EDUCATIONAL QUALITY AND ASSESSMENT PROGRAMME

Pacific Community Communauté du Pacifique

EQAP

Assessment Schedule 2021

South Pacific Form Seven Certificate

I N F O. & C O M. T E C H.

STRAND 1: DIGITAL MEDIA

Item No.	Skill Level	Evidence	Response Level				
			Extended Abstract	**Relational**	**Multistructural**	**Unistructural**	**Weak**
1.1	1	***To use open source. Provide a brief definition of open source software.*** Open source software is mostly free, and the source code is available for changing or modification				*A correct definition (must include open source code)- stick to definition*	*Failing to mention the free open source code or* *Incorrect, irrelevant*
1.2	2	***Present an outline of the strengths of open source software.*** • Open source software are mostly free • The source code are available for changes • Most are secure and may not require virus protection • Many skillful programmers may contribute to improving a particular software or fixing program bugs			*At least two of the given strengths/ideas*	*One of the strengths given*	*Incorrect, irrelevant*
1.3	1	***Specify a task that may require the use of graphics design software*** • Designing of a banner • Advertisement posters • Logo for the event • Event pictures for promotion				*A correct related task given.* *(any other task applicable)*	*Irrelevant task*
1.4	4	***Discuss the importance of determining the full requirements for any specific graphics design task*** To be able to create the visual solution that meet the need of the organizing committee. To be able to assess the required graphic design tools for the task.	*Use the full evidence as an acceptable response* *(2-3 ideas with*	*- able to create the visual solution that meets the need of the organizing committee.*	*- able to create the visual solution that meets the need of the organizing committee.*	*Correctly stating one importance.* *(any one correct idea)*	*Incorrect, irrelevant*

		Meeting the requirement will provide the assurance that the design task will fulfil the purpose and communicate the message through the design to the target audience. It's important to have a good graphic design to provide a positive impression and attract more people to participate in the 2021 Pasifika Festival. ✓ Fit – for-purpose ✓ Better productivity ✓ Within the budget	*linkage. Uses examples to justify)*	*-able to assess the required graphic design tools for the task (provides 2-3 ideas with linkage)*	*(Correctly stating at least two of the importance/ideas)*		
1.5	1	***Name an appropriate video peripheral*** • Digital Video Recorder (DVR) • Digital Video Encoders • Webcam • Video capture device • Video display Unit (VDU) • Camcorder • Smart phones (external with microphone) – devices that have the camera				*Any of the given video peripherals.*	*Not a video peripheral and failing to include "digital"*

			Evidence				Response Level	
1.6	1	*State the main function of the video peripheral named in Question 1.5 above* 					*Any of the correct functions stated from the table*	*Incorrect, irrelevant*

Table for 1.6:

Digital Video Recorder	An electronic device that records video in a digital format to a disk drive
Digital Video Encoders	Convert digital video data into standard analog baseband television signals
Webcam	A small camera attached to a computer that can take still images and sending a live video over conference calls
Video capture device	Converting video signals to video format for storing, modification and displaying on a PC
Video display Unit (VDU)	Displays images generated electronic device
Camcorder	An electronic device combining a video camera and recorder capable of recording video
Smart Phone	For recording purposes

			Evidence				Response Level	
1.7	2	*Outline of the common features of a video processing software that you propose to use for the 2021 Pasifika Festival.* • Animation effect: To enable users with the ability to animate objects and text. • Audio Transition: Effects to smoothly transition between audio clips • Colour manipulation - to correct the colour to make the video look good. • Subtitle: This is used to create subtitles for their video and specify at which times they appear in the timeline. • Storyboard: One of the main features of video editing which provides the user with an easy-to-use workspace. Overlays - adjustment			*At least two of the correct common features provided as in the evidence*	*Any of the correct common features*	*Incorrect, irrelevant*

STRAND 2: WEBSITE DEVELOPMENT

		Evidence	Response Level

Item No.	Skill Level		Extended Abstract	Relational	Multistructural	Unistructural	Weak
2.1	1	**A key web-design requirement.** • Company brand such as the BSP logo, preferred colour schemes, specific design templates, etc. • Basic features & functionality such as online banking capabilities. • Bank information or content to be shared online • A proper layout structure of how the bank information is going to be • Clients that require access to the bank's website and their interest • Look and feel such as graphics, required menu and design elements (borders, buttons, headers, etc) • Security required for protecting the website files and banks information • Database for real time transactions with required forms for database access • Type of web design tools or software to be used State examples – database & program language like HTML				*Any of the correct requirements stated*	*Incorrect, irrelevant*
2.2	1	**A brief definition of CSS** CSS stands for Cascading Style Sheets and used to format the layout of Web pages. They can be used to define text styles, table sizes, and other aspects of Web pages that previously could only be defined in a page's HTML.				*A correct definition given not just the long version of CSS*	*Failure to provide a proper definition*

