CARIBBEAN EXAMINATIONS COUNCIL

CAPE®
Digital Media

SYLLABUS
SPECIMEN PAPER
MARK SCHEME

CAPE® Digital Media Free Resources

LIST OF CONTENTS

CAPE® Digital Media Specimen Papers & Mark Schemes

CAPE® Digital Media Subject Reports

Digital Media

In the Caribbean, knowledge and information are increasingly communicated through digital images and electronic media. The creation and manipulation of digital media serves to disseminate this information and build bridges to the evolving national, regional and international society in the digital era. Digital Media competencies are therefore of great relevance and practical value. By increasing the cadre of digital media practitioners, such as content creators, animators, web developers, graphic artists and mobile app developers, the region secures the skillsets and knowledge base that are essential to building and sustaining the digital economy in the Caribbean.

The CAPE Digital Media Syllabus offers students the opportunity to acquire a variety of experiences and skills in the areas of digital media conceptualisation, design and development. It also fosters interest and enjoyment in the practical application, production and consumption of digital media and seeks to develop informed citizens, competent practitioners and raise the standard of digital media production among students and across industry.

The Digital Media Syllabus consists of two Units of 150 hours, each comprising three Modules of 50 hours each. Each Module is compulsory.

Unit 1: Digital Media Fundamentals

Module 1   –   Understanding Digital Media

Module 2   –   Digital Media Ecosystem

Module 3   –   Creative Solution Design

Unit 2: Applied Digital Media

Module 1   –   Visual and Interactive Design

Module 2   –   Web and Digital Publishing

Module 3   –   Mobile App Development

CARIBBEAN EXAMINATIONS COUNCIL

Caribbean Advanced Proficiency Examination®
CAPE®

DIGITAL MEDIA SYLLABUS

Effective for examinations from May-June 2014

Contents

First issued in 2013

Please check the website www.cxc.org for updates on CXC's syllabuses.

Introduction

The Caribbean Advanced Proficiency Examination (CAPE) is designed to provide certification of the academic, vocational and technical achievement of students in the Caribbean who, having completed a minimum of five years of secondary education, wish to further their studies. The examinations address the skills and knowledge acquired by students under a flexible and articulated system where subjects are organised in 1-Unit or 2-Unit courses with each Unit containing three Modules. Subjects examined under CAPE may be studied concurrently or singly.

The Caribbean Examinations Council offers three types of certification. The first is the award of a certificate showing each CAPE Unit completed. The second is the CAPE Diploma, awarded to candidates who have satisfactorily completed at least six Units, including Caribbean Studies. The third is the CAPE Associate Degree, awarded for the satisfactory completion of a prescribed cluster of seven CAPE Units including Caribbean Studies and Communication Studies. For the CAPE Diploma and the CAPE Associate Degree, candidates must complete the cluster of required Units within a maximum period of five years.

Recognised educational institutions presenting candidates for the CAPE Associate Degree in one of the nine categories must, on registering these candidates at the start of the qualifying year, have them confirm, in the required form, the Associate Degree they wish to be awarded. Candidates will not be awarded any possible alternatives for which they did not apply.

Digital Media Syllabus

♦ **RATIONALE**

The Digital Media area of study encompasses all the domains of learning, namely, cognitive, affective and psychomotor. The field of study covers such topics as the theory and history of digital media, the impact of digital media on society, digital media business and entrepreneurial models and elements and principles of digital design and manipulative or practical skills.

In the Caribbean, knowledge and information are increasingly communicated through digital images and electronic media. The creation and manipulation of digital media serves to disseminate this information and build bridges to the evolving national, regional and international society in the digital era. Digital Media competencies are therefore of great relevance and practical value. By increasing the cadre of digital media practitioners, such as content creators, animators, web developers, graphic artists and mobile app developers, the region secures the skillsets and knowledge base that are essential to building and sustaining the digital economy in the Caribbean.

The CAPE Digital Media course will facilitate the development of important learning and problem-solving skills, foster creativity, encourage innovation and entrepreneurship, and inculcate a sense of value in students for their own work and respect and regard for the work of others. This syllabus in Digital Media will contribute to the development of the *Ideal Caribbean Person,* by promoting and encouraging teamwork, collaboration, and the cross-pollination of ideas among students of different ethnic backgrounds, cultures and points of view in the region. The syllabus will also help students to develop intellectually and seeks to refine their critical thinking skills and judgments and the acquisition of skills as defined in the UNESCO Pillars of Learning through research and the making of digital media. These include the responsibilities of learning to know, learning to do, learning to live together, learning to be and learning to transform oneself and society

Students are offered the opportunity to acquire a variety of experiences and skills in the areas of digital media conceptualisation, design and development. It also fosters interest and enjoyment in the practical application, production and consumption of digital media and seeks to develop informed citizens, competent practitioners and raise the standard of digital media production among students and across industry.

♦ **AIMS**

This syllabus aims to:

1.   develop an understanding of basic concepts in digital media;

2.   develop an appreciation for the similarities and differences between new media and traditional media;

3.   develop an understanding of the historical context of digital communication;

4.   develop an understanding of the digital media environment/ecosystem;

5.   encourage critical reflection on the consequences and ethical implications of new technology on the traditional media as well as cultures, societies, and political systems;

6.   develop an understanding of the opportunities and techniques for creating digital media products and solutions;

7.   develop an appreciation for the role, value and significance of digital media to Caribbean society and regional development;

8.   encourage a culture of innovation, creative thinking and design;

9.   develop an appreciation for digital media tools and platform;

10.   develop an appreciation for the considerations of working in the digital media industry;

11.   develop an understanding of the trends and development in digital media;

12.   encourage the identification and design of relevant digital media solutions that address Caribbean problems and needs;

13.   encourage the use of new software and hardware inventions;

14.   encourage awareness of the entrepreneurial potential in the use of digital media in the pursuit of innovative and entrepreneurial activities.

♦ SKILLS AND ABILITIES TO BE ASSESSED

The skills and abilities that students are expected to develop on completion of this syllabus have been grouped under three headings:

(a)   Knowledge and Comprehension;

(b)   Creativity, Innovation and Collaboration;

(c)   Digital Literacy and Communication.

Knowledge and Comprehension

The ability to:

(a)   define terms and concepts;

(b)   describe current developments;

(c)   explain the economic, social and cultural impacts;

(d)   explain the entrepreneurial opportunities;

(e)   explain intellectual property protection and compliance;

(f)   describe ethical issues and considerations.

Creativity, Innovation and Collaboration

The ability to:

(a)   analyse information;

(b)   utilise process design principles;

(c)   troubleshoot and solve a problem;

(d)   conceptualise an innovative and creative design solution;

(e)   apply digital media marketing models and approaches;

(f)   work with others to realise a product;

(g)   apply pre-production skills and techniques;

(h)   plan and design innovative solutions;

(i)   apply the creative process to solve local problems.

Digital Literacy and Communication

The ability to:

(a)   select and use appropriate tools;

(b)   use social media and other digital platforms;

(c)   use appropriate terminology in discussing their discipline;

(d)   use appropriate technology;

(e)   market the products of their work.

◆   PRE-REQUISITES OF THE SYLLABUS

Any person who has completed five years of secondary education or its equivalent should normally be able to pursue the course of study defined by the syllabus.

◆ STRUCTURE OF THE SYLLABUS

The Digital Media Syllabus consists of two Units of 150 hours, each comprising three Modules of 50 hours each. Each Module is compulsory. Together the two Units provide a comprehensive introduction to the field of Digital Media.

UNIT 1*:* DIGITAL MEDIA FUNDAMENTALS

Module 1	-	Understanding Digital Media
Module 2	-	Digital Media Ecosystem
Module 3	-	Creative Solution Design

UNIT 2: APPLIED DIGITAL MEDIA

Module 1	-	Visual and Interactive Design
Module 2	-	Web and Digital Publishing
Module 3	-	Mobile App Development

◆ EQUIPMENT AND SOFTWARE

Candidates must be able to access equipment and materials that provide them with opportunities to participate in activities in a learning environment similar to that of a real digital media work place. In particular, candidates will need access to digital media hardware and software.

Essential

1.   Broadband Internet Access.

2.   Computing Device with audio and video capture capability with built-in microphone, camera and external speakers:

   (a)   Desktop Computers (Apple / Windows / Linux)
   (b)   Or Tablets (Apple iOS/Android)
   (c)   Or Smartphone

AUDIO	VIDEO	SUPPORT ACCESSORIES
Minimum Requirement	**Minimum Requirement**	**Recommended**
Portable Audio Recorders – (Mobile Phone, MP3 player or dedicated audio recorder)	Mobile Phone Camera	Portable Storage Devices
Recommended	**Recommended**	**Recommended**
Desktop Speakers Stand-alone Microphones	Digital Cameras Camcorders Video Cameras	Portable Storage Devices Multimedia Projectors CD and DVD Burners Scanners Printers
Optional	**Optional**	**Optional**
Audio adapters and connector as necessary Audio Mixers	Lighting Kit (Basic) Portable Green Screen Clapper	Tripods Microphone Stands

Software

These resources can be secured, for example, through appropriate partnership agreements or in-school Bring Your Own Device (BYOD) policies.

VIDEO EDITING	SOUND EDITING	ANIMATION	GRAPHIC DESIGN
Free	**Free**	**Free**	**Free**
Blender Windows Movie Maker iMovie	Audacity Wavepad Sound Editor Powersound	Blender Monkeyjam Synfig Powtoon.com Google Sketchup Pixen	Inkscape Pencil GIMP
Commercial	**Commercial**	**Commercial**	**Commercial**
Adobe After Effects Apple Final Cut Pro Sony Vegas	Sound Forge GoldWave Adobe Audition	Adobe Flash Autodesk Maya NewTek LightWave 3D	Publisher Sketch Adobe Illustrator Paint.NET

E-BOOKS	PHOTOGRAPHY	MOBILE APP DEVELOPMENT	WEB DEVELOPMENT
Free	**Free**	**Free**	**Free**
Google Docs	GIMP	PhoneGap	Composer
Kindle	Pixlr	Mo Sync	Weebly
iAuthor	Photoscape	Widget Sync	Yola
MobiPocket Creator	Google Picasa	Whoop	Wix
Cute PDF	Live Quartz	AppMakr	Firebug
Zinepal	iPhoto	MobileNation	Apatana Studio
	Microsoft Photoeditor	SenchaTouch	
		Mobile OS Emulator (Android/iOS/Blackberry)	
Commercial	**Commercial**	**Commercial**	**Commercial**
Adobe InDesign	Adobe Photoshop	GENWI	Adobe Dreamweaver
Adobe Acrobat	GIMP	BuidAnApp	Panic Coda
		iBuildApp	
		LiveCodeMobile	
		MobileNation	

Additional Online Resources

Motion Graphics
Motiongraphics.nu
Motionspire.com
Shots.net

Royalty Free Sound
freesound.org
soundjay.com
soungle.com
royaltyfreemusic.com
audiomicro.com/free-sound-effects

Royalty Free Video
http://xstockvideo.com/
http://commons.wikimedia.org/wiki/Category:Videos

http://www.footagefirm.com/free-footage
http://www.stockfootageforfree.com
http://www.movietools.info/
http://www.detonationfilms.com/Stock_Directory.html
http://www.vimeo.com/groups/freehd
http://worldclips.tv/
http://www.krishnacreationz.com/

Royalty Free Digital Images
www.sxc.hu
www.stockvault.net
www.morguefile.com
www.openphoto.net
www.freepixels.com
www.freerangestock.com

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♦ UNIT 1: DIGITAL MEDIA FUNDAMENTALS
MODULE 1: UNDERSTANDING DIGITAL MEDIA

GENERAL OBJECTIVES

On completion of this Module, students should:

1. develop an understanding of digital media;

2. appreciate the impact of digital media on society;

3. develop an appreciation for the business of digital media;

4. understand the Open Movement;

5. appreciate the future of digital media.

SPECIFIC OBJECTIVES

Students should be able to:

1. define terms relating to digital media;

2. describe the evolution of digital media;

3. explain the types of digital media;

4. discuss the importance of Caribbean content creation in the context of digital media;

5. discuss digital media platforms;

6. discuss the opportunities and pitfalls of digital media and the Internet;

7. explain intellectual property, patents and copyright protection as relates to digital media;

8. discuss the ethical issues associated with the use of digital media;

9. describe the types of digital media businesses;

10. explain the Open Movement;

11. identify digital media tools;

12. discuss future trends and developments in digital media.

UNIT 1
MODULE 1: UNDERSTANDING DIGITAL MEDIA (cont'd)

CONTENT

1.   **Digital Media Terminologies**

    (a)   Audio, Bandwidth, Broadband.

    (b)   Capture, content integration, convergence, compression.

    (c)   Digital Media, digital rights management, download media.

    (d)   Frame, GIF, HDTV, HTML, hypermedia, hypertext, IP, JPEG, linear editing.

    (e)   Media, multicasting, new media, pixels, stream, vector graphics, webcast, XML.

2.   **Evolution of Digital Media**

    (a)   History and timeline – (transition from analog to digital media).

    (b)   Web 1.0 to Web 2.0: (transition from static hyperlinks to interactive web applications and services).

    (c)   Emergence of Broadband, Mobile and Social Media (smartphones, tablets and other wireless devices integrating social, data analysis and applications).

    (d)   Affordability and access (impact of increasing Internet access and lower cost computing devices).

3.   **Types of Digital Media**

    (a)   Definition- a form of electronic media where data are stored in digital (as opposed to analog) form.

    (b)   Examples of Digital Media:

        (i)   Digital Art- computer generated graphics, digital paintings, hybrid, digitised artwork, 2D versus 3D art;

        (ii)   Digital Audio- digital music, ringtones, sound effects;

        (iii)   Animation- stop motion animation, motion graphics, animated logo design, animated advertisements, animatics / pre-visualisation, storyboarding, 3D product design, modeling, character design;

(iv)   Mobile Apps- mobile games, reference, multimedia, utilities, productivity, social;

(v)   Mobile phone versus tablet apps;

(vi)   Digital Video- capture, editing, production;

(vii)   Digital Photography (Capture / Production) - capture, editing, production;

(viii)   EBooks- production tools, distribution platforms for electronic books;

(ix)   Websites- design, development, management.

4.   **Caribbean Content Creation in the Context of Digital Media**

(a)   Opportunities to meet local needs.

(b)   Create global opportunities.

5.   **Digital Media Platforms (DMP)**

Definition - A digitised platform for media delivery of video, audio and/or data to multiple networks, such as Telco, cable, satellite, digital terrestrial broadcasting and the Internet.

6.   **Opportunities and Pitfalls of Digital Media and the Internet**

(a)   The opportunities - connections, branding, value added, follow up, communities, dynamic discussions, productive enhancing.

(b)   The pitfalls - permanent records, material discovery, ethical issues, confused text, time consuming, social issues.

7.   **Intellectual Property, Patents, Copyrights**

(a)   The reasons for and importance of intellectual property, patents and copyrights.

(b)   What do intellectual property, patents and copyrights protect?

(c)   Penalties for infringement of intellectual property, patents, copyrights.

(d)   Process involved in copyrighting and patenting one's work.

(e)   Authorised use of copyrighted material.

UNIT 1
MODULE 1: UNDERSTANDING DIGITAL MEDIA (cont'd)

8.   **Ethical Issues Relating to Digital Media**

    (a)   Cybercrimes.

    (b)   Plagiarism.

    (c)   What is right or wrong about individuals' actions when dealing with digital media for example:

          (i)   downloading software that is too costly to purchase from file sharing networks;

          (ii)   making copies of a borrowed CD or rented DVD before returning it;

          (iii)   stripping DRM restrictions from downloaded media to make an unprotected copy.

9.   **Types of Digital Media Businesses**

    (a)   Advertising Agencies - digital art, digital audio, animation, digital videos (capture/ production), digital photography (capture/production).

    (b)   Effects Factories (Sound or Video) - digital audio.

    (c)   Music Production Studios - digital audio.

    (d)   Animation Firms - digital art, digital audio, animation, digital videos (capture/ production), digital photography (capture/production).

    (e)   Mobile App Development - digital art, digital audio, animation, digital videos (capture/production), digital photography (capture/production), mobile apps, websites.

    (f)   Media Houses - digital videos (capture/production), digital photography (capture/ production).

    (g)   Gaming - digital art, digital audio, animation, mobile apps, digital videos (capture/ production), digital photography (capture/production).

    (h)   Publishing Houses - electronic books, digital art, digital audio, animation, digital videos (capture/production), digital photography (capture/production), websites.

(i) Website Development Firms: Websites, Digital Art, Animation, Digital Videos (Capture / Production), Digital Photography (Capture/Production).

(j) Education Support Services: Digital Art, Digital Audio, Animation, Mobile Apps, Digital Videos (Capture/Production), Digital Photography (Capture/Production), Electronic Books, Websites.

(k) Interactive Media Firms: Digital Art, Digital Audio, Animation, Mobile Apps, Digital Videos (Capture/Production), Digital Photography (Capture/Production), Electronic Books, Websites.

(l) Training Firms.

10. **The Open Movement Philosophy**

(a) Open Source.

(b) Open Data.

(c) Open Educational Resources (OER).

(d) Open Source versus Public Domain.

(e) Creative Commons Licensing.

11. **Digital Media Tools**

(a) Open Source, Free and Internet Based Digital Media Tools (Audio Editing – Audacity, Wavepad, Wavosaur, Ardour.

