin wildlife adventure park. <p>Use of, but not limited to, stimulus information provided.</p> <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

(ii) Annotate your design to help communicate your solution. (6 marks)

Description	Marks
Comprehensive annotations of design features that successfully communicates all aspects of the brief.	6
Detailed and thorough design that successfully communicates all aspects of the brief.	5
Clear and relevant design that communicates most aspects of the brief.	4
Adequate and appropriate design that relates to the brief.	3
Superficial and simple design that in general relates to the brief.	2
Limited design that partially relates to the brief.	1
Inappropriate/Incorrect Response.	0
Total	6
<p>Answers could include:</p> <ul style="list-style-type: none"> • Annotations may refer to the use of elements, principles, codes and conventions, composition, design intentions, typography styles, or text manipulation. • Comments about how the design will function/communicate or the treatment of components/materials to engage the audience. <p>Annotations on how the design includes the following points would also be considered relevant.</p> <ul style="list-style-type: none"> • Educates about Western Australia's endangered animals and plants. • Application of contemporary and/or future trends in production processes • Present connection to community, land, water and sky. • Relevance to the cultural values, ideologies and belief systems that are important to visitors to Karlup Gnagagin wildlife adventure park. <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

Question 8 (continued)

- (c) Justify how your proposed design solution is relevant to the cultural values, ideologies and belief systems of society and individuals. (6 marks)

Description	Marks
Comprehensive and insightful justification of how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	6
Detailed and thorough justification of how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	5
Clear and relevant justification of how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	4
Adequate justification of how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	3
Superficial discussion of how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	2
Limited comment on how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	1
Inappropriate/incorrect response	0
Total	6
<p>Notes:</p> <ul style="list-style-type: none"> • Clear, succinct and accurate justification of the design solution. Links could be made to the specifics of the design brief, interactive visitor experiences to educate and engage the audience. • Answers should detail appropriate and clear understanding and identification of intended audiences' cultural values, attitudes, ideologies and belief systems. • Answers should justify how they have connected choices in the design to engage and appeal to the intended audiences' cultural values, attitudes, ideologies and belief systems. <p>For example, vibrant interactive wall-sized photographic displays provide visitors with exciting recreation activities. Visitors can digitally engage with moving multi layered imagery of Western Australian endangered species creating innovative connections with land, water and sky. Live feed cameras place visitors into the interactive display of the imagery. Visitors will be able to digitally paint on the screens, personalizing their displays and memories of the park. This will appeal to a wide range of visitors interested in new recreation activities, self-expression and innovative digital trends who can then save this imagery and send it to their personal devices. This could act as promotional education through sharing imagery and information via their social media. Indigenous art in the displays creates a visual representation of this culture, promoting the belief system of respect for all cultures, targeting positive values and ideologies of the visitors.</p> <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

- (d) Evaluate critically how you would apply contemporary and/or future trends in production processes to present a connection to community, land, water and sky in your design concept. (8 marks)

Description	Marks
Comprehensive and insightful evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	8
Detailed and thorough evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	7
Clear and valid evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	6
Appropriate and relevant evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	5
Adequate and concise evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	4
General evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	3
Superficial evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	2
Limited comment on connections to community, land, water and sky in design concept.	1
Inappropriate/incorrect response	0
Total	8
<p>Notes:</p> <ul style="list-style-type: none"> • Identification and critical evaluation of contemporary and/or future trends in production processes used. • Detail on how the application of contemporary and/or future trends in production processes for design solution connects to community, land, water and sky. <p>Answers could include the use of design trends or developments in Photography technologies and production processes:</p> <ul style="list-style-type: none"> • development of HDR, 360, Drone, Macro, Cinemagraph technologies alongside a return to analogue film • digital design production via use of apps such as Adobe suite, VISCO, Pixlr. • enhanced VR/AU/AI technologies to create immersive experiences. <p>For example, interactive moving photographic displays featuring Western Australian endangered flora and fauna, using Drones, Macro and HDR technology would provide a clear connection to community, land, water and sky. The majority of Park visitors would have personal devices such as smart phones, which would interact with the touch displays linking to current technological trends. Visitors would access free Wi-Fi to download a park app detailing featured plants and animals. The app will offer interactive features such as AR, QR and live communication with the displays, allowing visitors to interact with the displays in a comfortable and confident way.</p> <p>Visitors could freely move objects on the screen via touch, as well as to swipe them across to different screens, conveying the connection between them all. Live-feed cameras will capture visitors and place them into the interactive display as holograms with visitors 'saving' the image and sending it to their own personal devices via the app and/or QR code. Visitors will be able to use their own devices to access information about the images on the displays via the app, and also simply touch items on screens for extra information. The display would also provide a holographic selfie station with social media frames from popular/ on-trend platforms.</p> <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