2.3	3	**_Explain the database-driven website concept._** • A website is developed with a link to a database using a web scripting tools such as PHP. • The website provides an interface to the database so that users can enter or retrieve data from the database using a web interface. [Two of the concepts for L2]. An example of a database driven website is the use of school management system where users can enter student information using a web interface and the data is submitted and stored to a database that is linked to the website. [Use as a possible link] ❖ Examples should be on Banking System as highlighted on the statement given but ideas can be considered. OR (Because of this, companies and possibly organizations can develop more Information Systems that allow users to access databases online.)		_Use the given concepts and the link. (Can use one of the proposed links)_ _(2 or more ideas linked to each other)_	_Use both given concepts or any correctly presented concepts_ _(2 or more ideas stated independently)_	_One of the given key concepts_ _(1 correct idea)_	_Incorrect, irrelevant_
2.4	3	**_Explain the key benefits of using a database-driven website._** • It is easier and faster to update financial transactions because changes are made almost in real-time • Reduced chances for error • A database driven website enhances the bank's performances online. [At least TWO ideas like the above for Level 2] With the use of online banking, users can access their bank accounts online using just a web browser and by entering their username and password to check their bank account balance or make any necessary transactions. [Use as a possible link] OR (The bank account information is stored in a database and is connected to the web page with proper web-programming enabling a user to view his or her banking information from anywhere at any time) Examples can also be considered.		_Use the given benefits and the link (can use one of the proposed links)_ _(2 or more correct ideas with linkage)_	_At least two of the given benefits_ _(2 or more correct ideas stated independently)_	_One of the given benefits_ _(1 correct idea)_	_Incorrect, irrelevant_

| 2.5 | 2 | *Outline of the required process that can be used in testing BSP's web-driven database website.*

The is process of checking a web driven database for potential bugs before it's made live or before code is moved into the production environment are given below.
• Functionality testing - to check if the website performs all the required functions as specified in the beginning of the development.
• Usability testing – check that everything works.
• Interface Testing – check the application, web and database Server
• Database Testing – checking of any database thoroughly.
• Compatibility testing- check that the web application displays correctly across different devices.
• Performance Testing – check that the site works under all loads.
• Security testing – check security of sensitive customer information
• Crowd Testing – use many people to execute tests | | | *At least two of the given steps in the process* | *One of the required testing steps in the process* | *Incorrect, irrelevant* |

STRAND 3: PROGRAMMING

Item No.	Skill Level	Evidence	Response Level				
			Extended Abstract	**Relational**	**Multistructural**	**Unistructural**	**Weak**
3.1	1	***The main benefit of using the problem-solving process in programming.*** • To ensure that the problem is solved in a timely manner • Able to create better programs that meet their intended outcome (able to create program solutions) • Save costs of developing a program that does not solve the problem				*One of the key given benefits*	*Incorrect, irrelevant*
3.2i	1	***Definition of the bottom-up approach.*** A problem-solving approach that starts with the smallest possible entity in the problem then these entities are linked and interacted together to form the main solution. *Rise to complex*				*Correct definition given*	*Incorrect definition*
3.2ii	1	***State the main benefit of the bottom-up design approach.*** • It's suitable for solving smaller problems and integrate it as whole and complete the solution. • Helps build a group of related parts which are then binded as a single unit. • Reusability is one of the benefits of the approach where base elements can be used many times in the main program. • Simple for testing. *Simple to develop…test conditions*				*One of the benefits stated*	*Incorrect, irrelevant*