(b) Photo Editing – Pixlr, Picasa, Picnik; Video Editing – Moviemaker, Cinefix; MovieStorm, StoryBoard Pro.

(c) Audio Slide Show – Photo Story, Animoto, Photo Peach.

12. **Future Trends and Development**

(a) Characteristics:

(i) Greater accessibility;

(ii) Affordability;

UNIT 1
MODULE 1: UNDERSTANDING DIGITAL MEDIA (cont'd)

(iii)   Pervasiveness of technology;

(iv)   Increasing/decreasing adoption.

Suggested Teaching and Learning Activities

To facilitate students' attainment of the objectives in this Module, teachers are advised to engage students in the following teaching and learning activities.

1.   Have students develop the Digital Media timeline and make presentation to class with graphical images showing the evolution of the digital media devices.

2.   Invite local experts in the field of Digital Media to conduct forums with students. Students would be given the opportunity to appreciate the role of digital media and the importance of local content at the national level and in the wider Caribbean context.

3.   Encourage students to discuss the social, political, economic, legal and cultural activities in their local and national context as well as in the wider Caribbean context.

4.   Teachers should have students compare and contrast traditional media with new media.

RESOURCES

Yue-Ling, Wong   *Digital Media Primer*.   United Kingdom: Pearson Education, 2008.

Yue-Ling, Wong   *Instructor Resources to accompany Digital Media Primer:* United States: Prentice Hall, Online, 2009.

Websites

- http://www.itvdictionary.com/definitions/digital_media_platform_dmp_definition.html
- http://www.brandchannel.com/images/papers/530_iconect_wp_social_media_legal_0911.pdf
- http://www.wipo.int/about-ip/en/
- http://www.zdnet.com/blog/bott/where-do-you-stand-on-digital-media-ethics/314
- http://www.zdnet.com/blog/bott/where-do-you-stand-on-digital-media-ethics/314

UNIT 1
MODULE 2: THE DIGITAL MEDIA ECOSYSTEM

GENERAL OBJECTIVES

On completion of this Module, students should:

1.   develop an understanding of the digital media environment;

2.   appreciate the characteristics of working in the digital media industry;

3.   develop the basic skill set to enter the digital media industry;

4.   develop an understanding of the entrepreneurial opportunities in the digital media industry.

SPECIFIC OBJECTIVES

Students should be able to:

1.   discuss the characteristics of a digital user (native and immigrants);

2.   discuss the characteristics of the digital media environment;

3.   explain the key aspects of the digital media value chain;

4.   discuss the characteristics of the modern work environment;

5.   discuss the challenges and opportunities in the digital media industry (regional/global);

6.   evaluate project funding opportunities available for digital content creators;

7.   discuss the skills that support employment and entrepreneurship in the digital media industry;

8.   apply the process of concept formulation to the development of digital media content;

9.   present project proposals.

CONTENT

1.   Characteristics of Digital Users

(a)   Digital native (beliefs, attitudes, practices).

(b)   Digital immigrant (beliefs, attitudes, practices).

(c)   Rights and needs of the digital generation.

2. **Explain the Concept of Digital Media Ecosystem**

   (a) Definition and scope of digital media ecosystem.

   (b) Types of media in the digital media ecosystem, for example, reading, gaming, mobile.

   (c) Major players in the digital media industry.

3. **The Key Aspects of the Digital Media Value Chain (Digital Value Chain)**

   (a) Key aspects of the value chain.

   (b) Stakeholders in the value chain (producer to end-user).

4. **Characteristics of the Modern Work Environment**

   (a) Globalisation; rate of technological advancement.

   (b) Work models – telecommuting, virtual work, micro work phenomenon.

5. **Challenges and Opportunities In The Digital Media Industry (Regional/Global)**

   Analysis of the environment (political, economic, social and technological).

6. **Project Funding Opportunities**

   (a) Types of funding (debt and equity).

   (b) Sources of funding (Debt: Lending institutions and Equity: Crowd funding, Angels, Venture Capitalists, Investors).

   (c) Project Proposal writing.

   (d) Project pitching.

7. **Skills Needed to Enhance Employability and Entrepreneurial Skills**

   (a) Continuous learning.

   (b) Developing a portfolio.

   (c) Marketing ideas.

UNIT 1
MODULE 2: THE DIGITAL MEDIA ECOSYSTEM (cont'd)

8.   Process of Concept Formulation

Idea generation (brainstorming; free writing; word association, mind-mapping).

9.   Complete Presentations

(a)   Effective oral presentation skills.

(b)   Preparation and use of visual aids for presentations.

Suggested Teaching and Learning Activities

To facilitate students' attainment of the objectives in this Module, teachers are advised to engage students in the following teaching and learning activities.

1.   Develop a research paper that provides an overview of the social, economic and political characteristics of the DM industry, the processes, characteristics of the users and the working opportunities available to digital media practitioners.

2.   Place students in groups to brainstorm and develop ideas for varying digital media projects using brainstorming tools (for example, word association, sketching, and free writing).

3.   Create an interview setting. Arrange for students to deliver an oral pitch that outlines their ideas. Pitches should be done with the support of visual props (for example, PowerPoint presentation, white board, flip chart).   Students should be encouraged to provide constructive feedback on each other's presentations to enhance their inquiry skills.

RESOURCES

Palfrey, John and Gasser, Urs   *Born Digital: Understanding the First Generation of Digital Natives*, New York: Basic Books, 2008.

Savage, T. M. and Vogel, K. E.   *Introduction to Digital Media*, Ontario: Jones and Bartlett Publishers, 2009.

Websites

Generating ideas through practice - Drawing, sketching and designing (16/19)
http://www.youtube.com/watch?v=7wDXy4J2wfs)

3 Elements for a Perfect Elevator Pitch
(http://www.youtube.com/watch?v=glrgMC0o2UI&feature=related)

UNIT 1
MODULE 3: CREATIVE SOLUTION DESIGN

GENERAL OBJECTIVES

On completion of this Module, students should be able to:

1.   understand the creative process - from idea to implementation;

2.   appreciate the role and importance of the creative process in solution design;

3.   develop the ability to plan and design creative solutions;

4.   demonstrate the ability to implement solutions using digital content creation tools.

SPECIFIC OBJECTIVES

Students should be able to:

1.   explain the concept of the creative process;

2.   describe the steps of the creative process;

3.   identify different ways of implementing the creative process;

4.   explain the concept of ideation;

5.   apply the creative process to solve local problems;

6.   apply pre-production skills and techniques;

7.   evaluate the utility of different digital media tools;

8.   communicate in the digital age;

9.   apply skills and techniques using image, audio and video.

UNIT 1
MODULE 3: CREATIVE SOLUTION DESIGN (cont'd)

CONTENT

1.   **Definition of the Creative Process.**

2.   **Describe the Steps of the Creative Process**

   (a)   Acceptance.

   (b)   Analysis.

   (c)   Definition.

   (d)   Ideation.

   (e)   Selection.

   (f)   Implementation.

   (g)   Evaluation (initiate, create, develop, implement).

3.   **Methods of Implementing the Creative Process**

   Linear, cyclic, stepped with intermediate feedback loops and as a branched network.

4.   **Definition of the Term Ideation (as related to digital media)**

5.   **Application of the Creative Process to Local Problems – Global Solutions**

   (a)   The seven phases of the creative process to local problems to arrive at a solution (global).

   (b)   Creative solutions to the problems through the use of new hardware and software inventions (the user is sometimes right –designing for future needs).

   (c)   Implementation.

6.   **Pre-Production Skills and Techniques to Possible Solution**

   (a)   The role of pre –production in creating digital media.

   (b)   Core elements of pre-production - resources (money, time, resource personnel, facilities, location), clearances, copyright (intellectual property), codes of practice and regulations and health and safety).

(c)   Factors affecting creation of digital media content – rule of thirds, lighting, composition, psychology of colours.

7.   **Digital Media Tools**

(a)   Definition of digital media tools

(b)   Identification of tools (as identified in Unit 1 Module 1).

(c)   Uses of tools.

8.   **Communicating in The Digital Age**

(a)   Different methods of communication (for example, email, wikis, blogs, live streaming).

(b)   Integration of techniques to capture and share digitally (for example cloud computing).

9.   **Skills and Techniques Using Image, Audio and Video Manipulation**

(a)   Software using images (audio and video) to tell a story.

(b)   The final product should be exported in a format that can be used across platforms, for example, a computer.

Suggested Teaching and Learning Activities

To facilitate students' attainment of the objectives in this Module, teachers are advised to engage students in the following teaching and learning activities**.**

1.   Students should be provided with problems for which there are possible solutions. The students are then required to design a 'creative' digital solution. For example, students can be asked to capture a school's event (sports day).

2.   Students should be provided with a number of items and they must choose the most appropriate mode of communication.

3.   Students should be given content, example pictures, for which they will choose the most appropriate tool, both hardware and software, to create, edit and present.

4.   Invite resource persons with the relevant expertise to demonstrate how digital content can be created, or request a field trip to the resource person's work site so that students can be exposed to the process in a real world environment.

UNIT 1
MODULE 3: CREATIVE SOLUTION DESIGN (cont'd)

RESOURCES

Skype
Google hangout
Face-time
Audacity
Adobe Photoshop
Microsoft Publisher
GIMP

- http://picasa.google.com/
- http://www.picnik.com/
- http://www.wordle.net/
- http://www.youtube.com/editor

♦ **UNIT 2: APPLIED DIGITAL MEDIA**
MODULE 1: VISUAL AND INTERACTIVE DESIGN

GENERAL OBJECTIVES

On completion of this Module, students should:

1.   understand digital principles;

2.   apply multiple design options to create innovative ideas;

3.   understand the principles of design and colour and apply them to creative ideas;

4.   appreciate the pipeline process to conceptualise an idea;

5.   demonstrate a working knowledge of trends and developments in visual and interactive design.

SPECIFIC OBJECTIVES

Students should be able to:

1.   generate ideas based on design principles;

2.   apply design principles to the creation of a digital media product;

3.   discuss the impact and motivations for indigenous digital products;

4.   analyse examples of digital media solutions;

5.   select appropriate formats and platforms as it relates to digital media;

6.   integrate basic video and sound editing principles in design;

7.   apply basics of 2D and 3D animation;

8.   collaborate using interactive digital media;

9.   apply current industry practices to create a promotional campaign;

10.   discuss trends and developments in visual and interactive design.

UNIT 2
MODULE 1: VISUAL AND INTERACTIVE DESIGN (cont'd)

CONTENT

1.   **Design Principles**

      (a)   Colour Theories, Harmony Rules, Tints, Shades, Gradients, Colour Mixing, New Colour Creation.

      (b)   Rules of composition, rule of thirds or the golden section/rectangle.

      (c)   Point of interest, the prominence of the subject.

      (d)   Composition, perspective, angles, lighting, repetition, proximity, white space, balance, and contrast.

      (e)   Visual impacts of specific colour combinations using a digital format.

2.   **Creation of a Digital Media product (Pre-Production Principles)**

      (a)   Planning designs, rough sketches, storyboards.

      (b)   Production schedule/planning and brainstorming processes.

3.   **Impact and motivations for indigenous digital products**

      (a)   Meaning of culture in evolving technology.

      (b)   Screening/critique and observation.

      (c)   Case studies – Santana T&T, Hama Films Mitzi and Howard Allen, UTT Crab Catcher Game, Jamaica Cabbie Chronicle.

4.   **Digital Media Solutions**

      (a)   Target audience/market; design, purpose.

      (b)   Setting timelines; content delivery.

      (c)   Product/Idea evaluation.

UNIT 2
MODULE 1: VISUAL AND INTERACTIVE DESIGN (cont'd)

5.   **Digital Media Platforms and Formats**

(a)   Different digital platforms.

(b)   Formats: selecting appropriate formats, distinguishing between formats, when to use which format, how they work, how they differ.

(c)   Importing and exporting data for different uses.

(d)   Cross-platform compatibility.

6.   **Audio and Video Principles**

(a)   Basic application of image manipulation, editing and compositing.

(b)   Sound editing: record, manipulate, work with multiple tracks, export in various formats (mp3, wav, ogg).

(c)   Video: capture video with a recording device (camera, cell, tablet), mounted devices (for example, with a tripod or stabilization), recording sound for video (indoor, outdoor considerations), edit video, add transitions and basic effects, lighting and light sources, export in different formats (mv4, avi, mpeg).

7.   **2D and 3D Concepts**

(a)   2D Principles; bouncing ball exercise (keyframing, timing, spacing, squash and stretch), interpolation/tweening.

(b)   3D Modeling; bouncing ball exercise (keyframing, timing, spacing, squash and stretch), character animation (ability to create a basic walk cycle), interpolation/tweening.

8.   **Interactive Digital Media**

(a)   Electronic communities.

(b)   Communication at a distance.

(c)   Using technology to participate in self-directed and collaborative activities.

9.   **Industry Practices For Promotional Campaigns**

Social networking, Internet, blogs, text messaging, guerrilla campaigns, viral marketing.

UNIT 2
MODULE 1: VISUAL AND INTERACTIVE DESIGN (cont'd)

10. **Trends and Developments in Visual and Interactive Design**

    (a)   Commoditisation.

    (b)   Pervasiveness of technology.

    (c)   Affordability.

    (d)   Accessibility.

    (e)   Adoption.

    (f)   Empowerment.

Suggested Teaching and Learning Activities

To facilitate students' attainment of the objectives in this Module, teachers are advised to engage students in the following teaching and learning activities.

1. Create a brainstorming chart of five concepts for a digital media product following the guidelines provided (5 minutes).

2. Create a draft design for a character or product based on your own cultural, personal interest.

3. Design a character for a game/book/comic/animation using colour theory to indicate if it is a villain or hero.

4. Create a basic 3 Dimensional shape using basic polygons and apply a simple texture to its surface.

5. Design a 2 Dimensional environment for a storyboard frame applying rules of composition, rule of thirds or the golden section/rectangle.

RESOURCES

Williams, Richard   *The Animator's Survival Kit: A Manual of Methods, Principles and Formulas for Classical, Computer, Games, Stop Motion and Internet Animators:* United Kingdom: Faber and Faber, 2002.

CABBIE CHRONICLES -   http://www.youtube.com/watch?v=4a5DFSbSP9U
SANTANA –   http://www.youtube.com/watch?v=mkoBWYLEUr0
RICHARD WILLIAMS –   The Animator's Survival Kit, Expanded Edition:

- http://picasa.google.com/
- http://www.picnik.com/
- http://www.wordle.net/
- http://www.youtube.com/editor

UNIT 2
MODULE 2: WEB AND DIGITAL PUBLISHING

GENERAL OBJECTIVES

On completion of this Module, students should:

1.   develop an understanding of digital publishing platforms and tools;

2.   appreciate the considerations associated with digital publishing;

3.   create a layout for digital content creation;

4.   develop content appropriate for digital publishing in the Caribbean context;

5.   develop awareness of current and future trends in digital publishing.

SPECIFIC OBJECTIVES

Students should be able to:

1.   explain digital publishing and Internet terminology;

2.   generate content ideas for digital publishing;

3.   create content for publishing online;

4.   apply tools and techniques for digital content development;

5.   create website(s);

6.   evaluate digital publishing platforms and websites;

7.   discuss online publishing tools;

8.   describe content management tools and techniques;

9.   discuss developments and trends in digital publishing.

CONTENT

1.   **Digital Publishing and Internet Terms**

(a)   Digital publishing platforms (for example, Amazon, Nook, Google, Kobo, CMS platforms, interactive e-book, ePub, ISBN, metadata).

(b)   Brief history of the Internet and the digital revolution (history, developments, technology, accessibility, MMOG).

2.   **Authoring Digital Content**

(a)   Digital Media writing techniques (for example, writing for blogs, podcast, video, audio slideshow).

(b)   Conceptualisations, storyboards, scripts, creativity within a Caribbean perspective.

(c)   Copyright laws and ethical standards of digital content creation and use in the Caribbean and globally (plagiarism, cybercrimes).

3.   **Content Development**

(a)   Brainstorming.

(b)   Content checklist.

4.   **Tools and Techniques**

(a)   Cameras (cellular, handheld, mounted, tablets); shooting video/audio/images for the web, rule of thirds, composition, depth, angles.

(b)   Software (open/industry standard can be used).

(c)   Best practices for basic photo, audio, video editing techniques to create a product for the web (adding text to image, changing backgrounds, working with multiple audio tracks, breadcrumbs, creating podcasts).

5.   **Website Building (Elements of Design)**

(a)   Fundamentals: HTML hyperlinking lists. CSS embedding multimedia components, and external widgets, background colour, print versus screen resolution.

(b)   Website structure, wireframes and mock-ups.

(c)   Page Design and Layout: Contrast, layout, text, link, graphics, usability, user-friendly, three-click approach.

6.   Digital Publishing Platforms

(a)   Characteristics: Strategic technology investments, growth in digital products, realistic expectations, leadership in digital publishing.

(b)   Site analytics, Evaluation of websites (accuracy, authority, usability, accessibility, satisfaction, purpose, "trunk test").

7.   Online Publishing Tools

(a)   Hosted (free or paid).

(b)   Creating online spaces (for example, wiki, blog, social networking tools).

8.   Web Content Management (WCM)

(a)   Content management systems and tools (open source software, proprietary.

(b)   Self-hosted, third party hosted.

(c)   Definition.

(d)   Classifications.

9.   Tracking new trends and developments in web publishing

(a)   Commoditisation.

(b)   Pervasiveness of technology.

(c)   Affordability.

(d)   Accessibility.