Question 9: Graphic design**(30 marks)**

- (a) Create a detailed mind map that explores and develops ideas relevant to the design brief. (6 marks)

Description	Marks
Comprehensive mind map exploring and developing creative ideas relevant to the design brief.	6
Detailed mind map exploring and developing creative ideas relevant to the design brief.	5
Clear mind map exploring creative ideas relevant to the design brief.	4
Adequate mind map exploring ideas relevant to the design brief.	3
Superficial mind map exploring few ideas relevant to the design brief.	2
Limited list of ideas making simple connections to the design brief.	1
Inappropriate/incorrect response	0
Total	6
<p>Notes:</p> <ul style="list-style-type: none"> • Mind mapping is a technique to graphically represent connections among key concepts using lines, links and images. • Each fact or idea is penned down and then connected to its minor or major (previous or following) fact or idea, thereby resulting in a web of relationships. <p>Answers could include:</p> <p>Detailed and top-quality mind maps should explore ideas in at least three levels:</p> <ul style="list-style-type: none"> • level 1: The Brain-dump (primary ideas) – here, the importance is on the quantity of ideas and not quality, even strange ideas are welcome • level 2: Divergent thinking (secondary ideas) – in this phase most ideas focus on concepts and the links between ideas. By making variations and combinations between ideas, we can generate new ideas • level 3: Creative ideation (tertiary ideas) – now the previous ideas become inspiration for actual solutions. The aim is to explore the more inspiring ideas through to original and new design possibilities. <p>Key aspects of the brief should be incorporated in the design that link the design to enhancing visitor experiences. Reference should be made to immersive, sensory and interactive visitor experiences linking to central themes that celebrate connection to community, land, water and sky and educate about our endangered animal and plant species. Of relevance are park visitors' cultural values, ideologies and belief systems and promotion of recreation activities available in the wildlife adventure park.</p> <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

(b) In the space below, create a design proposal of your concept for an interactive park character.

(i) Sketch a possible solution to the design brief. (4 marks)

Description	Marks
Detailed and comprehensive design that successfully addresses all aspects of the brief.	4
Clear and valid design that successfully addresses most aspects of the brief.	3
Appropriate design that relates to the brief.	2
Limited design that partially relates to the brief.	1
Inappropriate/incorrect response	0
Total	4
<p>Drawings should present a proposal with key aspects of the design brief featured in ideation.</p> <p>Exemplar drawings should focus on clear communication of ideas that:</p> <ul style="list-style-type: none"> • are educational • apply contemporary and/or future trends • celebrates connection to community, land, water and sky • are relevant to the cultural values, ideologies and belief systems that are important to society and individuals. <p>The design could incorporate:</p> <ul style="list-style-type: none"> • imagery, content, features which engage the characteristics of the intended audience – visitors to Karlup Gnagagin wildlife adventure park. <p>Use of, but not limited to, stimulus information provided.</p> <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

(ii) Annotate your design to help communicate your solution. (6 marks)

Description	Marks
Comprehensive annotations of design features that successfully communicates all aspects of the brief.	6
Detailed and thorough design that successfully communicates all aspects of the brief.	5
Clear and relevant design that communicates most aspects of the brief.	4
Adequate and appropriate design that relates to the brief.	3
Superficial and simple design that in general relates to the brief.	2
Limited design that partially relates to the brief.	1
Inappropriate/Incorrect Response	0
Total	6
<p>Answers could include:</p> <ul style="list-style-type: none"> • Annotations may refer to the use of elements, principles, codes and conventions, composition, design intentions, typography styles, or text manipulation. • Comments about how the design will function/communicate or the treatment of components/materials to engage the audience. <p>Annotations on how the design includes the following points would also be considered relevant.</p> <ul style="list-style-type: none"> • Educates about Western Australia's endangered animals and plants. • Application of contemporary and/or future trends in production processes • Present connection to community, land, water and sky. • Relevance to the cultural values, ideologies and belief systems that are important to visitors to Karlup Gnagagin wildlife adventure park. <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

