“A back to base marking” approach was again conducted this year for the assessment of design folios. Overall presentation and documentation of design folios was an improvement over previous years. It was pleasing to see almost all folios were submitted in accordance of the folio guidelines in either a single PDF format or with contemporary interactive tools. Some students continued to submit paper based folio content which was contrary to the published TASC project guidelines that specified the submission of all project content in a digital format. This content was ignored. Some folios were difficult to assess due to their lack of consistency in their format. It is much easier to assess a folio where the structure follows: brief, precedents, concept development, production, essay plan, essay and evaluation.

“Contemporary design” is a key requirements for design folios. A small number of projects lacked an understanding of what “contemporary design” means. For example, some projects with military or medieval themes were not examples of “contemporary design” unless there was an explicit connection to design contexts such as interactive game environments.

Highly successful projects again illustrated a completeness in terms of the design process in addressing the folio criteria. Some candidates continue to confuse quantity over quality. It is often better to undertake a smaller and less ambitious design project and do it well rather that undertake a design project that is clearly too ambitious for the designated 50 hour design time for the folio. In addition, some candidates needed to be more discriminating in the amount of content in their design folio. There is no point adding content if it does not add to the value to the design process.

The writing of a coherent and correct design brief continues to be a weakness for a number of folios. The design brief is the foundation of the design project and must have a reference to the context, the anticipated target audience, functional intentions and intended methods of presentation of the project outcome. Students who had a well written design brief in almost all cases achieved a successful and coherent design project outcome.

The research or precedents phase of the project design process is a critical step in the analysing of the project brief and is a foundation for further design development. Stronger projects had well researched precedent content that was well annotated and well connected to the design intention of the brief. This assisted in developing design solutions. A number of candidates continue to not understand the importance of this phase of the design process with poorly articulated research lacking a clear connection to the design brief and an inadequate reflection of design elements and principles. It would help students to take their own photos and videos to use in their project. Candidates could look wider than just relying on web searches for design inspiration. Taking their own photos of buildings, products, logos etc. is encouraged.

Exploration and experimentation by design sketching, be it with pencil or with digital tools, is a critical part of the design process. It provides opportunities for students to fully develop an understanding of their intentions before the production phase and to fully explore appropriate application of design principles and elements in the context of their design intention. Stronger candidates clearly demonstrated the capacity to explore and experiment with ideas. They also demonstrated a process of reflection and refinement in order to achieve a coherent final design solution in readiness for the production phase. These design sketches were well annotated, communicating effective design thinking. A significant number of candidates did not produce design sketches to the standard expected of the course. These were often poorly annotated and did not conform to visual communication standards. Candidates need to provide evidence of the evolution of the design idea and not just focus on one idea. A number of candidates also needed to enhance the scans of their design sketches to make them more readable in their folio. Design sketching is a skill that needs to be explicitly practised by candidates. A good test of whether a
design has been fully/adequately resolved is that an examiner or a third party should be able to produce the design from the material provided.

Most candidates produce annotated screen grabs of their production process with appropriate annotation and commentary that communicated terms and vocabulary relating to CGI. These are critical in proving the authenticity of the students' work. No screen grabs of the production process or ones with little or no commentary do not provide the required evidence of authenticity of student work.

It is important that candidates apply correct computer graphic production processes. Most candidates applied both appropriate compression codecs and contemporary aspect ratios in animations. Selection of appropriate image resolution of completed design content is an important consideration as is fully resolved design outcomes. High level projects demonstrated skilled application and production of digital content across a diversity of contexts. In the production of animated content, attention should be paid to lighting in 3D based animations. It is good to fade out the music and choose appropriate sound tracks. A number of the animated projects would have been better suited to voiceovers rather than text pop ups. Credit sections with referencing at the end of the sequence often detracted from animations. These should be referenced in the written section of the folio. Stop motion, video based and web layout type projects often lack the required Computer Graphic content to satisfactorily meet criterion 8 and should be avoided unless the candidate is prepared to add a significant amount of student generated digital content.

The industry analysis essay was well completed by many candidates and made the connection between the design context of the project and computer graphics related design and production methods. In addition, a number of candidates also discussed relevant social and environmental contexts relating to their project areas. However, there were a number of essays where this connection continues to be absent and where there is a just a discussion of the industry area of the project without any connection to a computer graphics and design context. In some instances essays were more a first person commentary of the student's own design process. The industry analysis essay should in an academic essay format with correct referencing and of the required word count.

Most candidates applied appropriate academic integrity principles in their folios with correct referencing of content sources in both the folio design process and in the industry analysis essay. Some students did not understand correct referencing requirements. A web link without additional reference such as the source and date of access is not a correct reference nor is a reference to a Google or Bing image search result. Imagery and content used in precedents or initial design research should be referenced in the project documentation against the sources as well as listed at the end of the project folio documentation. The 2017 Project Guidelines were quite specific stating, “Students will be penalised against criterion 6 if referencing conventions are not appropriately used.”