(e)   Adoption.

(f)   Empowerment.

UNIT 2
MODULE 2: WEB AND DIGITAL PUBLISHING (cont'd)

Suggested Teaching and Learning Activities

To facilitate students' attainment of the objectives in this Module, teachers are advised to engage students in the following teaching and learning activities.

1.   Engage in publishing e-magazines/e-books as a group/individual assignment.

2.   Students can keep blogs and be encouraged to comment on each other's blog.

3.   Students can be encouraged to build their own portfolio website consisting of multiple sections (home page and others). On these pages all published materials should be linked.

RESOURCES

Castro, E.   *From InDesign,* United States: Cookwood Press, 2012.

Felke-Morris, T.   *Basics of Web Design*, Reading, MA: Addison-Wesley, 2012.

Kasdorf, W.   *The Columbia Guide to Digital Publishing,* New York: Columbia University Press, 2003.

Krug, S.   *Don't Make Me Think: A Common Sense Approach To Web Usability*, San Francisco: New Riders Publishing, 2006.

Software

Notepad, MS Word, Kompozer, Amaya, Open BEXI HTML Builder, GIMP, Open Office Draw, Filezilla, Firebug, iBooks, Adobe Creative Suite including Adobe Dreamweaver, Windows Movie Maker, iMovie, Audacity, wordpress.com, blogger.com, ELXIS

Website

www.digitalbookworld.com

UNIT 2
MODULE 3: MOBILE APP DEVELOPMENT

GENERAL OBJECTIVES

On completion of this Module, students should:

1.   understand the components of the mobile ecosystem;

2.   appreciate the importance of mobile content in the Caribbean context;

3.   understand the processes of developing mobile apps;

4.   understand approaches to mobile development strategies;

5.   understand mobile app revenue generation models;

6.   understand the considerations associated with marketing mobile apps;

7.   develop awareness of current and future trends and how they affect the Caribbean mobile ecosystem.

SPECIFIC OBJECTIVES

Students should be able to:

1.   discuss the relationships within the mobile ecosystem;

2.   distinguish between the various mobile operating systems platforms and devices;

3.   contrast the global context of the mobile ecosystem to the Caribbean context;

4.   examine the benefits of developing applications to address local needs;

5.   describe the characteristics of the mobile user experience;

6.   apply tools and techniques required to create a mobile application;

7.   describe approaches to marketing and distributing mobile applications;

8.   discuss revenue models associated with mobile applications;

9.   describe how new developments and trends will impact the future of the mobile ecosystem.

UNIT 2:
MODULE 3: MOBILE APP DEVELOPMENT (cont'd)

CONTENT

1.   Mobile Ecosystem

(a)   Content, infrastructure, devices and users within the mobile ecosystem.

(b)   Carriers, consumers, enabling environment (for example, policy, developers).

2.   Mobile Operating Systems, Platforms and Devices

(a)   Operating systems and platforms: (for example, iOS, Android, Blackberry).

(b)   Devices: smart phones, feature phones, tablets.

3.   Caribbean Context versus International Context

(a)   Regional and international statistics.

(b)   Social and economic impact.

(c)   Applications of mobile technology.

(d)   Content consumption versus content production.

(e)   Mobile and broadband Infrastructure.

4.   Examples of Local Apps

(a)   Examples of local apps with global appeal (for example, bus schedules, restaurant reviews, hotels rankings, popular destinations).

(b)   Social and cultural linkages – entertainment, news, history, culture.

5.   Characteristics of the Mobile User Experience

(a)   Screen-size.

(b)   Bandwidth.

(c)   Portability.

(d)   Processing power.

UNIT 2:
MODULE 3: MOBILE APP DEVELOPMENT (cont'd)

6.   **Tools and Techniques to Create a Mobile Application**

(a)   Conceptualisation.

(b)   Wire framing and prototyping.

(c)   Overview of available tools (for example android SDK, iOS SDK, Blackberry SDK, online app builders and online mobile app development resources).

7.   **Marketing and Distributing Mobile Applications**

(a)   The process of adding and downloading apps.

(b)   Approaches to approval and monitoring of app submissions.

8.   **Revenue Models and Apps for the Public Good**

(a)   Commercial.

(b)   Freemium.

(c)   In-app purchasing.

(d)   Civic apps and apps for the public good (for example, disaster preparedness, health and safety).

9.   **Tracking New Developments and Trends of the Mobile Ecosystem**

(a)   Proliferation of high speed networks.

(b)   Commoditisation of hardware.

UNIT 2:
MODULE 3: MOBILE APP DEVELOPMENT (cont'd)

Suggested Teaching and Learning Activities

To facilitate students' attainment of the objectives in this Module, teachers are advised to engage students in the following teaching and learning activities.

1.   Engage students in creation of mobile applications as a group/individual assignment, by applying appropriate tools and techniques.

2.   Students can be encouraged to choose the best approach to market and distribute a mobile application.

3.   Teachers should identify some new trends and have students discuss how it will impact the future of mobile application.

RESOURCES

Mobile developers guide to the galaxy

http://www.enough.de/fileadmin/uploads/dev_guide_pdfs/Guide_11thEdition_WEB-1.pdf
or

https://dl.dropbox.com/u/1004432/cxcdigitalmedia/Guide_11thEdition_WEB-1.pdf

◆ OUTLINE OF ASSESSMENT

Each Unit of the syllabus will be assessed separately.

EXTERNAL ASSESSMENT   **(40 per cent)**

Paper 01 (1 hour 30 minutes)	This paper consists of forty-five multiple-choice questions with fifteen questions on each of the three Modules.	**(20 per cent)**
Paper 02 (2 hours 45 minutes)	This paper consists of one question/task/project covering all the three Modules.	**(20 per cent)**

Paper 03/1

SCHOOL-BASED ASSESSMENT   **(60 per cent)**

The School-Based Assessment for each Unit will be compulsory.

For Unit 1, students will be required to prepare a proposal based on an identified digital problem or idea and use it to create a digital solution to the problem. This will require the maintenance of a portfolio on the series of tasks performed leading to the final solution.

For Unit 2, students will be required to execute a series of practical digital tasks leading to the production of tangible digital products. A portfolio of the roadmap leading to this outcome will be kept by the student.

For both Units, digital outputs will be uploaded periodically onto an identifiable electronic submission facility (for example, Dropbox or Google Docs) created by the school and maintained at the school level.

The SBA will be designated as a project.

MODERATION OF SCHOOL-BASED ASSESSMENT

A sample of the tasks performed in class and the outputs kept on the local electronic submission facility will be requested by CXC for moderation purposes. These samples will be moderated by CXC Examiners. The marks assigned by the classroom teacher may therefore be adjusted to bring them in alignment with CXC's standards. The Examiner's comments will be sent to schools.

Copies of students' projects that are not submitted to CXC must be retained by the school until three months after publication of the examination results by CXC.

ASSESSMENT DETAILS

Assessment for each Unit   **40 Per Cent of Total Assessment**

External Assessment will be by electronic delivery for both Paper 01 – Multiple Choice and Paper 02 – Practical tasks.

Paper 01 (1 hour 30 minutes - 20 per cent of total assessment)

1.   **Composition of the paper**

      The paper will consist of forty-five multiple-choice questions, fifteen each from each Module. All questions will be compulsory.

2.   **Syllabus coverage**

      Knowledge of the entire syllabus will be required

3.   **Question type**

      The questions will cover cognitive abilities including, but not limited to comprehension, application and analysis.

4.   **Mark allocation**

      (a)   One mark will be assigned for each multiple-choice question.

      (b)   The total number of marks available for this paper is 45 which will be weighted to 90.

      (c)   Paper 01 will contribute 20 per cent to the candidate's final grade.

5.   **Electronic Devices**

      Only those devices specified in the examination equipment list on page 34 may be used during the examination. The candidates' private electronic devices must be disabled.

6.   **Examination environment**

      The examination should be held in a controlled environment. Computers screens should be covered with privacy filter screens. Candidates will not be allowed Internet access during the examination. Machines must be cleared of all material that may compromise the examination.

Paper 02 (2 hours 45 minutes – 20 per cent of the total assessment)

1. **Composition of paper**

   This paper consists of one question comprising topics from all three Modules of the Unit
   All tasks are compulsory.

2. **Syllabus Coverage**

   Knowledge of the entire Unit will be required.

3. **Question Type**

   The question requires performance of a series of practical activities including planning,
   scanning, photographing, digitizing, editing, format conversion.

   Questions will describe activities to be performed and may include digital content which
   may need to be manipulated.

4. **Mark Allocation**

   For each Unit the question will be worth 45 marks. The total marks will be divided equally
   (15 marks each) across the three Modules.

5. **Examination Equipment List**

Unit 1	Unit 2
Computer	Computer
Privacy Filter Screen	Privacy Filter Screen
Headphones	Headphones
Simple Video Creation software (Picasa, Windows Movie Maker, iMovie, Openshot or equivalent)	Scanner or Camera for every 5 candidates
Photo editing software (Picasa, GIMP, Adobe Photoshop, Pixelmator or equivalent)	Drawing Pencils
Audio edition software (Audacity, Adobe Audition or equivalent)	Ream of letter size plain white paper sheets (for sketching and brainstorming)
	Black Markers
	Vector editing software (Inkscape, Adobe Illustrator or equivalent)
	Image manipulation software (GIMP, Paint.NET, Adobe Photoshop, Pixelmator or equivalent)
	A way to export to PDF
NO INTERNET CONNECTIVITY WILL BE ALLOWED DURING THE EXAM	

6. Digital Delivery of question paper

(a)   Paper 02 will be delivered to all centres on a password protected thumb-drive.

(b)   The password for the thumb-drive will be securely delivered to the invigilator.

(c)   The invigilator will release this password to a designated technical officer no sooner than one (1) hour prior to the commencement of the examination.

(d)   The Technical Officer can be the subject teacher.

(e)   The Technical Officer will distribute the instructions and assets required to complete the examination to each candidate's computer. See diagram below.
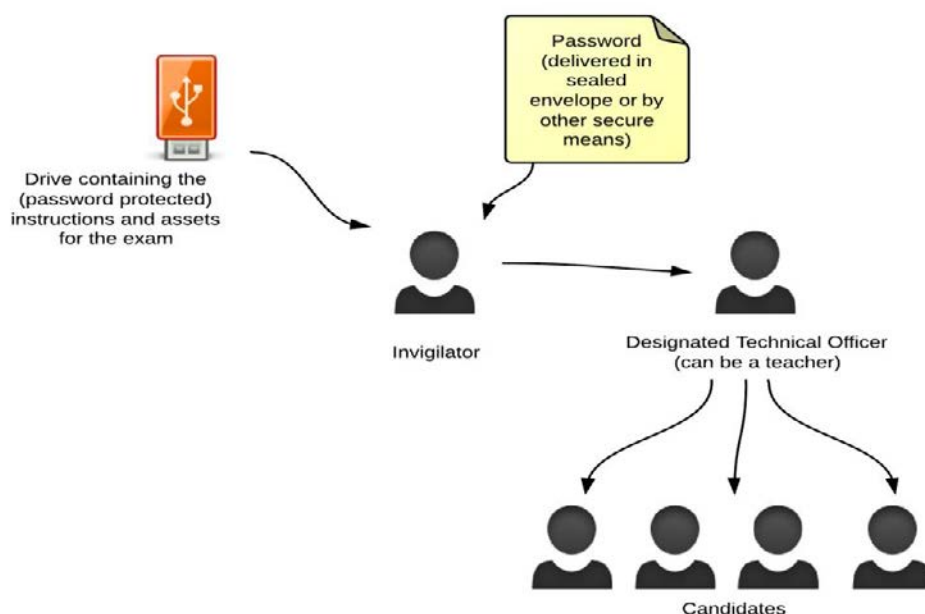
Designated Technical Officer (Can be the Subject Teacher)

7. **Submission Requirements and Procedure**

   (a) A computer (minimum processor, memory requirements and available harddrive space: 4GB RAM/1GHz processor/40GB) must be assigned to each student, in order for their examination to be completed.

   (b) Candidates should NOT have access to the Internet for this paper. All communication should be disabled, including any internal network.

   (c) Supporting sketches or other non-digital artifacts should be digitized and added to the candidate's submission folder.

   (d) All candidates, upon completion of Paper 02, must place all documents into a folder, compress that folder (using zip format) and name the compressed file with their candidate number only.

   (e) Internet access is needed only when the examination is completed and all examination materials are submitted, by the technical officer, directly to the CXC provided submission facility.

8. The Technical Officer will submit a digital copy of all candidates' compressed folders to CXC electronic submission facility, from which the officer will receive a receipt.

9. The Technical Officer will submit the thumb-drive with all candidates' folders to the invigilators.
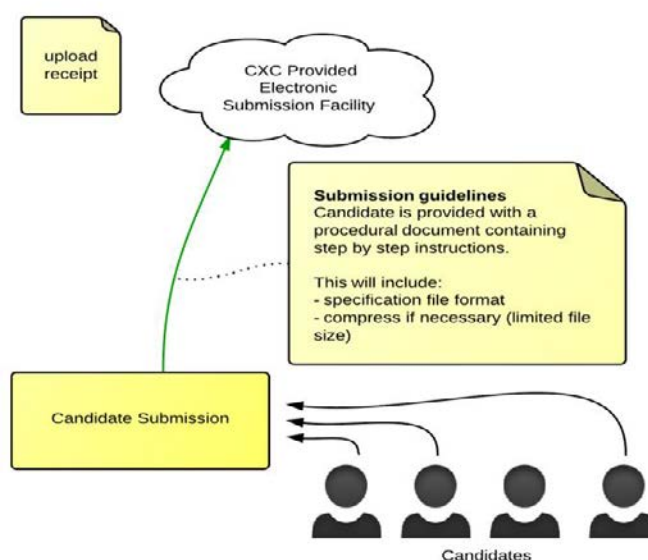
Candidates' work submission diagram at the end of the examination

CONTINGENCY SUBMISSION PROCEDURE (WHERE THERE IS NO INTERNET CONNECTIVITY AT THE END OF THE EXAMINATION)

If there is a concern about reliable Internet access the centre may opt to use a "contingency" machine and software recommended by CXC to create and print an offline receipt of the candidate's examination submission. That receipt should eventually be submitted to the CXC electronic submission facility and the thumb-drive submitted to the invigilator.

1.   The centre should designate a machine as the "contingency" machine.

2.   One computer should be assigned as a server computer in a network with all the candidates' computers. Students should submit their final work to the server. If the school does not have a network, then the Technical Officer should physically collect all candidates' work from their individual computers on a thumb-drive to be provided by the centre/school.

3.   The size of the thumb-drive will vary depending on the number of candidates at each school. For every 30 candidates, 1 GB of digital space will be required. See diagram below.
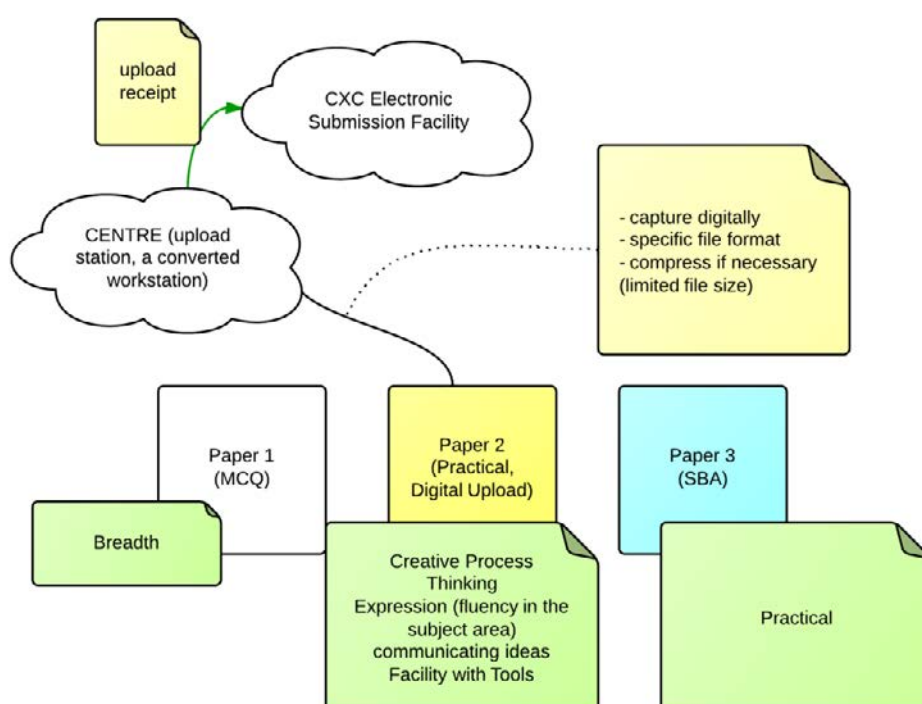
Contingency Submission Procedure

School-Based Assessment – (60 per cent of Total Assessment)

School-Based Assessment is an integral part of the students' assessment of the course of study covered by this syllabus. It is intended to assist the students in acquiring certain knowledge, skills and attitudes that are associated with the subject. The activities for the School-Based Assessment are linked to the syllabus and should form part of the learning activities to enable the students to achieve the objectives of the syllabus.

During the course of study for the subject, students obtain marks for the competence they develop and demonstrate in undertaking their School-Based Assessment assignments. These marks contribute to the final marks and grades that are awarded to the students for their performance in the examination.