Question 9 (continued)

- (c) Justify how your proposed design solution is relevant to the cultural values, ideologies and belief systems of society and individuals. (6 marks)

Description	Marks
Comprehensive and insightful justification of how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	6
Detailed and thorough justification of how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	5
Clear and relevant justification of how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	4
Adequate justification of how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	3
Superficial discussion of how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	2
Limited comment on how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	1
Inappropriate/incorrect response	0
Total	6
<p>Notes:</p> <ul style="list-style-type: none"> • Clear, succinct and accurate justification of the design solution. • Links could be made to the specifics of the design brief, interactive visitor experiences to educate and engage the audience. • Answers should detail appropriate and clear understanding and identification of intended audiences' cultural values, attitudes, ideologies and belief systems. • Answers should justify how they have connected choices in the design to engage and appeal to the intended audiences' cultural values, attitudes, ideologies and belief systems. <p>For example, Orchid is a fantastical brightly coloured energetic creature appealing to families with children familiar with mascots and characters based on or inspired by nature. This connects to an audience's sense of pride in Australia's unique species. Orchid appeals to children/families via symbolic codes including the 3D form, shape, pattern and colour schemes of native flora used. Orchid could be one of many park characters creating a community. Using endangered species as park characters promotes awareness of Australia's unique flora/fauna and connects to ideologies of park visitors interested in the environment, sustainability, education, adventure in the outdoors as well as technological innovation. The character could be designed as 3D avatar using the Park app and display screens through interactive live and/or virtual experiences. Orchid could also appeal to Australians via nostalgic values associated with fictional characters such as the Gumnut babies, Snugglepot and Cuddlepie.</p> <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

- (d) Evaluate critically how you would apply contemporary and/or future trends in production processes to present a connection to community, land, water and sky in your design concept. (8 marks)

Description	Marks
Comprehensive and insightful evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	8
Detailed and thorough evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	7
Clear and valid evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	6
Appropriate and relevant evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	5
Adequate and concise evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	4
General evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	3
Superficial evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	2
Limited comment on connections to community, land, water and sky in design concept.	1
Inappropriate/incorrect response	0
Total	8
<p>Notes:</p> <p>Answers should include:</p> <ul style="list-style-type: none"> • Identification and critical evaluation of contemporary and/or future trends in production processes used. • Detail on how the application of contemporary and/or future trends in production processes for design solution connects to community, land, water and sky. <p>Answers could include use of Design trends or developments in graphic design technologies:</p> <ul style="list-style-type: none"> • 3D design, comic book, surrealist, psychedelic, fantasy and pop aesthetic art styles • updated Vector programs Affinity, Adobe Creative Suite, CorelDRAW • graphic design processes working alongside motion graphics programs Nuke, Maya, Blender • using sustainability as a focus with a return to natural materials and traditional techniques such as Screen-printing (paper-cut stencils, photographic stencils) or relief printing techniques (woodblock, Lino). <p>For example, the character Orchid has been designed to interact with visitors as a 3D Holographic avatar that performs in AI/AU/VR/PR experiences in the park promoting care for land. Orchids as plants are connected to land. As part of the native ecosystem the character connects to a community of animals and or plants. Using the contemporary trend of QR codes and developing technology such as PR or touch display screens around the park visitors' link further with information on Orchid's environment including Orchids' community of other endangered animals and plants. Multi-cultural visitors could access a range of languages via the park app and/or PR experience. Orchid is constructed using contemporary/future trends in graphic design and/or motion graphic programs which focus on a 3D form featuring playful use of bright colours and realistic textures to evoke visitor engagement and positive emotion.</p> <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

Question 10: Dimensional design**(30 marks)**

- (a) Create a detailed mind map that explores and develops ideas relevant to the design brief. (6 marks)