Many candidates produced a sound evaluation/reflection of their design outcomes in response to their design brief. This is an important step in the design process to reflect upon learning and the process. Candidates who did not provide such an evaluation/reflection had an incomplete design process.

Approximately 3% of candidates presented folios that would be considered exemplars that achieved the highest possible ratings. These folios were strong with the design process and illustrated a high level application of the principles and elements of design associated with the selected design context. In summary a high level folio contains:

- A design brief that clearly articulates the design intention with a context, functional considerations and potential target audience.
- Comprehensive annotated research of precedents connected to the design brief.
- An exploration and evaluation though design sketching of a diversity of ideas to a clearly resolved final design intention.
- Annotated screen grabs of the production process that effectively communicate insight and understanding of techniques and process.
• An industry analysis essay that makes the link between the design context and computer graphics processes that conforms to academic integrity requirements.

• An evaluation/reflection that reflects the learning and outcomes of the design intention.

• A complete and resolved project that applies a diversity of appropriate computer graphics process and conforms to industry standards of the design context with correct referencing of content sources not generated by the student.

WRITTEN EXAM PAPER

GENERAL COMMENTS

Section D essay responses were an improvement this year with many candidates composing coherent well-argued content with a suitable introduction and conclusion bookending the response. The quality of design sketching was a significant improvement in responding to Section C this year. There was an improvement in the analysis of design considerations at a higher level in this section of the paper. Some candidates just commented about what they have attempted to design and this did not reflect the use of higher level design thinking and analysis. A greater number of candidates effectively communicated specific understanding of appropriate design language in their responses. The short answer sections A and B were well attempted by the overwhelming majority of candidates. Candidates need to be reminded to make full use of the 15 minutes reading time to fully comprehend the nature of the question they select to respond to. A small number of candidates are not taking the time to fully comprehend what is being asked of them in a question or answering more than the required number of questions. Answering more than the required number of questions in Sections A and B disadvantages students as it was often seen that little time was then left for comprehensive responses to Section C and D questions. This is important as Sections C and D have a double weighting in the determination of assessment against exam criteria.

QUESTION 1

This question was attempted by a small number of candidates. The higher level candidate answers identified the principles of line, shape and tone to be evident and could communicate the context of how such an element can be applied in a design context. For example, how tone is the relative degree of lightness and darkness in a design element that helps delineate a 3 dimensional form though the application of highlights and shadow.

QUESTION 2

A popular question which was well answered by most candidates. Copyright protects the original expression of ideas, not the ideas themselves. It comes into existence automatically and gives you the right to control and exploit the copying of your original work.

QUESTION 3

Most candidates responded well to this question. Strong answers include using low resolution for test rendering, minimalizing the use of glossy effects, reducing the number of lights in a scene, using low poly models and low end textures. Hiding objects in a scene and disabling cast shadows that are not required were also among the responses.

QUESTION 4

This question was well attempted by many candidates. The overwhelming majority of candidates understood the key differences and the underlying purposes of both isometric and orthographic representational drawing systems.
QUESTION 5

This was a popular question that yielded very few high-quality answers. The majority of candidate responses did not identify the appropriate design principles. Some candidates found it challenging to describe the posters using design language, others described all three posters in relation to one design principle only. Higher end responses were able to accurately identify all three design principles and clearly articulate the benefits of each.

QUESTION 6

This question required an understanding of the design process. Many students referred to the intake, compression, ignition and release analogy while others used the PRISMET (problem, restrictions, investigation, solution, make, evaluate, test) acronym. Weaker answers generally discussed individual elements of the process such as research and sketching but often failed to cover the full range of elements within a typical design process. This question was generally well answered.

QUESTION 7

The key element of this question required an understanding that scalable graphics work best in vector graphics programs such as Adobe Illustrator. The key principle of vector graphics relates to elements (lines, curves, points) being processed as data sets that use mathematical formulae to allow scale conversion. Raster images on the other hand store data for individual pixels and therefore tend to pixelate when enlarged. Some candidates understood the principles behind the raster / vector issue but confused the two. Overall this question was particularly well answered by the majority of candidates.

QUESTION 8

This question was attempted by relatively few candidates with many of those achieving good results. Understanding that the use of 30 degree axes is important in isometric drawing as well as constructing an initial box showing length, width and height parameters, generally set the candidate up for a good result on this question.

QUESTION 9

This was a popular question. Higher rated answers commented on colour presentation on monitors being an additive process. Many commented on the differences between colour production on monitors (an emissive process) and in the printed form (absorptive process) highlighting the differences between RGB and CMYK colour systems. Most answers conveyed a clear understanding of how pixels generate the spectrum of colours and light intensities.