The guidelines provided in this syllabus for selecting appropriate tasks are intended to assist teachers and students in selecting assignments that are valid for the purpose of School-Based Assessment. The guidelines provided for the assessment of these assignments are also intended to assist teachers in awarding marks that are reliable estimates of the achievements of students in the School-Based Assessment component of the course. In order to ensure that the scores awarded are in line with the CXC standards, the Council undertakes the moderation of a sample of the School-Based Assessments marked by each teacher.

School-Based Assessment provides an opportunity to individualise a part of the curriculum to meet the needs of the student. It facilitates feedback to the student at various stages of the experience. This helps to build the self-confidence of the students as they proceed with their studies. School-Based Assessment also facilitates the development of the critical skills and abilities emphasised by this CAPE subject and enhances the validity of the examination on which the students' performance is reported. School-Based Assessment, therefore, makes a significant and unique contribution to both the development of the relevant skills and the testing and rewarding of the student.

UNIT 1: DIGITAL MEDIA FUNDAMENTALS

1. **Aims of the Project**

   (a)   Develop candidate's understanding and application of digital media.

   (b)   Provide opportunities for all candidates to demonstrate their creative thinking, innovation and problem-solving skills to create digital solutions.

2. **Requirements**

   Each candidate is required to design a product or service (preferably for a local social element or one that is entrepreneurial), which must be implemented using appropriate digital tools. In addition to the product/service, the candidate is required to include a proposal, his/her progress which must be shown incrementally, as well as the process that was used.

3. **Integration of Project into the course**

   (a)   The activities related to project work should be integrated into the course so as to enable candidates to learn and practise the skills of undertaking a successful project.

   (b)   Some time in class should be allocated for general discussion of project work. For example, discussion of how data should be collected, how data should be analysed and how data should be presented.

   (c)   Class time should also be allocated for discussion between teacher and student, and student and student.

4. **Management of Project**

   (a)   Planning: An early start to planning project work is highly recommended and the schedule of the dates for submission should be developed by teachers and candidates.

   (b)   Length: The length of the report of the project should be between 1000 and 1500 words excluding diagrams, graphs, tables and bibliography.

   (c)   Guidance: Each candidate should know the requirements of the project and its assessment process. Although candidates may consult with resource persons in addition to the teacher the candidate's submission should be his or her own work. The teacher is expected to give appropriate guidance at all stages of project work, for example, chapters to read, alternative procedures to follow and other sources of information.

5.   **Authenticity**

Teachers are required to ensure that all projects are the candidates' work. A recommended procedure is to:

(a)   engage candidates in discussion;

(b)   ask candidates to describe procedures used and summarise findings either orally or written;

(c)   ask candidates to explain specific aspects of the analysis.

6.   **Submission Guidelines**

The candidate should utilise digital submission when delivering milestones to the teacher. Teachers should collect the candidate's completed SBA in a digital format, since the submission of the samples for moderation must be uploaded to CXC electronic submission facility.

7.   **Allocation of Marks To Modules**

The teacher is required to allocate one-third of the total score for the School-Based Assessment to each Module. Fractional marks should not be awarded. In cases where the mark is not exactly divisible by three, then:

(a)   when the remainder is 1 mark, the mark should be allocated to Module 3;

(b)   when the remainder is 2, then 1 mark should be allocated to Module 3, and the other mark to Module 2, for example, if the total SBA score for a candidate is 35, this mark would be allocated as follows:

35/3 = 11 remainder 2 so 11 marks to Module 1 and 12 marks to EACH of Modules 2 and 3.

ASSESSMENT CRITERIA FOR THE PROJECT

General

It is recommended that candidates be provided with the assessment criteria before commencing the project. It is also recommended that students work in groups of 2 to 3 for the school-based assessment.

Research/Pitch

- Description of Service or Product

- Research – Data to justify why the project was selected

  - Identify target audience
  - Design data capture instrument
  - Data collection and analysis
  - Data presentation

- Rationale - Overview of Problem that is being solved

- Pitch (5 minute oral presentation, to sell the idea)

Progress and Process

- Timeline/Production Schedule/Milestone Chart

- Basic Sketches/Rough Designs

- Drafts

Proposal

Digital/Interactive Proposal

- Overview

- Concept (draft designs)

- Methodology/Tools/Techniques

- Budget

- Action

- Use of digital tools for presentation of concept

CRITERIA FOR MARKING INTERNAL ASSESSMENT PROJECT

The project will be graded out of a total of 45 marks (which will be weighted by CXC to 90) and marks will be allocated to each task as outlined below. Candidates will be awarded marks for communicating information in a logical manner using correct grammar and terminology.

Research/Pitch [10]

- Description of Service or Product

    - Name of product [1]
    - Purpose of product [1]

    Research – Data to justify why the project was selected

    - Identify target audience [1]
    - Design data capture instrument [1]
    - Data collection [1]
    - Data analysis [1]
    - Data presentation [1]

- Rationale - Overview of Problem that is being solved [1]

- Pitch (5 minute oral presentation, to sell the idea)

    - Clearly state the problem and situation [1]
    - Describe solution and target audience [1]

Progress and Process [15]

- Timeline/Production Schedule/Milestone Chart

    - Gives a timeline [1]
    - Presents production schedule [2]
    - Indicates milestones [2]

- Basic Storyboard/Wireframes/Mock-ups/Rough Designs

    - Clearly identifies a crisis/problem and resolution/solution [2]
    - Clarity [2]
    - Demonstrates development and clear direction [2]

- Drafts

    - Follows the storyboard, mock-up or rough design [2]
    - Clearly illustrates the concept [2]

Proposal [20]

Digital/Interactive Proposal

- Overview

    - Brief introduction [1]
    - Summary of the content [2]

- Concept (draft designs)

    - States idea [1]
    - Indicates how idea works [2]
    - Impact of the concept [2]

- Methodology/Tools/Techniques

    - Tools (some tools identified [1], all tools identified [2]) [2]
    - Methodology explained [3]
      (basic [1], adequate [2], thorough [3])

- Budget

    - Breakdown: basic[1], adequate [2], thorough[3]) [3]

- Use of digital tools for presentation of concept

    - Use of digital tools [2]
    - Evidence of application of the creative process [2]

TOTAL [45]

UNIT 2: APPLIED DIGITAL MEDIA

1.   **Aims Of The Project**

(a)   Develop candidate's personal insights into the fundamentals of digital media.

(b)   Provide opportunities for all candidates to demonstrate their creative thinking and innovation that will be expressed via digital tools.

2.   **Requirements**

Each candidate is required to design a product or service (preferably for a local social element or one that is entrepreneurial) and create a proposal, that must be presented to an audience of at least five (this audience may include classmates, other students, parents and teachers). The proposal must consist of an overview, concept, methodology, budget and action that must also be included in the presentation.

3.   **Integration of Project Into The Course**

(a)   The activities related to project work should be integrated into the course so as to enable candidates to learn and practise the skills of undertaking a successful project.

(b)   Some time in class should be allocated for general discussion of project work. For example, discussion of how data should be collected, how data should be analysed and how data should be presented.

(c)   Class time should also be allocated for discussion between teacher and student, and student and student.

4.   **Management of Project**

(a)   Planning: An early start to planning project work is highly recommended and the schedule of the dates for submission should be developed by teachers and candidates.

(b)   Length: The length of the report of the project should be between 1000 and 1500 words excluding diagrams, graphs, tables and bibliography.

(c)   Guidance: Each candidate should know the requirements of the project and its assessment process. Although candidates may consult with resource persons, in addition to the teacher, the candidate's submission should be his or her own work. The teacher is expected to give appropriate guidance at all stages of project work, for example, chapters to read, alternative procedures to follow and other sources of information.

5. **Authenticity**

Teachers are required to ensure that all projects are the candidates' work. A recommended procedure is to:

(a) engage candidates in discussion;

(b) ask candidates to describe procedures used and summarise findings either orally or in writing;

(c) ask candidates to explain specific aspects of the analysis.

6. **Submission Guidelines**

The candidate should utilise digital submission when delivering milestones to the teacher. Teachers should collect the student's completed SBA in a digital format, since the submission of the samples for moderation must be uploaded to CXC electronic submission facility.

7. **Allocation of Marks To Modules**

The teacher is required to allocate one-third of the total score for the School-Based Assessment to each Module. Fractional marks should not be awarded. In cases where the mark is not exactly divisible by three, then:

(a) when the remainder is 1 mark, the mark should be allocated to Module 3;

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35/3 = 11 remainder 2 so 11 marks to Module 1 and 12 marks to EACH of Modules 2 and 3.

General

It is recommended that candidates be provided with the assessment criteria before commencing the project. It is also recommended that students work in groups of 2 to 3 for the School-Based Assessment.

Proposal/Research

- Description of Service or Product

- Research – Data to justify why the project was selected

  - Identify target audience

  - Design data capture instrument

  - Data collection, presentation and analysis

- Rationale - Overview of Problem that is being solved

- Pitch (5 minute oral presentation, to sell the idea)

- Proposal

  - Overview

  - Concept (draft designs)

  - Methodology/Tools/Techniques

  - Budget

Progress and Process

- Timeline/Production Schedule/Milestone Chart

  - Gives a timeline

  - Presents production schedule

  - Indicates milestones

- Initial Content/Scripts/Mock-ups/Rough Designs

  - Clearly identifies a crisis/problem and resolution/solution

  - Demonstrates development and clear direction

- Drafts

  - Follows the storyboard, mock-up or rough design
  - Clearly illustrates the concept
  - Preproduction/Previsualization/Interface Design
  - Basic Storyboard/Wireframes/Animatic/Outline
  - Brainstorming Chart
  - Final Models/ Props/Assets/Final Content

- HTML Mock-ups/Rough Edits/Interface

  - Implemented

  - Relevance

- Use of Collaboration Tools

  - Student communicates using collaboration tools, for example, Skype, Google Docs, Dropbox, Wikis, Blogs, Google Hangout

  - Student uses digital tools to visually share ideas

Product

- E-content/Website/Mobile Application or Interactive product

  - Animation or visualisation or 3D component

  - Appropriate use of design and composition principles

    - Good overall composition
    - Good use of colours or texture
    - Good use of space
    - Good use of typography or camera angles

  - Appropriate user experience

  - Convergence of techniques

The project will be graded out of a total of 45 marks (which will be weighted by CXC to 135) and marks will be allocated to each task as outlined below. Candidates will be awarded marks for communicating information in a logical manner using correct grammar and terminology.

Proposal/Research   **[15]**

- Description of Service or Product   [1]

- Research – Data to justify why the project was selected

    - Identify target audience   [1]
    - Design data capture instrument   [1]
    - Data collection, presentation and analysis   [1]

- Rationale - Overview of Problem that is being solved   [2]

- Pitch (5 minute oral presentation, to sell the idea)   [2]

- Proposal (5 – 6 page document)

    - Overview   [1]
    - Concept (draft designs)   [2]
    - Methodology/Tools/Techniques   [2]
    - Budget   [2]

Progress and Process   **[15]**

- Timeline/Production Schedule/Milestone Chart

    - Gives a timeline   [1]
    - Presents production schedule   [1]
    - Indicates milestones   [1]

- Initial Content/Scripts/Mock-ups/Rough Designs

    - Clearly identifies a crisis/problem and
      resolution/solution   [1]
    - Demonstrates development and clear direction   [1]
    - Drafts

        - Follows the storyboard, mock-up or rough
          design   [1]
        - Clearly illustrates the concept   [1]

    - Preproduction/Revisualisation/Interface Design
    - Basic Storyboard/Wireframes/Animatic/Outline   [1]
    - Brainstorming Chart   [1]
    - Final Models/ Props/Assets/Final Content   [1]

- HTML Mock-ups/Rough Edits/Interface

    - Implemented   [1]
    - Relevance   [2]

- Use of Collaboration Tools

    - Student communicates using collaboration tools,
      for example, Skype, Google Docs, Dropbox, Wikis,
      Blogs, Google Hangout   [1]
    - Student uses digital tools to visually share ideas   [1]

Product   **[15]**

- E-content/Website/Mobile Application or Interactive product

    - Animation or visualisation or 3D component   [2]
    - Appropriate use of design and composition principles

        - Good overall composition   [2]
        - Good use of colours or texture   [2]
        - Good use of space   [2]
        - Good use of typography or camera angles   [2]

    - Appropriate user experience   [2]
    - Convergence of techniques
      (At least two techniques clearly demonstrated)   [3]
      Where evidence is weak award 1 mark

    TOTAL   **[45]**

♦ REGULATIONS FOR RESIT CANDIDATES

Resit candidates must rewrite Papers 01 and 02 of the examination for the year for which they re-register. Resit candidates may elect not to repeat the School-Based Assessment component provided they rewrite the examination no later than two years following their first attempt.

Resit candidates must be entered through a school, approved educational institution or the Local Registrar's office.

♦ REGULATIONS FOR PRIVATE CANDIDATES

Private candidates must take Papers 01, 02 and 031 (SBA).

Candidates entered for the examination through private institutions recognised by the Council will be required to complete all the requirements of the syllabus. Although the project is assessed in components in class, candidates are to be given the entire project. As candidates work on individual components in class, they must be monitored by tutors in the institution and given feedback before the final assessment of that component. Tutors must also monitor candidates' project to determine veracity of work submitted. Tutors should not accept projects which were not monitored during development. The marks recorded in the three components will be collated to form the final SBA mark for submission by May 31, in the year of the examination. For these candidates, the mark allocated to collaboration will be awarded based on the use of digital tools to communicate progress with the teacher.

In order to be assessed on the criterion of collaboration with colleagues in the school-based assessment, the private candidate should be directed to interact with other candidates (from a school or other private candidates offering the subject). It is the responsibility of the candidate to provide evidence of such collaboration to the teacher.

Candidates as well as tutors must retain a copy of the completed component as part of their portfolio.

♦ ASSESSMENT GRID

The Assessment Grid for each Unit contains marks assigned to papers and to Modules, and percentage contributions of each paper to total scores.

Papers	Module 1	Module 2	Module 3	Total	Percentage (%)
Paper 01 1 hour 30 minutes	*15*	*15*	*15*	45	20
Paper 02 **2 hours 45 minutes** A case/problem/project/task	*15*	*15*	*15*	45	20
School-based Assessment **Paper 031**	*15 (45)**	*15 (45)**	*15 (45)**	45 (135)*	60
Total	**75**	**75**	**75**	**225**	**Percentage 100**

*Weighted scores are in brackets

♦ GLOSSARY OF BEHAVIOURAL VERBS USED IN THE DIGITAL MEDIA EXAMINATION

VERB	DEFINITION	COGNITIVE LEVEL
Define	Provide a precise statement giving the **nature** or the **scope** or the **meaning** of a term; or use the term in one or more sentences so that the meaning is clear and precise.	
Identify	Name specific components or features. Point out, indicate without explanation or recognise and select.	
List	Stating or naming chronologically or otherwise without explanation or description.	Recall
Name/Label	Provide actual names (but no other details).	
Give/State	Provide short, concise statements.	
Select	Choose from a list.	
Describe	Provide a detailed account, including significant characteristics or elements of an issue or situation.	
Explain	Provide statements on **what** happened, **how** it happened and **why** it happened. Provide elaboration of particular terms, concepts, approaches.	
Interpret	Explain the meaning of.	Comprehension
Outline	Provide main points, or features only without details.	
Plan	Prepare to conduct an investigation.	
Classify	Put into groups according to given criteria.	
Apply	Use knowledge and/or principles, approaches or theories to solve problems.	
Comment	State opinion or view with supporting reasons.	
Arrange	Put in specific or logical order.	
Show/Solve	Use evidence to prove or manipulate to arrive at results.	Application
Use/Create	Employ knowledge to produce something new.	
Compare and contrast	State, describe and elaborate on the similarities and differences.	
Develop	Elaborate on or expand an idea or argument with supporting reasons.	

VERB	DEFINITION	COGNITIVE LEVEL
Discuss	Write an extended answer defining key concepts, stating what is, exploring **related** concepts and issues, present reasoned arguments for and against, using detailed examples but **not** necessarily drawing a conclusion.	Synthesis
Plan	Show a series of systematic steps which, when followed, will lead to a solution.	
Compose	Combine principles and elements of design together elements to create a layout. Put together existing information to produce a new object.	
Analyse	Examine methodically and in detail the elements of a process, a situation or a theory, and then draw (a) conclusion(s).	
Outline	Provide in skeletal form.	Analysis
Differentiate or Distinguish	State or explain briefly those differences between or among items or situations which can be used to define them or place them into separate categories.	
Evaluate	Weigh evidence and make judgements based on given criteria. The use of logical supporting reasons for a particular point is more important than the view held; usually both sides of an argument should be considered.	
Assess	Present reasons for the importance of particular structures, relationships, processes or approaches.	Evaluation
Investigate	Use appropriate procedures to observe, research, record data, analyse and draw logical conclusions.	
Justify	Explain the correctness of/give reasons for the selection of.	

SPEC 2013/02123010

C A R I B B E A N   E X A M I N A T I O N S   C O U N C I L

CARRIBEAN ADVANCED PROFICIENCY EXAMINATION®

DIGITAL MEDIA

SPECIMEN PAPER

Unit 1 – Paper 01

1 hour 30 minutes

READ THE FOLLOWING INSTRUCTIONS CAREFULLY.

1.   This test consists of 45 items. You will have 1 hour and 30 minutes to answer them.

2.   Each item in this test has four suggested answers lettered (A), (B), (C), (D). Read each item you are about to answer and decide which choice is best.

3.   Look at the sample item below.

Sample Item

Which of the following is the LAST step in the creative process?