Description	Marks
Comprehensive mind map exploring and developing creative ideas relevant to the design brief.	6
Detailed mind map exploring and developing creative ideas relevant to the design brief.	5
Clear mind map exploring creative ideas relevant to the design brief.	4
Adequate mind map exploring ideas relevant to the design brief.	3
Superficial mind map exploring few ideas relevant to the design brief.	2
Limited list of ideas making simple connections to the design brief.	1
Inappropriate/incorrect response	0
Total	6
<p>Notes:</p> <ul style="list-style-type: none"> • Mind mapping is a technique to graphically represent connections among key concepts using lines, links and images. • Each fact or idea is penned down and then connected to its minor or major (previous or following) fact or idea, thereby resulting in a web of relationships. <p>Answers could include:</p> <p>Detailed and top-quality mind maps should explore ideas in at least three levels:</p> <ul style="list-style-type: none"> • level 1: The Brain-dump (primary ideas) – here, the importance is on the quantity of ideas and not quality, even strange ideas are welcome • level 2: Divergent thinking (secondary ideas) – in this phase most ideas focus on concepts and the links between ideas. By making variations and combinations between ideas, we can generate new ideas • level 3: Creative ideation (tertiary ideas) – now the previous ideas become inspiration for actual solutions. The aim is to explore the more inspiring ideas through to original and new design possibilities. <p>Key aspects of the brief should be incorporated in the design that link the design to enhancing visitor experiences. Reference should be made to immersive, sensory and interactive visitor experiences linking to central themes that celebrate connection to community, land, water and sky and educate about our endangered animal and plant species. Of relevance are park visitors' cultural values, ideologies and belief systems and promotion of recreation activities available in the wildlife adventure park.</p> <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

(b) In the space below, create a design proposal of your concept for an interactive public artwork.

(i) Sketch a possible solution to the design brief. (4 marks)

Description	Marks
Detailed and comprehensive design that successfully addresses all aspects of the brief.	4
Clear and valid design that successfully addresses most aspects of the brief.	3
Appropriate design that relates to the brief.	2
Limited design that partially relates to the brief.	1
Inappropriate/incorrect response	0
Total	4
<p>Drawings should present a proposal with key aspects of the design brief featured in ideation.</p> <p>Exemplar drawings should focus on clear communication of ideas that:</p> <ul style="list-style-type: none"> • are educational • apply contemporary and/or future trends • celebrates connection to community, land, water and sky • are relevant to the cultural values, ideologies and belief systems that are important to society and individuals. <p>The design could incorporate:</p> <ul style="list-style-type: none"> • imagery, content, features which engage the characteristics of the intended audience – visitors to Karlup Gnagagin wildlife adventure park. <p>Use of, but not limited to, stimulus information provided.</p> <p>Solutions are not exhaustive and candidate’s responses should be considered.</p>	

(ii) Annotate your design to help communicate your solution. (6 marks)

Description	Marks
Comprehensive annotations of design features that successfully communicates all aspects of the brief.	6
Detailed and thorough design that successfully communicates all aspects of the brief.	5
Clear and relevant design that communicates most aspects of the brief.	4
Adequate and appropriate design that relates to the brief.	3
Superficial and simple design that in general relates to the brief.	2
Limited design that partially relates to the brief.	1
Inappropriate/Incorrect Response.	0
Total	6
<p>Answers could include:</p> <ul style="list-style-type: none"> • Annotations may refer to the use of elements, principles, codes and conventions, composition, design intentions, typography styles, or text manipulation. • Comments about how the design will function/communicate or the treatment of components/materials to engage the audience. <p>Annotations on how the design includes the following points would also be considered relevant.</p> <ul style="list-style-type: none"> • Educates about Western Australia’s endangered animals and plants. • Application of contemporary and/or future trends in production processes • Present connection to community, land, water and sky. • Relevance to the cultural values, ideologies and belief systems that are important to visitors to Karlup Gnagagin wildlife adventure park. <p>Solutions are not exhaustive and candidate’s responses should be considered.</p>	

Question 10 (continued)

- (c) Justify, how your proposed design solution is relevant to the cultural values, ideologies and belief systems of society and individuals. (6 marks)