3.3i	1	**Define algorithm in computer programming** • A list of simple instructions that describes the exact steps needed for the computer to solve a problem or perform a task • A list of the steps in the order the instructions should be performed				*Any of the definitions given.*	*Incorrect definition*
3.3ii	2	**Outline two known advantages of using flowcharts.** • better way of communicating the logic of the solution to be programmed • problem can be analysed in a more effective way minimising cost and wastage of time. • an effective blueprint of the solution to be programmed • a good program documentation making the design more efficient. • helps in debugging process • helps in checking of program flows during maintenance *able to relate the logic much better…….use of symbols*			*At least two of the given advantages* *Use of symbols & examples*	*One of the given advantages.* *Use of symbols*	*Incorrect, irrelevant*
3.3iii	2	**Outline two benefits of using appropriate design tools** • improves productivity of the development team • design tools can allow the models to be used for generating part of the codes • minimise errors in the final code • allow for testing of models before the actual coding • helps with software documentation • improves the understandability of the software design			*At least two of the given benefits*	*One of the given benefits*	*Incorrect, irrelevant*
3.4	3	**Brief explanation of the benefits of following the programming stages.** Following the programming stages provide programmers with. • clear goal for solving the problem • clear steps of activities to be completed at each stage. • necessary checks to test the program properly before implementation • records of changes for any new members		*Any two of the given ideas and with the link is acceptable.*	*At least two of the given benefits* *List stages on in order…*	*One of the given benefits*	*Incorrect, irrelevant*

		• easy to manage the development to ensure that the program is completed • best control to minimise problems [Any TWO of the above responses for Level 2] Following the stages of programming properly is to break up the long process of programming into manageable parts to ensure that the final program meets all the requirements.					
3.5	1	**The definition of debugging in programming**. • The process of locating and removing computer program errors or abnormalities using debugging tools. • Checks and corrects errors or bugs to allow proper program operation according to set specifications.				*One of the given definitions*	*Incorrect definition*

STRAND 4: MICROPROCESSOR CONTROL

Item No.	Skill Level	Evidence	Response Level				
			Extended Abstract	**Relational**	**Multistructural**	**Unistructural**	**Weak**
4.1	1	**State a key feature of a microprocessor.** • One of the key features is cost - the volume of production is very high, and the chips are available at low prices. • another feature is the small size of processors • another important feature is its low power consumption • versatility of a microprocessor- can be configured with many applications • another feature is its extreme reliability *include size, cost*				*One of the given features*	*Incorrect, irrelevant*
4.2	1	**A simple task that can be performed by an embedded device.** • changing the traffic light from Red to Green • changing the temperature of an air conditioning unit • opening and closing of an automatic door or gate / car *include any devices*				*One of the given tasks or similar tasks*	*Incorrect, irrelevant*
4.3	2	**An outline of the main parts of the process involved when a microprocessor controls the hardware.** • the microprocessor is programmed using a high-level language • the high-level code is translated into the machine code using a compiler and then saved into the microprocessor • the program provides the instructions for the microprocessor to control the function of the device			*At least two of the given parts of the process*	*Any part of the given steps of the process*	*Incorrect, irrelevant*
4.4	2	**An outline of the process involved in controlling an embedded device to respond when a critical change in its environment occurs.**			*At least two of the given parts of the process*	*Any part of the given*	*Incorrect, irrelevant*

						steps of the process	
		• the software is created with a high-level language is translated into machine codes and embed into the microprocessor • the instructions will include responses to change in the environment if occurs, triggered by a sensor that connects to the microprocessor • the microprocessor responded by processing the instructions for the device to perform and wait for the sensors to send any confirmation.					

STRAND 5: ISSUES IN ICT

Item No.	Skill Level	Evidence	Response Level				
			Extended Abstract	**Relational**	**Multistructural**	**Unistructural**	**Weak**
5.1i	1	***Brief definition of Piracy.*** The issue with piracy is the illegal copying of contents such as audio, video, and software. The violation of copyright agreements is a Piracy issue.				*Correct definition given (stick to definition)*	*Incorrect definition or just examples*
5.1ii	1	***Brief definition of Privacy.*** Privacy is the right of people not to reveal information about them. For example, health related information of a patient kept in the hospital. Such information is private and not to be shared with other people.				*Correct definition given*	*Incorrect definition*
5.2	2	***A clear outline of the impacts of ethical issues in ICT.*** • Cost lots of money and time to provide protections and security. • Poor performances in the workplace when employees using company time and resources for non-work-related Internet surfing • Reputations and credibility of companies and individuals affected or damaged when got caught engaging in unethical activities. • Disrespectful attitude such as using of smart phones and laptops while people talk or during formal meetings. • Growing motivations for untruthful actions of individuals and organizations with the wrong impressions that their actions are not visible when using ICT. • Imprisonment due to illegal offences,			*At least two of the given ethical issues*	*One of the given ethical issues*	*Incorrect, irrelevant*