Sample Answer

(A)   Selection
(B)   Evaluation
(C)   Acceptance
(D)   Implementation

Ⓐ ● Ⓒ Ⓓ

The best answer to this item is "Evaluation", so answer space (B) has been shaded.

4.   The use of mobile phones is NOT allowed.

5.   Internet connectivity is NOT allowed.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

1. Which of the following BEST describes „Digital Media"?

    (A) Online broadcast medium
    (B) Social media content
    (C) Internet transmission data wired over limited network
    (D) Electronic content that can be transmitted over a computer network

2. Which of the following does NOT refer to new media?

    (A) Feature TV offered over the air broadcast
    (B) Community participation around media
    (C) Democratization of the creation, publishing and distribution of media tools
    (D) On demand access to content anytime, anywhere using any digital device

3. Approximately, for how long have digital media been in existence?

    (A) 5 years
    (B) 10 years
    (C) 15 years
    (D) 30 years

4. In the early days of digital media, „advertising" was construed to mean

    (A) the proliferation of websites
    (B) emergence of smart mobile devices
    (C) the proliferation of self-publishing platforms
    (D) message creation by electronic agencies

5. Which of the following BEST describes „local content"?

    (A) Content that is not imported
    (B) Community owned and adapted knowledge
    (C) Indigenous content
    (D) Content for people in a certain locality

6. In terms of involvement in the digital revolution, the Caribbean Community can be characterized as

    (A) exporters of content
    (B) users of local content
    (C) creators of local content
    (D) mostly consumers of imported content

7. Which of the following is used for media delivery?

  (A) Mobile phone
  (B) Keyboard
  (C) Printer
  (D) Mouse

8. Which of the following is NOT a characteristic of digital media?

  (A) Create connections
  (B) Create community
  (C) Foster dynamic dialogue
  (D) Produce permanent records

9. Which of the following is a pitfall of digital media?

  (A) Boost brand
  (B) Encourage too much follow up
  (C) Create ethical issues in discovery
  (D) Stabilise the value of resources

10. The source of intellectual property can be traced to

  (A) conferred authority
  (B) creation of the mind
  (C) inherited liability
  (D) shared effort

11. Which of the following is MOST likely to raise ethical issues associated with digital media?

  (A) Sharing a personal video production
  (B) Playing a rented DVD
  (C) Stripping of a DRM protected track
  (D) Downloading a Linux distribution movie using bittorrent

12. Which of the following businesses uses the long-tail business model?

  (A) Apple iTunes
  (B) NBC Universal
  (C) Caribbean Sports Wear
  (D) Website development firm

13. The open movement does NOT include open

  (A) standards
  (B) access movement
  (C) source movement
  (D) software initiative

14. Which of the following is a multimedia software tool?

  (A) Eclipse
  (B) Audacity
  (C) Microsoft Word
  (D) Google Chrome

15. Which of the following are digital media platforms?

   I.   Satellite
  II.   Internet
 III.   3D art

(A) I and II only
(B) I and III only
(C) II and III only
(D) I, II and III

16. A „digital native" is an individual who

(A) uses technology without difficulty
(B) repairs and maintains computers and servers
(C) was born before the existence of digital technology
(D) was born during the proliferation of digital technology

17. A „digital immigrant" is an individual who

(A) has adopted digital technology in later life
(B) has moved away from digital technology
(C) was born before the existence of digital technology
(D) applies the principles of software development

18. Which of the following BEST describes the „digital media ecosystem" concept?

(A) An online library
(B) A government information service
(C) A business and corporate communications system
(D) Media based on human communication, and shared electronically

19. Which of the following BEST describes the digital convergence?

(A) A document domain
(B) An interpersonal domain
(C) A global system of computer networks
(D) Consolidation of multiple communication technologies

20. Which of the following BEST describes the term „Internet"?

(A) Locally designed connectivity
(B) Group of unconnected websites
(C) Global computer network
(D) System of stand-alone-computers

21. Which of the following BEST describes the concept of digital media communication?

(A) Personal reflection
(B) Static online communication
(C) Face-to-face communication
(D) Interactive, online communication

22. Which of the following is NOT a form of digital media?

(A) E-books
(B) Live streaming
(C) Feature filmshow
(D) Electronic online services

23. Which of the following is NOT part of the digital media value chain?

(A) Single site service
(B) Content creation
(C) Content distribution
(D) Customer management

24. Which of the following is a common work arrangement for digital media practitioners?

(A) Virtual team
(B) Office team
(C) Management team
(D) Administrative team

25. Globalization is a process where an increased proportion of

(A) computer networking takes place
(B) engagement takes place through social media
(C) economic, social and cultural activities are carried out across national borders
(D) economic, social and cultural activities are carried out within a country

26. Which of the following is a challenge in the digital media industry?

(A) Piracy
(B) Convergence
(C) Collaboration
(D) Communication

27. Which of the following is an example of debt funding?

(A) Loan
(B) Crowd funding
(C) Venture Capital
(D) Angel investment

28. Which of the following is a tool for generating ideas?

(A) Texting
(B) Mind-mapping
(C) Application development
(D) PowerPoint presentation

29. Which of the following BEST describes the purpose of a project proposal?

(A) To provide the budget
(B) To introduce the team
(C) To provide project data
(D) To introduce the project

30. Which of the following are key aspects of a project proposal?

(A) Conclusion, reference
(B) Apps, disks, computers
(C) Text messages, blogs, web pages
(D) Overview, target audience, budget

31. Which of the following sequences describes the creative process?

    I.   Develop
    II.   Implement
    III.   Create

(A)   I, II, III
(B)   II, I, III
(C)   II, III, I
(D)   III, I, II

32. At which stage in the creative process would a person need to describe the issue to be solved?

(A)   Ideation
(B)   Analysis
(C)   Acceptance
(D)   Implementation

33. Which of the following channels of communication does NOT belong to the digital age?

(A)   Fax
(B)   Blog
(C)   Wiki
(D)   Email

Item **34** refers to the following diagram.

Accept Situation → Analyse → Define → Ideate → Select → Implement → Evaluate
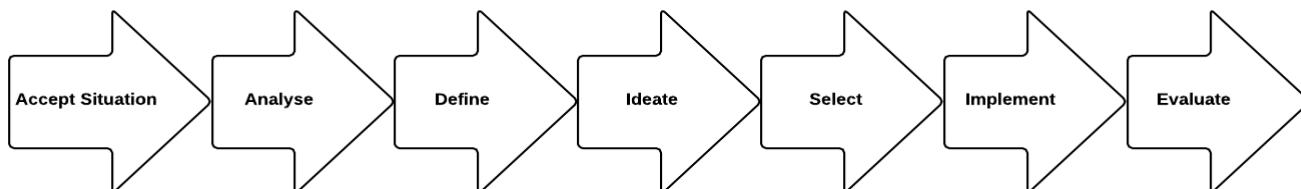
34. What type of implementation of the creative process does the diagram illustrate?

(A)   Cyclic
(B)   Linear
(C)   Feedback
(D)   Selection

35. Which of the following activities is missing from the group: creativity, innovation, concept development?

(A) Ideation
(B) Problem definition
(C) Problem solving
(D) Brain storming

36. A writer has developed an outline for a story and has decided to follow it through. What is the next stage in the creative process that should be undertaken?

(A) Ideation
(B) Selection
(C) Acceptance
(D) Implementation

37. Which of the following tasks must be completed prior to the actual making of a digital media product?

(A) Production
(B) Fact finding
(C) Pre-production
(D) Problem solving

38. Which of the following is a tool that can be used to edit photographs?

(A) PixIr
(B) Audacity
(C) MovieMaker
(D) Storyboard Pro

39. Brainstorming, scriptwriting and storyboarding are part of

(A) ideation
(B) production
(C) pre-production
(D) implementation

Item **40** refers to the following diagram.

Media Pre-Production Process
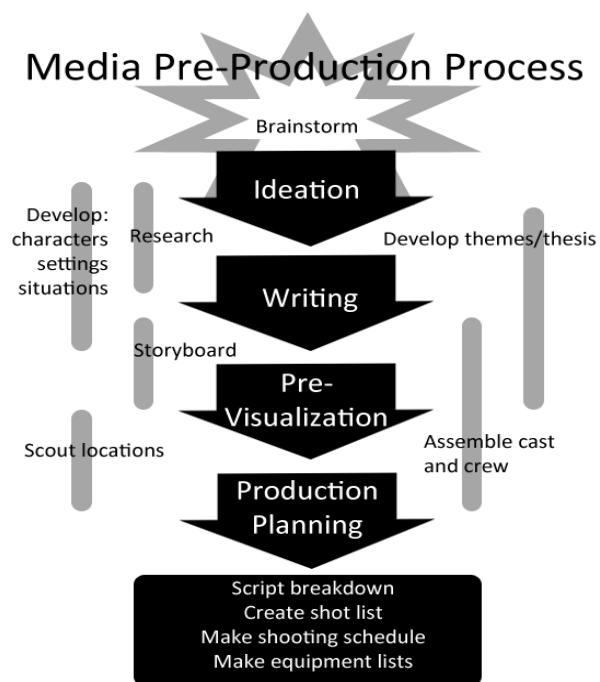
40. The diagram shown above is an illustration of

(A) ideation
(B) scripting
(C) production
(D) pre-production

41. How many sections are formed when the imaginary lines are drawn in relation to the rule of thirds?

(A) Three
(B) Six
(C) Nine
(D) Twelve

42. Which of the following groupings are elements of composition?

(A) Video and lighting
(B) Audio and composition
(C) Rule of thirds and lighting
(D) Rule of thirds and psychology of colours

43. A teacher would like her students to recap a particular lesson, ask questions, add comments, add discussion points and post any additional resources. Which digital media tool is most suitable to complete this task?

(A) A blog
(B) Instant messaging
(C) Audio recording
(D) Video conferencing

44. Which of the following will allow a group of five persons staying at different locations to plan a presentation as a group project for a course?

(A) A wiki
(B) Podcast
(C) Live streaming
(D) A Word processor

45. A couple is celebrating their fortieth wedding anniversary. Which of the following will BEST capture all aspects of the years they spent together?

(A) Photograph and video story
(B) Video and audio story
(C) Audio and photography story
(D) Audio, photograph and video story

END OF TEST

Unit 1 - Paper 01

Item	Specific Objective	Key	Item	Specific Objective	Key
1	1.1.1	D	**26**	1.2.5	A
2	1.1.1	A	**27**	1.2.6	A
3	1.1.2	D	**28**	1.2.7	B
4	1.1.2	A	**29**	1.2.8	C
5	1.1.4	B	**30**	1.2.8	D
6	1.1.4	D	**31**	1.3.1	D
7	1.1.5	A	**32**	1.3.2	C
8	1.1.6	D	**33**	1.3.8	A
9	1.1.6	C	**34**	1.3.3	B
10	1.1.7	B	**35**	1.3.4	A
11	1.1.8	C	**36**	1.3.5	D
12	1.1.9	A	**37**	1.3.6	C
13	1.1.10	A	**38**	1.3.7	A
14	1.1.14	B	**39**	1.3.8	C
15	1.1.12	A	**40**	1.3.8	D
16	1.2.1	D	**41**	1.3.8	C
17	1.2.1	A	**42**	1.3.8	D
18	1.2.2	D	**43**	1.3.8	A
19	1.2.2	D	**44**	1.3.8	A
20	1.2.2	C	**45**	1.3.8	B
21	1.2.2	D			
22	1.2.2	C			
23	1.2.3	A			
24	1.2.4	A			
25	1.2.4	C			

C A R I B B E A N   E X A M I N A T I O N S   C O U N C I L

CARIBBEAN ADVANCED PROFICIENCY EXAMINATION®

DIGITAL MEDIA

UNIT 1 – Paper 02

2 hours 45 minutes

READ THE FOLLOWING INSTRUCTIONS CAREFULLY.

1. This paper consists of ONE major task.

2. The task consists of a background, theme, audience and production.

3. You are required to respond to the entire task. Any text-based response should be done using an appropriate text or web editor (for example, word processor or notepad).

4. A digital media kit has been provided to assist you in the production work.

5. All work, including project and asset files used MUST be digitally compressed into a SINGLE ZIP FILE, included with your final submission at the end of the examination and exported as directed by the invigilator. The zipped file should be given your name followed by ID number (for example, John Doe – 123456789).

6. The use of mobile phones is NOT allowed.

7. Internet connectivity is NOT allowed.

8. All hard copies must be handed over to the invigilator at the end of the examination.

9. You are strongly advised to save your work **intermittently**.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

TASK

Guidelines: You have been asked to design a digital media story that promotes awareness of healthy living in the Caribbean. You must use the media in the digital kit that is provided.

This will involve:

• The creation of a digital media story using the creative process.
• Use of ONE or MORE of the following digital media formats when creating your digital story:

    – Photographs
    – Audio
    – Video

Theme: Healthy Living

Audience: Choose ONE of the following target groups:

    – Digital Native
    – Digital Immigrant

1. (a) State which of the target groups you have selected. Outline THREE characteristics of the target group. **[3 marks]**

(b) Use mind maps and thumbnails to show the development of your digital story concept. **[10 marks]**

(c) Name the MAIN application that you will use to create your story. **[1 mark]**

(d) Name ONE technique other than mind mapping that can be used to generate ideas. **[1 mark]**

Total 15 marks

2.   (a)   Identify TWO stages of the creative process that will NOT be required to create the story.   **[2 marks]**

        (b)   (i)   Recommend a licensing approach that would make it easy for others to share the content without fear of legal repercussions.   **[1 mark]**

                (ii)   Which stakeholder in the digital media value chain would your target audience represent?   **[1 mark]**

        (c)   (i)   Identify THREE ways by which this story can be distributed on the Internet.   **[3 marks]**

                (ii)   Who will be the owner of the finished product and how is this ownership determined?   **[1 marks]**

                                                                Total 10 marks

3.   (a)   Select from the pieces of media provided (photographs, audio and video) and using an appropriate digital media tool, create your story. Ensure that your finished product does NOT exceed 70 MB.   **[13 marks]**

        (b)   Export your finished product into any one of the following formats and submit

                –   MPEG2
                –   MP4
                –   AVI
                –   WEBM
                –   WMV
                –   FLV

                                                                   [3 marks]

        (c)   Justify TWO of the pieces of media that you used.   **[4 marks]**

                                                                Total 20 marks

END OF TEST

IF YOU FINISH BEFORE TIME IS CALLED, CHECK YOUR WORK ON THIS TEST.

INSTRUCTIONS FOR THE SUBMISSION OF COMPLETED WORK

**After the invigilator has signalled the end of the examination,
compress your work (project and asset files) into a single zip file,
name the file using your name followed by your candidate ID and
submit it to the electronic facility as directed by the invigilator.**

C A R I B B E A N   E X A M I N A T I O N S   C O U N C I L

CARIBBEAN ADVANCED PROFICIENCY EXAMINATIONS[®]

DIGITAL MEDIA

UNIT 1 – PAPER 02

KEY AND MARK SCHEME

SPECIMEN

Syllabus Objective	Question	Suggested Response
M2 . 1	1 (a)	**Three characteristics of the target group** *Any three characteristics consistent with the profile of a Digital Native or a Digital Immigrant* **1 mark for each characteristic**
M2 . 8	(b)	**Mind maps and Thumbnails** **Mind map shows at least 5 credible branches [5 marks]** **Thumbnails shows the progression of the complete story [5 marks]** *... partial story [3 marks]* *... incoherent story [1 mark]*
M1 . 11	(c)	**Main application for story creation** *if a <u>video</u> is submitted this could be Windows Movie Maker, Final Cut Pro, iMovie, Blender VSE, Kino or similar video editor,* *if the story is presented as an <u>animation</u> then possibly Blender, Synfig, ToonBoom, Adobe Flash or similar* **1 mark for stating a suitable application**
M2 . 8	(d)	*Technique used for idea creation* *free writing, word association or other plausible techniques* **1 mark for any plausible technique**
M3 . 1, 2	2 (a)	**Two stages of the creative process** *[If based on Koberg and Bagnall's "Universal Traveler Model" then the following stages will not be required:* **Acceptance** **Analysis** **Definition** *Allowance will be made for explicit reference to other models of the creative process for example the Hear and Deliver stages of the Human Centred Design model* **1 mark for each stage**

Syllabus Objective	Question	Suggested Response
M1 . 10	(b) (i)	**Licensing approach** *Creative commons or open source licensing* *1 mark for any approach*
M2 . 3	(ii)	**Stakeholder** *End User* **1 mark**
M1 . 6	(c) (i)	**Distribution of story on the internet** *Youtube/Vimeo etc… social networks such as Google+, Facebook and Twitter, Email or similar]* *1 mark for each way*
M1 . 7	(ii)	**Determining ownership of finished product** *Ownership is based on rights associated with the laws of the country* *1 mark* *Copyright generally defaults to the creator* **1 mark** *Owned by the creator of the work unless there is an explicit written agreement to work for hire* **1 mark**

M3 . 3, 5
 M3 . 6,7
 M3 . 9
	3 (a)	**The Digital Story**
		   – *Illustration of the story*
		     o *Theme expressed in the story* **1 mark**
		     o *Story flows clearly*
		       ▪ *Introduction* **1 mark**
		       ▪ *Climax* **1 mark**
		       ▪ *Conclusion* **1 mark**
		
		   – *Relevance to context of the Caribbean*
		     o *Choosing media relevant to the Caribbean* **1 mark**
		     o *Choosing media relevant to the story* **1 mark**
		
		   – *Concept of appropriate colours/imagery used*
		     o *Colours appropriate to theme* **1 mark**
		     o *Layout* **1 mark**
		     o *Colours to add impact and texture* **1 mark**
		
		   – *Editing of media*
		     o *Appropriate transitions, effects or type* **1 mark**
		     o *Good pacing/synchronisation of audio with images/video* **1 mark**
		     o *Cropping and framing* **1 mark**

SR	Question	Suggested Response
		- *Impact of the story, as related to audience* ***1 mark***

M1 . 5	(b)	**Export of finished product**
		 The finished product successfully exported and is within the file size limit ***3 marks***
		      ... successfully exported but exceeds the file size limit (by less than 5% (1.5 MB)) [2 marks]
		      ... successfully exported but exceeds the file size limit (by more than 5% (1.5 MB))[1 mark]

M1 . 3,11	(c)	**Justification of media used**
		 1. *'Living Healthy in the Caribbean' moves from the negative to the positive. It presents all the unhealthy options followed by the healthy methods.*
		 2. *It utilises the options that are available in the Caribbean, such as avocados and tomatoes.*
		 3. *Windows Live Movie Maker was used because it allowed all the media, audio, video and pictures, to be combined to tell the story and be exported and copied on a DVD that can work on all platforms.*
		      …..clear justifications 2 marks each
		      ….. partial justifications 1 mark each

SPEC 2013/02223010

C A R I B B E A N   E X A M I N A T I O N S   C O U N C I L

CARIBBEAN ADVANCED PROFICIENCY EXAMINATION®

DIGITAL MEDIA

SPECIMEN PAPER

Unit 2 – Paper 01

1 hour 30 minutes

READ THE FOLLOWING INSTRUCTIONS CAREFULLY.