Description	Marks
Comprehensive and insightful justification of how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	6
Detailed and thorough justification of how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	5
Clear and relevant justification of how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	4
Adequate justification of how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	3
Superficial discussion of how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	2
Limited comment on how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	1
Inappropriate/incorrect response	0
Total	6
<p>Notes:</p> <ul style="list-style-type: none"> • Clear, succinct and accurate justification of the design solution. • Links could be made to the specifics of the design brief, interactive visitor experiences to educate and engage the audience. • Answers should detail appropriate and clear understanding and identification of intended audiences' cultural values, attitudes, ideologies and belief systems. • Answers should justify how they have connected choices in the design to engage and appeal to the intended audiences' cultural values, attitudes, ideologies and belief systems. <p>For example, a public artwork may be a massive 10M high organic shape like an upward spiral of water, pulling up land and creatures and then water creatures into the sky. Unity created by the flow of animal shapes celebrating care for land, water and sky. An audience interested in art and culture, is engaged through interactive sound, such as poetry and song from many languages and lighting and projections evoking care for the environment through the use of animal and plant shapes. Interactive technologies would be triggered by visitor connection and proximity to the artwork.</p> <p>The work features warm analogous colours and textures referencing Noongar indigenous culture. The unity expressed in the spiral body reinforcing multicultural Australia. Inclusions of rare and endangered creatures connecting to visitor attitudes of global issues. The features of the central form and associated creatures could be stylised using art styles such as post-modernist/minimalist, or eco-art appealing to broader visitor culture. The large scale of the Artwork brings the audience into a sense of humility, that we are not the centre of the universe.</p> <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

Question 10 (continued)

- (d) Evaluate critically how you would apply contemporary and/or future trends in production processes to present a connection to community, land, water and sky in your design concept. (8 marks)

Description	Marks
Comprehensive and insightful evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	8
Detailed and thorough evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	7
Clear and valid evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	6
Appropriate and relevant evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	5
Adequate and concise evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	4
General evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	3
Superficial evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	2
Limited comment on connections to community, land, water and sky in design concept.	1
Inappropriate/incorrect response	0
Total	8

Notes:

Answers should include:

- Identification and critical evaluation of contemporary and/or future trends and production processes used.
- Detail on how application of contemporary and/or future trends and production process for design solution connects to community, land, water and sky.

Answers could include use of Design trends or developments in Dimensional design technologies:

- 3D concept development using applications such as Rhinoceros, 3D StudioMax, inventor, AutoCAD 3D or similar.
- digital programmed lighting to enhance seasonal awareness
- the use of composite and combined materials that can allow forms to be generated by CNC machines.

For example: The central form could be generated in 3D modelling software, using VR/modelling/visualisation/rendering techniques then prototyped in miniature form to test interactive/mobility/construction aspects of the design. The community impact could be enhanced using extensive photos to establish a 3D stage, then installing a model of the work into the environment. Scale, form and colour could be considered, along with digitally controlled lighting to enhance the connection of the land, water and sky themes. Imagery could be projected onto the sculpture, played along with recorded song/music from community groups including Noongar locals. This would build a sense of proximity and respect of indigenous culture. The artwork could be sectioned and replicated by printing, then sculpted in synthetic rock or similar material, large-scale 3D printed, or projected onto a modelling material and carved.

Each moving part could be designed in a software environment, CNC formed/cut and then tested for functionality to ensure impact and engagement of the audience.

Solutions are not exhaustive and candidate's responses should be considered.

Question 11: Technical graphics**(30 marks)**

- (a) Create a detailed mind map that explores and develops ideas relevant to the design brief. (6 marks)