		• Lack of trusts amongst employees and ICT professionals because of on-going unethical actions.					
5.3	4	**Discuss effective ways of managing ICT waste.** • Some old ICT devices may still be in use and can be Repaired and Refurbished • Donating for reuse of old devices that are still in use can keep old devices from being dumped or disposed. • Recycling is one of the most effective ways of managing e-waste. Electronic devices are being dismantled into pieces and separated into the different types of materials it consists of as much as possible [Any TWO of the above responses for Level 2] It's important for ICT waste to be collected and transported to treatment facilities or in the case of smaller Island nations of the Pacific, shipped to other developed countries with proper disposal facilities. [Include the link above for Level 3] I suggest that countries, especially developed countries must consider developing proper legislations and policies to address the growing concerns with ICT waste. Policies that promote proper ICT waste management and public awareness.	*At least two of the ideas, linked and an idea presented as in the evidence / acceptable and relevant new idea.* *(2 or more correct ideas with linkage. Uses examples to justify)*	*At least two of the effective ways and with the provided link or an acceptable link of the effective ways* *(2 or more correct ideas with linkage)*	*At least two of the given effective ways* *(2 or more correct ideas stated independently)*	*One of the given effective ways* *(1 correct idea)*	*Incorrect, irrelevant*
5.4	1	**State a known health issue directly related to using ICT equipment.** • Muscle Problems because of poor posture • Vision problems caused by long hours on the screen • Headache; Stress; Obesity • Repetitive Stress Injury and radiation				*One of the given health issues*	*Incorrect issue stated*
5.5	3	**Explain the best operating practices when interacting with ICT.** • use correct sitting posture and take small breaks • correct brightness of screen not to strain the eyes • Relax arms and try to get a few stretches in when not typing or using your mouse [Any TWO of the above for L2]		*At least two of the given practices which are linked correctly* *(relationship between the best*	*At least two of the given practices*	*One of the given practices*	*Incorrect, irrelevant*

		- Using a computer may present health issues but following the best operating practices will reduce any health risks. OR - it is also important for everyone to practice a certain healthier attitude by changing behaviour while working at the computer or ICT devices [Include any of the links above for Level 3]		*practices and their reasons must be clear)*			
5.6	1	***A known security threat posed by employees.*** • misuse or damaging (sabotage) of ICT resources both hardware and software • carelessness such as giving access accounts or physical access to other people • sharing confidential information with other organisations for financial gains or other reasons • violation of organisation ICT Policy putting the organisation's ICT facilities and resources at risk.				*One of the given threats*	*Incorrect threat recorded*
5.7	3	***Explain the issues with having an online identity.*** • Users identities are shared on public easily with no restrictions • Control on what's available online is limited • Some experience users prefer having multiple identities • Cyber bullying is a growing online issue • On contact with many people by sharing of information & knowledge • Easy to find friends or networking with others etc • Celebrities use their own identity as online identities to gain popularity • Private information is stored elsewhere and can be accessible to others. [Any TWO of the above responses for Level 2] With the invisibility nature of social media, a growing number of people can choose whatever identity to use and perform criminal activities and other bad things easily, affecting other people especially young kids. OR		*At least two of the given issues with the given link (can use one of the given links)* *(NB: the relationship between the issues, their causes and effects on users is clear)*	*At least two of the given issues*	*One of the given issues*	*Incorrect, irrelevant*

		Some people are not so careful when using Social media and unknowingly share everything about themselves and other confidential information for others to view and use. [Include one of the above links for Level 3] *Mentioned on celebrity….*					
5.8	1	***An ICT security incident that has been reported in the Pacific.*** • Illegal copying of online resources for commercial gains such as software, music, movies and e-books. • Attempt to steal money from ATM stations. • Online illegal transferring of money or money laundering • Cyber-attacks or hacking attempts on government and school systems. • Pornography activities using mobile technologies and Cyber space. *Any security incident related & examples…*				*One of the given incidents*	*Incorrect, irrelevant*
5.9	3	**Explain known efforts being implemented in the Pacific to combat cybercrimes.** • Drafting and enacting cyber legislations • Law enforcement using expertise and proper tools in dealing with a wide range of cybercrimes • Cyber security capacity building in the region and global efforts to develop policies and technologies to help • Public awareness and training in cyber security [Any TWO of the above responses for Level 2] Many nations of the Pacific have been involved in the development of Cyber security protection systems to manage cyber activities and alert countries or institutions of any suspicious cyber activity attempts such as the Computer Emergency Response Team (CERT). [Include the above for Level 3]		*At least two of the given efforts with the given link* *(NB: the relationship between the efforts stated and how it combats cybercrime should be clear)*	*At least two of the given efforts*	*One of the given efforts*	*Incorrect, irrelevant*

The End