1.   This test consists of 45 items. You will have 1 hour and 30 minutes to answer them.

2.   Each item in this test has four suggested answers lettered (A), (B), (C), (D). Read each item you are about to answer and decide which choice is best.

3.   Look at the sample item below.

Sample Item

What is the name of the object that forms the skeleton of an animated 3D?

Sample Answer

(A)   Rig
(B)   Bones
(C)   Skeleton
(D)   Character

● Ⓑ Ⓒ Ⓓ

The best answer to this item is "Rig," so answer space (A) has been shaded.

4.   The use of mobile phones is NOT allowed.

5.   Internet connectivity is NOT allowed.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

02223010/SPEC 2013

1. At which point in the process should the storyboard for a game or film be created?

   (A) Editing
   (B) Production
   (C) Pre-production
   (D) Post-production

2. Which of the following colours will BEST be suited to the design of a villain character?

   (A) Red
   (B) Grey
   (C) Pink
   (D) Green

3. Which of the following are NOT online products?

   (A) Blog
   (B) E-book
   (C) Webpage
   (D) Interactive DVD

4. What does the term OSS software mean?

   (A) Open Safety Solutions
   (B) Open Source Solutions
   (C) Often Solved Solutions
   (D) Open Solution Systems

5. What movie file is BEST suited for use in webpages?

   (A) GIF
   (B) AVI
   (C) Quicktime
   (D) Targa Files

6. Which of the following is NOT a social media platform?

   (A) URL
   (B) Twitter
   (C) You Tube
   (D) Facebook

7. Which of the following will generate a wide screen format?

   (A) 3:1
   (B) 3:4
   (C) 16:4
   (D) 16:9

8. What is the terminology used to describe the audience for a digital product?

   (A) Congregation
   (B) Focus group
   (C) Target group
   (D) Viewing group

9. Which format works on the principle of pixilation?

   (A) AI
   (B) EPS
   (C) SVG
   (D) Bitmaps

10. What is the terminology used to describe the application of effects, transitions, and titles to editing projects?

   (A) Editing
   (B) Modelling
   (C) Compositing
   (D) Special effects

11. Which of the following is NOT an audio file?

    (A)   Mp3
    (B)   Wav
    (C)   M4r
    (D)   GIF

12. How many frames create one second of animation?

    (A)   12
    (B)   22
    (C)   24
    (D)   30

13. What does the acronym FPS stand for?

    (A)   Final Paste Section
    (B)   Frames Per Second
    (C)   Frames Per Session
    (D)   Final Position Section

14. What is the term used to describe the scenario where more than one person is working on a digital document at the same time?

    (A)   File sharing
    (B)   Collaborating
    (C)   Crowd sharing
    (D)   Crowd collaboration

15. What is the terminology used to describe a promotional campaign created without the use of a budget and often solely implemented through social media?

    (A)   PR
    (B)   PR branding
    (C)   Banana marketing
    (D)   Guerilla marketing

16. Which of the following is NOT a reason for the digital revolution?

    (A)   Analog consumption
    (B)   Facilitation of digitization
    (C)   User friendly technology
    (D)   Consumer adoption of personal computers

17. Which of the following is an ethical consideration when creating digital content?

    (A)   Hacking
    (B)   Threading
    (C)   Plagiarism
    (D)   Cybercrimes

18. Which of the following BEST describes "Breadcrumbs" on a webpage?

    (A)   "Contact Us"
    (B)   "Home Page"
    (C)   "you are here"
    (D)   "Coming up next"

19. Which of the following is a format for a digital image?

    (A)   .png
    (B)   .avi
    (C)   .flv
    (D)   .wmv

20. Which of the following is a video file extension?

    (A)   .flv
    (B)   .jpg
    (C)   .bmp
    (D)   .wma

21. Which of the following is a format for digital sound file?

    (A)   .png
    (B)   .ogg
    (C)   .tiff
    (D)   .bmp

22. The HTML code to close a second level heading block is

    (A)   </h2>
    (B)   <\h2>
    (C)   </hh>
    (D)   </hdg2>

Item **23** refers to the following INCOMPLETE snippet for the header of a basic HTML page.