Description	Marks
Comprehensive mind map exploring and developing creative ideas relevant to the design brief.	6
Detailed mind map exploring and developing creative ideas relevant to the design brief.	5
Clear mind map exploring creative ideas relevant to the design brief.	4
Adequate mind map exploring ideas relevant to the design brief.	3
Superficial mind map exploring few ideas relevant to the design brief.	2
Limited list of ideas making simple connections to the design brief.	1
Inappropriate/incorrect response	0
Total	6
<p>Notes:</p> <ul style="list-style-type: none"> Mind mapping is a technique to graphically represent connections among key concepts using lines, links and images. Each fact or idea is penned down and then connected to its minor or major (previous or following) fact or idea, thereby resulting in a web of relationships. <p>Answers could include:</p> <p>Detailed and top-quality mind maps should explore ideas in at least three levels:</p> <ul style="list-style-type: none"> level 1: The Brain-dump (primary ideas) – here, the importance is on the quantity of ideas and not quality, even strange ideas are welcome level 2: Divergent thinking (secondary ideas) – in this phase most ideas focus on concepts and the links between ideas. By making variations and combinations between ideas, we can generate new ideas level 3: Creative ideation (tertiary ideas) – now the previous ideas become inspiration for actual solutions. The aim is to explore the more inspiring ideas through to original and new design possibilities. <p>Key aspects of the brief should be incorporated in the design that link the design to enhancing visitor experiences. Reference should be made to immersive, sensory and interactive visitor experiences linking to central themes that celebrate connection to community, land, water and sky and educate about our endangered animal and plant species. Of relevance are park visitors' cultural values, ideologies and belief systems and promotion of recreation activities available in the wildlife adventure park.</p> <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

(b) In the space below, create a design proposal of your concept for interactive play equipment.

(i) Sketch a possible solution to the design brief. (4 marks)

Description	Marks
Detailed and comprehensive design that successfully addresses all aspects of the brief.	4
Clear and valid design that successfully addresses most aspects of the brief.	3
Appropriate design that relates to the brief.	2
Limited design that partially relates to the brief.	1
Inappropriate/incorrect response	0
Total	4
<p>Drawings should present a proposal with key aspects of the design brief featured in ideation.</p> <p>Exemplar drawings should focus on clear communication of ideas that:</p> <ul style="list-style-type: none"> • are educational • apply contemporary and/or future trends • celebrates connection to community, land, water and sky • are relevant to the cultural values, ideologies and belief systems that are important to society and individuals. <p>The design could incorporate:</p> <ul style="list-style-type: none"> • imagery, content, features which engage the characteristics of the intended audience – visitors to Karlup Gnagagin wildlife adventure park. <p>Use of, but not limited to, stimulus information provided.</p> <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

(ii) Annotate your design to help communicate your solution. (6 marks)

Description	Marks
Comprehensive annotations of design features that successfully communicates all aspects of the brief.	6
Detailed and thorough design that successfully communicates all aspects of the brief.	5
Clear and relevant design that communicates most aspects of the brief.	4
Adequate and appropriate design that relates to the brief.	3
Superficial and simple design that in general relates to the brief.	2
Limited design that partially relates to the brief.	1
Inappropriate/Incorrect Response.	0
Total	6
<p>Answers could include:</p> <ul style="list-style-type: none"> • Annotations may refer to the use of elements, principles, codes and conventions, composition, design intentions, typography styles, or text manipulation. • Comments about how the design will function/communicate or the treatment of components/materials to engage the audience. <p>Annotations on how the design includes the following points would also be considered relevant.</p> <ul style="list-style-type: none"> • Educates about Western Australia's endangered animals and plants. • Application of contemporary and/or future trends in production processes • Present connection to community, land, water and sky. • Relevance to the cultural values, ideologies and belief systems that are important to visitors to Karlup Gnagagin wildlife adventure park. <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

Question 11 (continued)

- (c) Justify how your proposed design solution is relevant to the cultural values, ideologies and belief systems of society and individuals. (6 marks)

Description	Marks
Comprehensive and insightful justification of how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	6
Detailed and thorough justification of how the design is relevant to cultural values, ideologies and belief systems of society and individuals..	5
Clear and relevant justification of how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	4
Adequate justification of how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	3
Superficial discussion of how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	2
Limited comment on how the design is relevant to cultural values, ideologies and belief systems of society and individuals.	1
Inappropriate/incorrect response	0
Total	6
<p>Notes:</p> <ul style="list-style-type: none"> • Clear, succinct and accurate justification of the design solution. • Links could be made to the specifics of the design brief, interactive visitor experiences to educate and engage the audience. • Answers should detail appropriate and clear understanding and identification of intended audiences' cultural values, attitudes, ideologies and belief systems. • Answers should justify how they have connected choices in the design to engage and appeal to the intended audiences' cultural values, attitudes, ideologies and belief systems. <p>For example, an adventure activity appeals to visitors that enjoy physical engagement with the environment. The activity starts with underground tunnels/rooms representing land, with portholes that contain endangered land species illuminated by sun and artificial lights. The trail then continues through to a water play area with skylights featuring aspects of Noongar culture and beliefs such as seasons to inform and educate. Tunnels featuring sustainable, recycled materials appeal to visitors concerned with sustainability and value for money. The exploratory nature of the activity encourages an interest in our natural world, how our impact is affecting it and our custodial responsibilities towards it. The activity trail meanders and winds, encouraging children and adults to communally enjoy the experience together.</p> <p>Solutions are not exhaustive and candidate's responses should be considered.</p>	