QUESTION 10

This question was attempted by the majority of candidates with almost all candidates understanding the use of a range of storage devices including cloud storage. Many commented that cloud storage is an effective means to store design data in a manner that permits remote access by design team members. Weaker answers failed to respond to the two key elements of the question that involved both listing several storage methods as well as choosing one that best served the needs of a design business. Many only focussed on the latter element.

QUESTION 11

A number of candidates who attempted this question missed the key point and only answered by moving the location of the lights and camera to improve the illumination. The scene has 3 point lighting with light 2 the key light which enables the object to be the principal illuminator. This determines the scenes overall strength, colour and angle of light. Light 1 and 3 are the fill lights which balance the key by illuminating shaded surfaces. The lighting setup could be improved by applying standard and photometric lights. Once in the scene lights position or orientation, add shadows animate lights or changing parameters can then be applied.
QUESTION 12

This question was answered to a good standard. Typical responses included different levels which you can place an object or image file. Strong answers discussed how layers can be partially obscured allowing portions of images within the layer to be hidden or shown in a translucent manner within another image. Most common responses discussed how layers can combine two or more images into a single digital image and that the use of layers enable you to edit without affecting other layers.

QUESTION 13

A generally well answered question with most candidates referring to the quality of the images as resolution and being measured in dots per inch. A typical “A” type’s answer discussed that when the resolution goes up the image becomes sharper and more defined. As the scan resolution increases it results in a slow scan time, and a much bigger image file size.

QUESTION 14

This question was attempted by many candidates and well answered for the greater part. In some instances candidates confused input devices such as a keyboard or mouse with output devices. Higher quality answered described how an output device would benefit the design studio for both functional and productivity standpoints.

QUESTION 15

This question was attempted by a number of candidates. Poor responses merely indicated a yes or no with little or no justification of the reason. Higher quality answers provided a range of analysis indicating how graphic tablets allow for direct digital input, allow for the use of variable stroke and pressure sensitive capability in creating vector based design, for digital painting using brushes and in animation workflow productivity.

QUESTION 16

This was a popular question from candidates and the overwhelming majority of answers indicated understanding of the key idea of applying bitmap or procedural based textures to diffuse channels in a 3D based application and how other adjustments such as lighting can enhance the realism of the texture. Higher level answers also indicated how additional channels such as specularity, translucency, transparency, displacement and bump in combination with diffuse channels added an extra level of reality and believability to textured surfaces.

QUESTION 17

This question was only undertaken by a few candidates. There was a broad range in the quality of story boards presented. Strong answers described the initial process of design in order to produce the 7 cells required for the story board. Strong answers included strong technical detail and were well annotated with appropriate character sketches, audio, camera pans, video transitions and post production work.

QUESTION 18

This was a popular question with some innovative design solutions presented. Weaker solutions “re-invented” typical existing designs while higher level responses considered aesthetics, sustainability, safety, information, security, comfort, space, form and function. Higher level responses presented a range of design solutions in both 2D and 3D formats, using colour, shading and extensive annotation. Written responses generally focussed on the design elements outlined above.
QUESTION 19

This question was generally well answered by the majority of candidates who attempted it. In order to achieve a high result all three aspects of the question needed to be addressed. This included a discussion of appropriate design considerations, providing two alternative design solutions with annotation and a discussion of relevant design principles and elements. Weaker responses did not show a strong understanding of design principles and elements, or failed to complete all three components of the question.

QUESTION 20

Very few candidates attempted this question and few were able to effectively communicate a resolved design intention. Responses often lacked any detailed discussion of design considerations and many lacked an understanding of how visual design principles and elements could be applied in the context of the design scenario. A number of the design examples also lacked any detail and finesse.

QUESTION 21

This was a very popular question attempted by approximately two thirds of candidates. Better quality answers identified that the key element of the question focussed on the planning processes required prior to commencing the animation process. Weaker answers simply discussed the animation process, often in simplistic, generalised terms. Better responses identified character development, sketching, physical modelling and in particular the importance of storyboarding as essential aspects of the planning phase of an animation. Other elements discussed included planning / experimentation with lighting, shading, texturing, voice acting, and soundtrack elements.

QUESTION 22

This question was attempted by very few candidates. Responses demonstrated a general understanding of the question and candidates were able to describe how inverse kinematics aids the animation process.

QUESTION 23

This question was well answered for the number of candidates who attempted it. Candidates clearly were able to articulate the difference between open source and proprietary commercial software. The key points of difference discussed were the costs associated with software purchase, the stability and useability, and support provided by the developer(s).

QUESTION 24

This was a popular question and most candidates were able to effectively communicate understanding of minimum hardware requirements for particular graphic based and general use software applications. Higher quality responses were able to point to various levels of software based demands on specific hardware components and the effect such demands place on minimum hardware needs. For example, fluid simulations, high resolution rendering, complex 3D modelling and high resolution digital imaging production processes.