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8"/>
<title> </title>
</head>
```

23. Which of the following will complete the snippet so that the page will have the name "My First Page"?

    (A) <title>My First Page</title>
    (B) </head>My First Page>
    (C) <html My First Page lang="en">
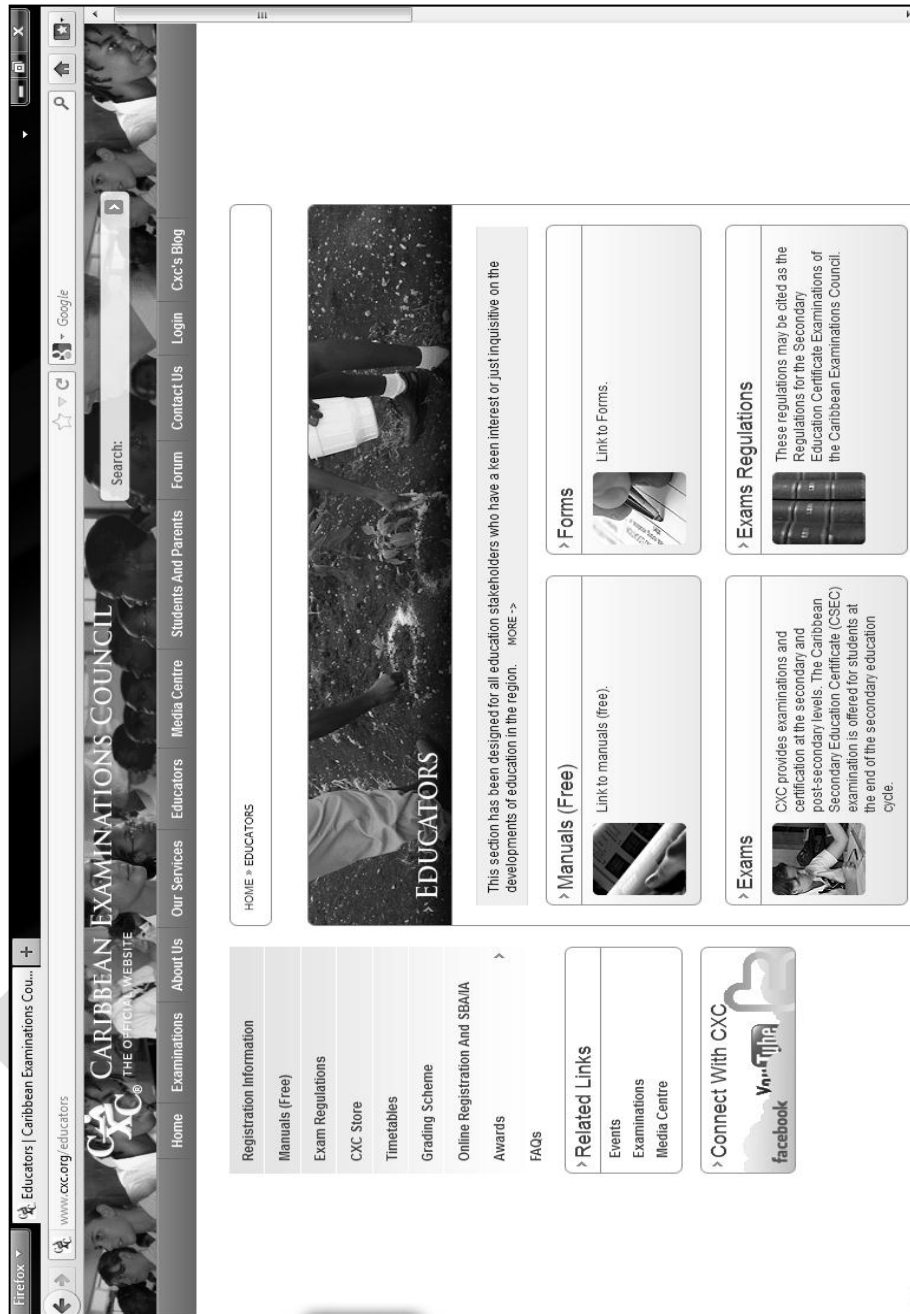   (D) <!DOCTYPE My First Page html>

24. Which of the following is NOT a characteristic of emerging web publishing technology?

    (A)   Accessibility
    (B)   Pervasiveness
    (C)   Discrimination
    (D)   Commodization

25. Which of the following services does NOT offer an e-book market place?

    (A)   Bing
    (B)   Sony
    (C)   Google
    (D)   Amazon

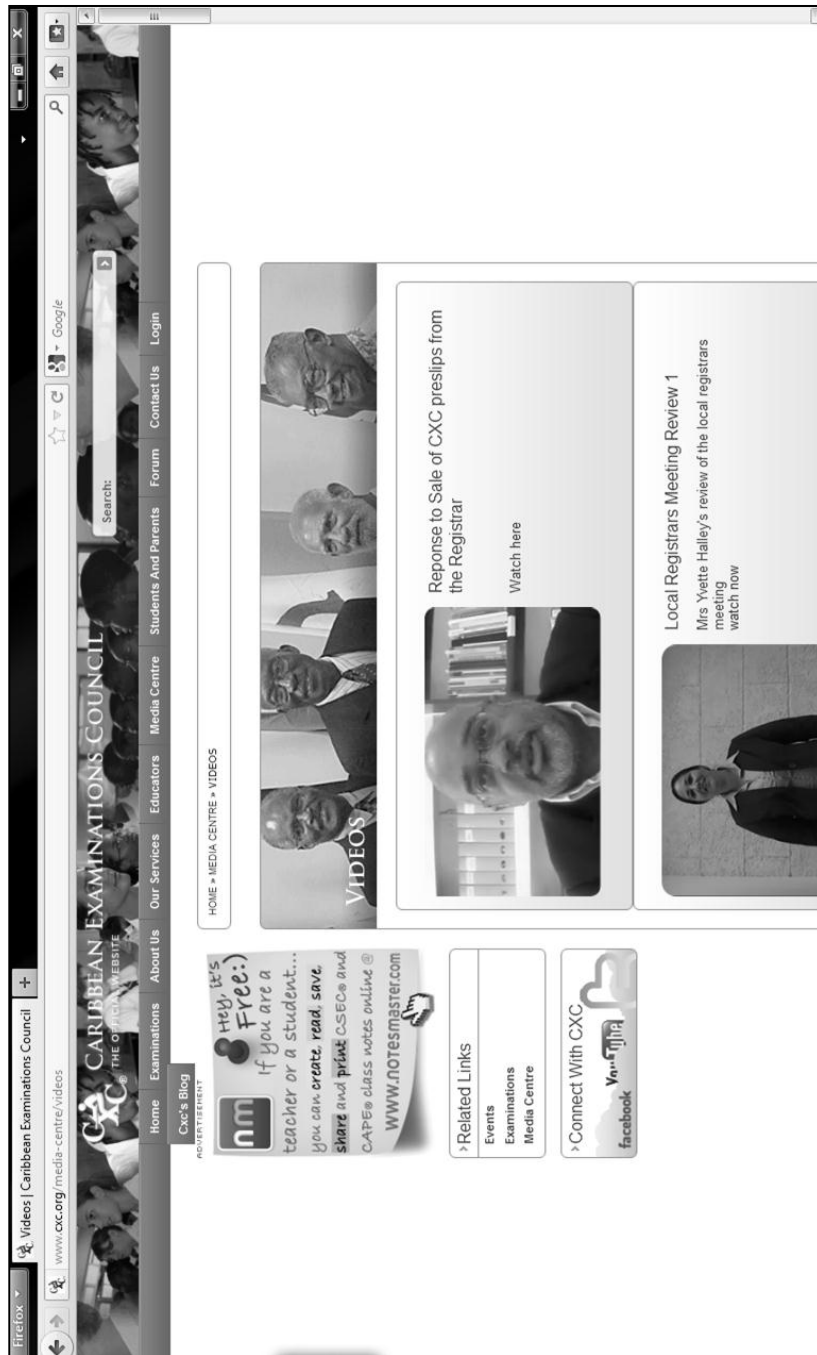Item **26** refers to the following snapshot of a website.

26.   Which of the following navigational items can be seen on the illustrated website above?

(A)   Social network links, Login Page
(B)   Site ID, Global Navigation, Breadcrumbs
(C)   Contact Us Page, Registration Information
(D)   Local Navigation, Exam regulations, Events

Item **27** refers to the following snapshot of a website.

27. Which of the following is the "you are here" indicator on the website provided?

(A) Home, CXC's Blog
(B) Home, Forum, Contact Us
(C) Home, Media Centre, Videos
(D) Home, Examinations, About Us

28. A blog could be used as

    (A)   a teaching tool
    (B)   a web browser
    (C)   an online video editor
    (D)   an instant messaging tool

29. Which of the following is a factor to consider in evaluating a website?

    (A)   Cost
    (B)   Growth
    (C)   Strategy
    (D)   Usability

30. Which of the following is a DISADVANTAGE of using web content management software?

    (A)   Low cost
    (B)   Tool mixing
    (C)   User friendly
    (D)   Workflow management

31. Government policy, infrastructure, devices and users are all important parts of the

    (A)   digital era
    (B)   mobile era
    (C)   mobile ecosystem
    (D)   digital ecosystem

32. Which of the following is NOT a mobile operating system?

    (A)   Bada
    (B)   iPhone
    (C)   FirefoxOS
    (D)   Windows 8

33. A feature phone is characterized as a phone that

    (A)   is considered top of the line
    (B)   can play mp3s and record video
    (C)   integrates with social networks
    (D)   has additional functionality over a basic phone

Item **34** refers to the following photograph.

34. The photograph represents a?

    (A)   camera phone
    (B)   feature phone
    (C)   basic phone
    (D)   smart phone

35. Which of the following may NOT be considered a local app with global appeal?

    (A)   Bus schedule
    (B)   Air travel schedule
    (C)   Beach resort facility
    (D)   Car rental facility

36. The acronym 3G stands for

    (A)   triple Gear
    (B)   third generation
    (C)   three Generation
    (D)   three speed mobile

GO ON TO THE NEXT PAGE

37. Which of the following is the LEAST important cultural consideration when addressing local problems in the context of designing maps?

    (A)   News
    (B)   History
    (C)   Time zone
    (D)   Entertainment

38. John builds a website and notices that it is difficult to view it on mobile devices. What is the MOST likely reason for this problem?

    (A)   Portability
    (B)   Bandwidth
    (C)   Screen size
    (D)   Processing power

39. The technique of wire framing is useful for creating

    (A)   3D models
    (B)   2D scenes
    (C)   polygon meshes
    (D)   mobile application prototypes

Item **40** refers to the following image

Source: http://www.mobilemovie.com/handset-emulators/phone-emulator/

40. What does the screenshot represent?

    (A)   An iPhone application
    (B)   An iPhone 3 performance report
    (C)   A mobile application emulator
    (D)   A performance report for an iPhone site

41. On which platform is there only ONE app marketplace?

    (A)   iOS
    (B)   Android
    (C)   Blackberry
    (D)   Symbian

GO ON TO THE NEXT PAGE

42. Mary has a mobile game named "Caribbean Flurry". She pays $2 per month to benefit from premium membership. What revenue model does this represent?

(A) Freemium
(B) Subscription
(C) Membership
(D) In app purchasing

43. In the mobile game "Caribbean Sea", Sandra can become an "Ocean Princess" if she acquires "Coral Powers" by accumulating 1000 points or paying for a "Powerpak".

This is an example of the

(A) freemium model
(B) membership model
(C) subscription model
(D) one-time purchase model

44. Which of the following networks does NOT improve speed of Internet access?

(A) Fiber
(B) Wireless
(C) Broadband
(D) 4G cellular

45. Which of the following is a contributor to commoditization?

(A) Fiber network
(B) Cheaper component
(C) Faster broadband network
(D) Faster computer processor

Unit 2 - Paper 01

Item	Specific Objective	Key	Item	Specific Objective	Key
1	2.1.1	C	26	2.2.6	B
2	2.1.1	B	27	2.2.7	C
3	2.1.2	D	28	2.2.7	A
4	2.1.4	B	29	2.2.6	D
5	2.1.5	A	30	2.2.8	B
6	2.1.5	A	31	2.3.1	C
7	2.1.5	D	32	2.3.2	B
8	2.1.5	C	33	2.3.2	D
9	2.1.5	D	34	2.3.2	B
10	2.1.6	C	35	2.3.4	B
11	2.1.6	D	36	2.3.3	D
12	2.1.7	C	37	2.3.4	C
13	2.1.7	B	38	2.3.5	C
14	2.1.8	A	39	2.3.6	D
15	2.1.9	D	40	2.3.7	C
16	2.2.1	A	41	2.3.8	A
17	2.2.2	C	42	2.3.9	B
18	2.2.4	C	43	2.3.9	A
19	2.2.4	A	44	2.3.10	B
20	2.2.4	A	45	2.3.10	B
21	2.2.4	B			
22	2.2.5	A			
23	2.2.5	A			
24	2.2.9	C			
25	2.2.6	A			

C A R I B B E A N   E X A M I N A T I O N S   C O U N C I L

CARIBBEAN ADVANCED PROFICIENCY EXAMINATION®

DIGITAL MEDIA

UNIT 2 – Paper 02

2 hours 45 minutes

READ THE FOLLOWING INSTRUCTIONS CAREFULLY.

1. This paper consists of ONE major task.

2. The task consists of a background, theme, audience and production.

3. You are required to respond to the entire task. Any text-based response should be done using an appropriate text or web editor (for example, word processor or notepad).

4. A digital media kit has been provided to assist you in the production work.

5. All work, including project and asset files used MUST be digitally compressed into a SINGLE ZIP FILE, included with your final submission at the end of the examination and exported as directed by the invigilator. The zipped file should be given your name followed by ID number (for example, John Doe – 123456789).

6. The use of mobile phones is NOT allowed.

7. Internet connectivity is NOT allowed.

8. All hard copies must be handed over to the invigilator at the end of the examination.

9. You are strongly advised to save your work **intermittently**.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

TASK

Guidelines: You are tasked with designing TWO digital media products using an animated character to tell the same story based on the theme. These products are:

- Storyboard for one episode of a web-based animated show
    – Design the home page for a website that will host the web-series

- Mobile app to distribute episodes
    – Design the home page for a mobile app

Theme: Encouraging good environmental practices

Audience: – Preschoolers
    – Pre-Teens
    – Teenagers

1.   (a)   Use the kit provided to design a superhero character to be used in your chosen story and featured prominently in your webpage layout.   **[3 marks]**

(b)   Show the development of your story idea in the form of a storyboard with at least 12 panels.   **[4 marks]**

(c)   State which SINGLE mobile device you will focus on for these digital products.
   [1 mark]

(d)   Based on the storyboard you have created describe THREE aspects of your proposed design idea.   **[3 marks]**

(e)   Create SIX thumbnails that explore the layout of your web page.   **[2 marks]**

(f)   Name TWO possible sources of revenue for the mobile application.   **[2 marks]**

Total 15 marks

2. (a) Identify an appropriate video format for web-based distribution and explain why it is suitable. **[3 marks]**

(b) Identify ONE digital media product that is Caribbean-based and compare it with your digital media product. **[3 marks]**

(c) State TWO ways by which your mobile app can be marketed. **[2 marks]**

(d) Recommend the best eBook platform to support this project and justify your recommendation. **[3 marks]**

(e) Digital media devices are becoming cheaper and more widely available. Name this trend and explain how it may impact the development of your product. **[2 marks]**

Total 13 marks

3. (a) Create a high fidelity web page mock-up for the home page of this web-series site. Show a simple menu system that allows the user to navigate across the entire site as well as between individual episodes. **[4 marks]**

(b) Create a screenshot of your mock-up in (a) and use labels to annotate THREE key design decisions that you made. **[3 marks]**

(c) Using the character you designed and the UI elements provided in the kit, design an app mock-up for the home screen of a mobile app to display the webisode. In designing your app pay attention to the following:

•   Screen size
•   Readability
•   Screen orientation **[7 marks]**

(d) Create a screenshot of your mock-up in (c) and use labels to annotate THREE key design decisions that you made. **[3 marks]**

Total 17 marks

END OF TEST

IF YOU FINISH BEFORE TIME IS CALLED, CHECK YOUR WORK ON THIS TEST.

INSTRUCTIONS FOR THE SUBMISSION OF COMPLETED WORK

**After the invigilator has signalled the end of the examination,
compress your work (project and asset files) into a single zip file,
name the file using your name followed by your candidate ID and
submit it to the electronic facility as directed by the invigilator.**

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CARIBBEAN ADVANCED PROFICIENCY EXAMINATIONS®

DIGITAL MEDIA

UNIT 2 – PAPER 02

KEY AND MARK SCHEME

SPECIMEN

Key and Mark Scheme

Syllabus Objective	QUESTION	SUGGESTED RESPONSE
M2 . 3	1 (a)	Creation of the character **3 marks** • Appropriate colour scheme [1 mark] • Creativity [1 mark] • Construction quality (dexterity) [1 mark]
M1 . 1	(b)	Cohesive story **2 marks** Compliance (a minimum of 12 panels) **1 mark** Cultural relevance **1 mark**
M3 . 2	(c)	iPhone, iPad, Samsung Galaxy **1 mark for clearly identifying a device**
M1 . 1	(d)	The response should explore at least 3 of the following • characters • environment • storyline • any other reasonable aspect **1 mark for each of any 3 aspects explored**
M2 . 2	(e)	**1 mark for every 3 thumbnails created**
M3 . 5	(f)	App payments, freemium, any other **1 mark for each appropriate source**
M1 . 5	2 (a)	Flv, mp4, WebM, ogg/ogv, mov, **1 mark for any one format** Complete explanation (Smaller file size, better quality, wider adoption) **2 marks** • partial explanation [1 mark]
M1 . 3	(b)	Identify a legitimate product (Cabbie Chronicles, Santana, UTT Crab Catcher Game, etc.) **1 mark for any one Caribbean-based product** Use of local dialect, familiar locations, scenarios, music, current events, colours **1 mark for any similarity** Association with own product **1 mark**

Syllabus Objective	QUESTION	SUGGESTED RESPONSE
M3 . 7	(c)	AppStore, QR codes, In-App Ads, Google Ad Words, Social Media, App Store Optimization **1 mark each for any two ways of marketing** ibooks or enhanced e-books **1 mark for any one platform**
M2 . 8	(d)	Justification should indicate that these platforms support rich media including video. **2 marks** Identifying the trend as commoditization or proliferation of technology **1 mark**
M1 . 10	(e)	Identifying as a new distribution opportunity **or** stating that attention to file size is required **or** stating that screen size and video support on these devices may need to be considered **1 mark for any one**
M2 . 4, 5	3 (a)	Good execution **1 mark** Effective navigation across entire site and between individual episodes **3 marks** • effective navigation between individual episodes only [2 marks] • effective navigation across entire site only [1 mark]
M2 . 5	(b)	Annotated design choice **1 mark each for any 3 design choices**
M3 . 6	(c) (d)	Screen size **2 marks** • size of each variation • finger friendly buttons 44 x 44 pixels minimum Readability **3 marks** • Unified layout • Appropriate font sizes

Syllabus Objective	QUESTION	SUGGESTED RESPONSE

M3 . 6	(d)	• Not cluttering the screen
		Screen orientation **2 marks**
		    • landscape
		    • portrait
		
		Annotated design choice
		1 mark each for any 3 design choices

CARIBBEAN   EXAMINATIONS   COUNCIL

REPORT ON CANDIDATES' WORK IN THE
CARIBBEAN ADVANCED PROFICIENCY EXAMINATION®

MAY/JUNE 2015

DIGITAL MEDIA

GENERAL COMMENTS

Digital Media is a new subject which represents an exciting opportunity for CXC to respond to important areas of economic growth and job creation. In particular the rationale for the syllabuses and examinations for this subject can be viewed as being anchored in the growing importance and value of the creative industries to Caribbean countries. The areas covered are applicable to growing economic areas such as animation, music, entertainment, and sports.

An integral part of this course is creativity — developing and processing creative ideas and converting them to innovative applications. Consequently, the area of Mind Mapping is an important component of the subject. The nature of Mind Mapping requires representing creative ideas in diagrams using paper and pencil and/or using features of computer applications. This is an area which will need specific attention going forward. This includes specialized creative thinking sessions for teachers.

The subject seeks to prepare candidates to develop processes and a road map for producing creative applications in Unit 1. These processes are further developed and, in Unit 2, lead to the production of an actual application.

The logical prerequisites for doing Unit 1 are Information Technology and Visual Arts at the CSEC level.

During the first sitting in 2014, 61 candidates wrote the Unit 1 examination. Of these, 12 achieved Grade I, 13 achieved Grade II, 30 achieved Grade III and 6 achieved Grade IV. In Unit 2, 9 candidates wrote the examination. Of these, 1 achieved Grade I, 2 achieved Grade II and 6 achieved Grade III.

In 2015, 211 candidates wrote the Unit 1 examination. Of these, 48 achieved Grade I, 60 achieved Grade II, 55 achieved Grade III, 28 achieved Grade IV and 5 achieved Grade V. In Unit 2, 70 candidates wrote the examination. Of these 18 achieved Grade I, 20 achieved Grade II, 23 achieved Grade III and 9 achieved Grade IV.

While the performance of candidates on both units was satisfactory, there were questions where performance was below the required standard. These included questions which tested Mind Mapping and the Creative Process in Unit 1 and in Unit 2, the Information Technology tools required to solve real-life problems.

DETAILED COMMENTS

UNIT 1

Paper 01 – Multiple Choice

The paper comprised 45 items, 15 items per module. Most candidates performed satisfactorily. The scores on this paper ranged from 15 to 40. The mean score was 29 (64 per cent) out of 45.

Paper 02 – Structured Questions

The paper consisted of three compulsory questions. The maximum score was 41 out of 45. The mean was 27.90 (62 per cent) out of 45.

Question 1

For this question, candidates were expected to create a short profile of their target audience for a campaign. Although this part was well done, there was a noticeable weakness in the candidates' ability to differentiate between the profile of the target audience and the campaign.

This question also required the candidates to demonstrate their understanding of the process of concept formulation associated with Mind Mapping and thumbnails. They were also required to differentiate between digital natives and digital immigrants. The mean mark for this question was 7.29 out of 15. One (0.47 per cent) out of the 211 candidates who attempted this question scored full marks.

The majority of candidates failed to answer Part (b) satisfactorily which required that they use both Mind Maps and thumbnails in the development process of their campaign concept.

Recommendations

Mind Mapping
- Teachers can use simple classroom exercises to problems that allow them to create Mind Maps. Students should be reminded that Mind Maps begin with a *single concept* and that each branch of the Mind Map should convey a different perspective of the concept.
- The first example of a Mind Map can be done as a class activity as a whole, where the class comes up with a problem and each student is allowed to add a branch and sub-branch. They can then be allowed to work in small groups and eventually on their own.
- Teachers are also reminded that there are resources available online that can be used to create these Mind Maps.

Thumbnails
- Teachers are encouraged to use simple classroom exercises that provide students with the opportunity to create thumbnails.
- Again, the first thumbnail can be created together after which the students can be placed in small groups to work before working individually.
- Teachers are reminded that there are numerous methods used in the design and development process — Mind Mapping, thumbnails, rough drafts and sketches, storyboarding. These methods should not be treated as one and the same. From responses received, students are treating the different methods of concept formulation as the same. Teachers can provide give one concept and allow students to develop the concept using all the methods listed in the syllabus.
- Teachers are also reminded of the resources that are available online, and should allow students to make use of them.

An example of a Mind Map is given below.

Problem: Students Underperforming in Secondary School
Have students come up with reasons or factors that are directly linked to the central problem and then explode from there.
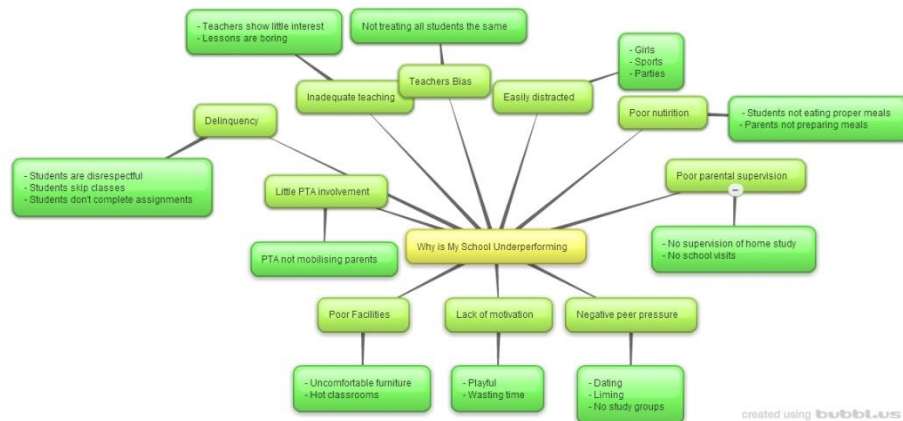
Question 2

This question examined candidates' understanding of the creative process, digital media platforms and issues related to intellectual property. The mean mark for this question was 5.92 out of 10. Ten (4.74 per cent) out of the 211 candidates who attempted this question scored full marks.

Generally, candidates were able to correctly answer all parts of the question which required identifying the creative process, digital media platforms as well as an intellectual property issue associated with the creation of the product.

Recommendations

- Teachers should include activities that require the student to assess and determine the phase of the creative process that involves those activities.

- It is important for students to understand what digital platforms are and to present examples of these. More importantly, students must be able to determine what can be done on each of these platform that shares digital media content. For example, the popular text messaging application WhatsApp is used by many. An image on the phone or device stored can be shared on over 15 platforms — Facebook, Twitter, Email, Hangouts, Wi-Fi Direct, Picasa, Messaging, Bluetooth, Loop, Google+, Gmail, Google Drive, etc. Some of these are usable as a medium to display or share digital content and therefore once justified, they can be used as a platform to share.

- Students should be given case studies/scenarios and asked to identify the most appropriate digital media platform for the distribution of information or digital content.

- Students can be asked to compare the appropriateness of platforms for a given situation and justify which platform will be more viable to disseminate digital content.

- Students could create digital content in the classroom such as a video in a video using a movie making software, save this to their mobile phone or on a memory card, or upload to YouTube and later share this via WhatsApp, Twitter, Instagram, Hangouts, Facebook, text messaging (MMS).

Question 3

This question required that candidates create a digital story, in the form of a video or poster, using the media kit provided and justify the choice of media. The mean mark for this question was 14.69 out of 20. Eleven (5.21 per cent) out of the 211 candidates who attempted this question scored full marks.

The majority of candidates did a video and was able to satisfactorily create their digital story and compress the finished product. A few candidates confused pieces of media with media platform; however, most were able to justify the use of two of the pieces of media chosen for the story. Similarly, the few candidates who did posters were able to successfully complete them but some did not save/export the final product in the stipulated format.

Recommendations

- Students should engage in doing local videos of school events from data collected in picture and video. These could include sports day, prize giving, football, netball, etc. as a marketing tool, allowing for the mastery of skills.
- Students should be encouraged to create infomercials using 30 second videos to promote a new business in their area.
- Students should be encouraged to interview other students and create short, three-minute videos to show a day in the life of the head boy or head girl or even teachers. This will allow for video capture and photography skills.
- Students could be given a folder with images, sounds and graphics, with irrelevant pictures and inappropriate sounds included, and asked to create a video product. Students could then be required to assess the appropriateness of each item and determine what to use. It is also a good practice for students to use storyboarding in this exercise to plan the outline for the video to be developed as well as the sequence that must be followed in the production.
- Students should be engaged in more photo editing to develop these skills.

Paper 031 – School-Based Assessment (SBA)

The projects received reflect a general trend up in the variety of goods and services that can be used for entrepreneurial purposes. It is notable that many groups of students were really innovative and used brainstorming and other project management techniques to narrow down which project to execute in their SBA.

It is important to note that candidates entered for both Units in the same year must submit two different SBAs — one for each unit. There is also need for careful review of the syllabus mark schemes provided as though these may indicate that some sections are similar, the outcome of the project for each unit is different.

With greater attention paid to detail, more marks can be awarded. In addition to paying careful attention to mark schemes, where possible, examination reports should be reviewed. Candidates should use syllabus contents listed in documenting their project.

<u>Use of Executive Summary</u> (if desired)

Though not on the mark sheet, there could be an executive summary at the start of the project allowing for a general overview of the project and for it to be clearly understood.

<u>Research/Pitch</u>

Description of Service or Product
Name of product and purpose
Generally, most groups were able to explain, at an acceptable standard, a product or service and clearly state its intended purpose. However, there was inorganic repetition of 'the name of the product' during the introduction, for example, 'The name of the product/service is…'. Students could be encouraged to be more creative in their expressions. The use of unique names for a product or service is encouraged. The assigned application of intellectual property symbols could be used, for example, ©, ®, ℗, ™.

Identify Target Audience
This was generally well done. Students were able to clearly identify their target audience. However, the age range or important demographics such as gender and educational background were not mentioned. In some cases, the target audience identified was not relevant to the project's idea. When a target description was done, it was too general and very vague, for example, a group of females; a group of persons etc.

Students should be encouraged to include in their identification why the audience was targeted/chosen. Creativity should not be limited to: 'The target audience was…'.

Suggested Response

The product or service is aimed at youths, ages 13–18, who currently own and operate a cellular phone and use a variety of applications in their day-to-day life. From research, the youths are equally male and female and came from a middle income family background.