- (d) Evaluate critically how you would apply contemporary and/or future trends in production processes to present a connection to community, land, water and sky in your design concept. (8 marks)

Description	Marks
Comprehensive and insightful evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	8
Detailed and thorough evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	7
Clear and valid evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	6
Appropriate and relevant evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	5
Adequate and concise evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	4
General evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	3
Superficial evaluation on application of contemporary and/or future trends in production processes to present connection to community, land, water and sky in design concept.	2
Limited comment on connections to community, land, water and sky in design concept.	1
Inappropriate/incorrect response	0
Total	8

Notes:

Answers should include:

- Identification and critical evaluation of contemporary and/or future trends and production processes used.
- Detail on how application of contemporary and/or future trends and production process for design solution connects to community, land, water and sky.

Answers could include use of Design trends or developments in Technical graphics design technologies:

- use of 3D Design, pop, fantasy and anime aesthetic art styles informing structures, shared spaces, illustration of animals and plants
- use of updated industry standard applications such as Autocad, Solidworks, Inventor, Turbo Cad along with Adobe illustrator, Affinity
- use of sustainable materials such as rammed earth, straw, reclaimed concrete, reclaimed wood, recycled plastics and rubber
- solar/wind power for digital lighting and to lift and drive water
- use of foams and/or composite materials for forms and finishes
- use of treated metals such as dichroic or blued stainless steel, anodised aluminium, powder-coated steel, fish/rope nets
- materials could be water-cut, laser-cut, a range of CNC operations
- modular forms developed in CAD and manufactured robotically
- use of electro-conductive glass, recycled glass

For example, an adventure activity inspired by First Peoples' culture, designed using industry standard applications and natural and/or sustainable, recycled materials such as rubber, treated metals, rope nets and rammed earth and stone alongside new materials such as molded foams. Connecting with land through a series of underground environmentally inspired themed rooms made of rammed earth featuring interactive experiences enabling connection with community.

Finally, the activity trail links with sky with as the activity ends up in high look out with a polished concrete slide that transports back to the ground.

Solutions are not exhaustive and candidate's responses should be considered.

ACKNOWLEDGEMENTS

- Question 2** Adapted from: Shannon, C. E. & Weaver, W. (1948). *Shannon-Weaver's model of communication* [Diagram]. Retrieved September, 2021, from <https://www.communicationtheory.org/shannon-and-weaver-model-of-communication/>
- Adapted from: Berlo, D. (1960). [Diagram of Berlo's SMCR model of communication]. Retrieved September, 2021, from <https://www.communicationtheory.org/berlos-smcr-model-of-communication/>
- Adapted from: Laswell, H. D. (1948). [Diagram of Laswell's communication model]. Retrieved September, 2021, from <https://www.communicationtheory.org/laswells-model/>
- Adapted from: Lewin, K. D. (1943). *Gate keeping theory* [Diagram]. Retrieved September, 2021, from <https://www.communicationtheory.org/gatekeeping-theory/>
- Question 5** Dot point 1 (sentences 1–2) adapted from: Form follows function. (n.d.). In *Wikipedia*. Retrieved September, 2021, from https://en.wikipedia.org/wiki/Form_follows_function
- Question 10(a) & 11(a)** Dot points 1–2 from: Belyh, A. (2019). *Brainstorming - Techniques for idea generation*. Retrieved September, 2021, from <https://www.cleverism.com/brainstorming-techniques-for-idea-generation/>

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