Design Data Capture Instrument
Students did not explore a wide range of data capture instruments, especially those that were 'digital tools'. Questionnaires, when done, were traditionally typed up in a word processor and printed. Respondents would complete the instrument and return.

Alternatively, students should be encouraged to investigate as many data collection instruments that can be deployed using digital tools. Observation, online forums, focus groups, online polls, blogging, etc. could be explored fully and better captured using digital tools for data processing and presentation. Multiple instruments could also be used. Eighty per cent of the projects reviewed had questionnaires as the sole method of data collection.

Data Collection
Many of the projects were thorough in their collection of data. Some also gave good examples of the data collection process. However, many also lacked variety, depth and the scope of target audience used to gather data. Students should be encouraged to clearly explain how the data was collected using the instrument(s).

Data Analysis
The analysis brought relevance to what was collected in a concise manner, while pointing out factors important to the problem being solved in the project.

There was generally a lack of analytical details based on what was collected. Some projects simply stated what was already there. The separation of data analysis from data presentation is not helpful to the information being reported on. It is more advantageous to discuss the data analysis along with the data presentation being done.

Students should be exposed to various approaches to data analysis and be encouraged to present only relevant data in their analysis.

Data Presentation
The charts used were generally well done. However, greater creativity could be explored in data presentation, such as using tables, journey maps, user persona/profiling, ecosystems and vox pop results summary. In addition, histograms, pros and cons checklists and comparative audits could also be used.

Rationale
The rationale should be treated as an overview of the problem that is being solved, from a more informed position, especially after conducting data analysis. Approximately 50 per cent of the projects reviewed had an acceptable rationale. Students should be encouraged to separate the rationale from other sections on the purpose of the product/service by highlighting the core of the issues that the product or service addresses. It is at this point of the project that the reader will be able to understand the direction of the project.

Pitch
Students appeared quite involved and enthusiastic with the content being presented. Too many groups, however, just gave an oral summary of the entire project. The main intent of the pitch is to sell the product or idea. Greater effort should be put into optimizing the environment/area of recording such as lighting. Excessive background noise could be eliminated or lessened, and background images could be made to look more professional by using a clean whiteboard or background cloth.

When visual aids are used, as this is encouraged, they should be clearly visible. Video editing should be encouraged as there were too many 'extras' given that were not necessary. Audio integrity should be optimized. Many times, the audio in the presentations was inaudible.

When doing a pitch of this nature, it is important to show why the solution is important and needs to be invested in. If possible, students should use storyboarding to help plan and prepare for the pitch. Students should be encouraged to practise the pitch before the final presentation and recording. In delivering the pitch the audience should be treated as the clients — hence

making this activity more a sales pitch/elevator pitch. It should be persuasive and not just informational. Finally, a greater level of professionalism must be adopted. Dress, mannerism, use of language, and non-visual communication should be employed.

<u>Progress and Process</u>

Timeline/Production Schedule/Milestone Chart

The majority of projects reviewed had poorly done timelines. Some groups merely sketched on paper. There was very little evidence to indicate that any software was used to create the timeline.

Students should be encouraged to use digital tools to present information. Gantt charts can be done using spreadsheets; timelines and production schedules can be done using Visio. Students should remember that:
- Timelines should outline tasks that were done in the project and not how the project document was created.
- Production schedules should address how the budget is to be spent over a given timescale bearing in mind the artefacts to be created in the project and the output from the end of each process.
- Milestone charts should be treated as the major achievements that were made during the project and at specific times along the project's timescale.

Basic Storyboard/Wireframe/Mock-Ups/Rough Designs

- Storyboards did not follow the creative process being documented.
- Wireframes were lacking and these could have been used more effectively to communicate ideas.
- Mock-ups were irrelevant in most cases, and not used properly.
- Rough designs when done just provided one look of a sketch and not several sketches.

Recommendations

- Each of the four diagrams is not always required, as mock-ups are more specific to a web page being developed.
- Care should be taken to show the problem or crisis that the product or service is designed to address.
- There should be great clarity in how the problem or crisis is being taken care of using this product or service. A storyboard would be useful at this point.
- It must be emphasized that a clear development of the solution and how is it solving the problem must be communicated using this section.

Concept (*Draft Design)*
Many students stated the idea they had in mind, but failed to indicate the type of product or service, what it would do and how would it work. Most candidates only stated the positive impact of their product or service on the **target group** and made no reference to others.

Recommendations

- Students must clearly state what their idea is by indicating a name for their product or service, stating the type of product or service it is (for example, what needs it will meet). For example, such as is it a film, mobile app, website, animation, hardware product, etc.
- Students should also explain in full detail how the product or service will work, that is, how a user will navigate through the product or service, how a user operates the device/service.
- The positive and negative effects their product/service will have on society, a particular industry or group of individuals, should be explored.

Proposal Review

Methodology/Tools/Techniques

This section of most projects was poorly done. Most groups of students did not provide a list of tools used to produce their project. Some students included a list of tools, but inadequate explanations were given or were omitted in many cases.

Recommendations

- Students should list **all** the tools that were used in the development of the project, be it tools used in communication between group members, for example, social media, tools used to capture data.
- Tools used to capture and edit the pitch for example, audio, video and photo editing software, are important to mention. Tools used to create storyboards, mock-ups and wireframes cannot be left out.
- Tools used to store project materials such as Drop Box, Sky Drive, etc. along with tools used to create the project document or artefacts, for example, Microsoft Office, should be clearly stated along with how each was used.
- Importantly, the students should explain in detail how **each** tool was used to contribute to the final outcome.
- Students, in the group work, may include screen-shots of communications and storage tools used in the Appendix.

Budget
In two-thirds of the projects reviewed, the budgets provided were very basic and included only elementary items.

Recommendations

- A thorough budget must be developed documenting both income and expenditure related to the creation and distribution of product or service.
- Students should include items of intellectual property, the cost for patent, copyright, licensing, raw materials, labour, security, rental, utilities, equipment, software and miscellaneous expenses.
- Listings on the time period for licensing, quantity of raw materials, number of labourers, versions of software should be included in the budget.

- There is also need for expressing the appropriate source of funding, the amount to be received from investors, cost of production and return on investment (profit) should also be expressed.
- The budget must treat items realistically, for example, tenders for licensing, etc.
- Teachers could engage their accounts teachers in helping students to prepare budgets and work out break even analysis and return on investments (ROI).

Use of Digital Tools for Presentation of Concept

Generally, there was a lack of evidence in the use of digital tools. Greater effort must be placed on promoting and using digital tools to get the project done. A list of these can be found on the Internet. Most students, in their group, only showed the end product. Once the Appendix is made use of, the students can use screenshots to aid in communication.

In light of Module 3, the creative process could be better shown in the project. Careful attention must be paid to the steps in the creative process for Digital Media and that students are aware of these and demonstrate how they are achieved, directly or indirectly.

UNIT 2

Paper 01 – Multiple Choice

This paper comprised 45 items, with 15 items per module. All candidates performed satisfactorily. The score on this paper ranged from 19 to 41. The mean score was 30 (66.67 per cent) out of 45.

Paper 02 – Structured Questions

This paper consisted of three compulsory questions. The maximum score was 35 out of 45. The mean score was 25.03 (55.62 per cent).

Question 1

This question examined candidate's knowledge with respect to website development. Candidates should pay specific attention to instructions given for labelling and the submission of documents. Also, candidates should work on expressing themselves using appropriate digital media terminology. The mean mark for this question was 6.97 out of 12. No candidate who attempted this question scored full marks.

This question required the candidates to state three drawbacks of having a fixed layout for a website. Candidates' responses were poor. Special emphasis should be placed on the evaluation of digital publishing platforms and websites as well as on fixed, fluid and elastic websites including the pros and cons of each.

Parts (b) and (c) were well done as candidates were able to create the content checklist for five distinct sections of the website and the sketches for the possible options for the homepage. The majority of candidates were able to obtain higher than average scores for these two parts.

Recommendations

- Students should be given activities that require them to give responses using appropriate digital media terminology.
- Students should be given questions that include areas of the theoretical aspect of website development.
- Teachers should encourage students to use appropriate symbols, such as a button or a video or a banner, when doing sketches for a website.
- Students should create thumbnails for various situations of marketing, advertising, and/or content suitable for comic strips as required for this unit. Some ideas for stories include drug abuse campaigns, safe sex campaigns, honesty and discipline programmes, health awareness education, etc. From various themes, candidates preparing for the examination will be able to draw and compose their ideas with various emotions, gestures, and body language.
- Candidates should practise using graphic management software to complete their sketches. Candidates, however, would have to learn to insert these thumbnails in a picture file and use this in their website at a later date.
- As it relates to website development, it is an area of the syllabus that requires more practice. Importantly, candidates should be able to create simple, multiple-page websites and to place appropriate headings, navigation buttons and insert images.
- Candidates should also review websites from various fields and comment on these and the effectiveness with which the message is communicated.
- More practice should be given to students to demonstrate their abilities using simple, everyday experiences.

Question 2

The question tested candidate's knowledge of the design phase of mobile application and web page development. The mean mark for this question was 5.30 out of 14. No candidate who attempted this question scored full marks.

For Part (a), many candidates did not seem to have a clear identification of a thumbnail technique but instead used text in a box or images from the kit in some cases. Teachers are reminded that there are different design techniques and it is necessary that students are able to differentiate between them as well as use them.

Similarly the overall results for Part (b) suggested that web page design techniques should be reinforced, with emphasis on the quality of execution through techniques, creativity and interface design, using appropriate drawing software.

Candidates with poor results typically displayed the following: no video representation, no logo, no use of software, poor layout and orientation, lack of thematic approach, lack of knowledge on elements and principles of design, missing background, poor use of fonts (colours, size, style etc.)

Teachers are reminded that the final documents should be able to be opened easily by the examiner, so students are encouraged to save and export as recommended in the examination instructions.

Part (c) was exceptionally done as most candidates were able to successfully answer this basic question.

Recommendations

- Teachers should engage students in activities that require them to frequently use applications, available online or otherwise, to create their thumbnails.
- Teachers should encourage students to design products for their environment, with emphasis on the demographics.
- Students should engage in activities which enable them to designing using all the techniques mentioned in the syllabus. It is imperative that students are able to distinguish between the techniques and use each one.

Question 3

This a practical question which tested candidates' ability to create a video along with their high fidelity mock-up for a restaurant. The mean mark for this question was 12.76 out of 20. One (1.43 per cent) out of the 70 candidates who attempted this question scored full marks.

Most candidates were able to create the video but not without some challenges. Candidates did not always link/embed the media provided in the kit properly in their final product. This resulted in incomplete videos and as such full marks were not awarded. Candidates also did not show much skill in media editing or video editing.

Most candidates were able to successfully export the video in the formats specified; however, some files became corrupted during this process. This could have been caused by a number of factors, so special care should be taken during video development, saving and exporting.

Recommendations

- Teachers should provide students with activities that allow them to practise media editing and by extension video editing.
- Candidates need to be familiar with manipulating given media in a graphics software under examination conditions.
- Students should be encouraged to always be aware of media location when linking to a video and exporting.

Paper 031 – School-Based Assessment (SBA)

As in Unit 1, there were more projects, reflecting a wide variety of ideas, that were solving problems. Many groups were really innovative in their approach and this was commendable.

Proposal/Research

Description of Product/Service

Approximately 95 per cent of the projects reviewed had an adequate description of their product/service.

Research

Overall, most students provided a target audience for their product or service. Many projects used questionnaires for their instrument of data collection but failed to include a copy. There were many cases where there was minimal evidence of data being collected and analysed. Most students included their presentation as graphs and charts without any discussion.

Recommendations

- Students should describe the target audience to be more specific to the product or service being developed.
- Students should utilize other data capturing instruments such as online surveys, vox pops, etc.

Rationale

When included, the rationale had some basic information. However, greater attention must be paid to explain why this product/service is being attended to, what problem is being solved, what has been done in the project so far and what is left to be done.

Recommendation

- Students should treat the rationale as an executive summary of the project.

Pitch

Students appeared quite involved and enthusiastic with the content being presented. Too many groups, however, just gave an oral summary of the entire project. The main intent of the pitch is to sell the product or idea. Greater effort should be put into optimizing the environment/area of recording such as lighting. Excessive background noise could be eliminated or lessened, and background images could be made to look more professional by using a clean whiteboard or background cloth.

When visual aids are used, as this is encouraged, they should be clearly visible. Video editing should be encouraged as there were too many 'extras' given that were not necessary. Audio integrity should be optimized. Many times, the audio in the presentations was inaudible.

When doing a pitch of this nature, it is important to show why the solution is important and needs to be invested in. If possible, students should use storyboarding to help plan and prepare for the pitch. Students should be encouraged to practise the pitch before the final presentation and recording. In delivering the pitch the audience should be treated as the clients — hence making this activity more a sales pitch/elevator pitch. It should be persuasive and not just informational. Finally, a greater level of professionalism must be adopted. Dress, mannerism, use of language, and non-visual communication should be employed.

Recommendations

- Students should be more professional in their approach to delivering a pitch.
- Students should utilize their video and audio editing skills in order to improve the final video produced.

Proposal

Students as a group did not adhere to the 5–6 pages requirement as stated in the syllabus. The information provided for this section was very limited. Most students stated the idea they had in mind but failed to indicate the type of product/service and how it works. Like Unit 1, most projects showed only the positive impact of the product/service on the target group.

Where tools were to be listed, these were poorly done and explanations supplied inadequate. How each tool was used is important as part of the documentation, especially the process they were used to carry out and the final results obtained.

The budgets were basic, lacked critical information and focused only on elementary items. *Refer to comments made for Unit 1.*

Recommendations

- Students should state clearly how their idea will work and the type of product/service. For example film, mobile application, website, animation or hardware product.
- Both negative and positive effects of their product/service should be explored by students in terms of its effect on society, particular industry or individuals.
- A listing of all tools must be provided, along with a detailed explanation of why they were chosen and how they will be used.
- For discussion on budget, *see comments made for Unit 1.*
- Teachers could engage their accounts teachers in helping students to prepare budgets and work out breakeven analysis and return on investment (ROI).

Initial Content/Scripts/Mock-Ups/Rough Designs

Most students included basic rough drafts. However, these designs did not identify the problem, only the solution.

Recommendation

- Students must do more detailed work on creating the initial content or scripts, mock-ups and/or rough designs. These tools must describe not only the solution but also the problem being solved.

Preproduction/Revisualization/Interface Design

Students did not include storyboard, wireframes, animatic or an outline in most of their projects. Nine out of 10 of the projects reviewed did not make use of a brainstorming chart, which is critical to the process.

Recommendations

- There should be more effective use of storyboarding.
- Wireframes can be used to show pictorial information about the project solution being undertaken.
- Animatic is important to show sketches that are relevant to the final solution being adopted.
- Brainstorming charts should be used in all projects to show how the solution was arrived at.

Final Models/Props/Assets/Final Content

Recommendations

- Students should show the final outcome of the product or service. If the product is online, provide passwords or instructions to access and document this in the project body.
- Provide working URLs.
- If demo software are used, this should be stated in the project and the software installation files included in the project folder, properly labelled so it can be identified by the reviewer.

HTML Mock-Ups/Rough Edits/Interface

Generally, most projects did not get to this point. Where projects got to this stage, the outcome was not sufficient in a few cases.

Recommendations

- Students should provide HTML codes in the document being given for marking.
- Where rough edits are done, students should ensure there are more than just one or two. They should provide earlier representation, work in progress and final outcome.
- For Interface, students should ensure that interaction on screen is clear and appropriate for the type of product or service.

Use of Collaboration Tools

For most of the projects reviewed, this section was lacking or just completely omitted.

Recommendations

- As the word suggests, collaboration must show how students in the group worked together. Digital tools such as the use of social media, screenshots, conversation logs, or online collaboration using online storage, file sharing, etc. could have been better documented.
- Google Hangouts, Snapchats, Blogs, Wikis, Skype, Google Documents could have been more appropriately used and integrated by candidates.
- The interaction with the teacher as well as stakeholders could also be shown.
- Documenting how research was done using online digital tools could also be captured.

Product

E-Content/Website/Mobile Application or Interactive Product

In many cases, as the projects submitted did not get to this section, there was not much left to be assessed.

Recommendations

- Students should ensure that the actual product/service is created and deployed using one of the four specified outputs given.
- The product or service should work and evidence to support this must be clearly demonstrated.
- Students should ensure that where compositions are done these are balanced on screen and that sizing is appropriately done.
- For colours and textures, students should ensure that colours blend against backgrounds and that information displayed is easily readable.
- Space should be well used to ensure that the appearance of the final outcome is as professional as possible.
- In terms of typography, students should ensure that not too many font styles and sizes are used. They should try to be consistent in the general use of typography. They should also ensure that font styles used are clearly readable and that font sizes are appropriate, especially for headings or labels.
- The experience of users of the product should be documented.
- For convergence, it is important to see how different skills were combined in creating the final outcome. Animation used in websites, or graphics created that is incorporated in mobile apps or e-content should be effective.