AQA Level 3 Technical Level Entertainment Technology: Video Games Art and Design
Digital Asset Management

Unit Number: T/507/6611

Mark scheme

SPECIMEN MARKSCHEME – DIGITAL ASSET MANAGEMENT

Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the learners' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation, each associate analyses a number of learners' scripts: alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Assessment Writer.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of learners' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Further copies of this mark scheme are available from: aqa.org.uk/tech-levels

Section A

Answer **all** questions in this section

Total for this section: 50 marks

In the multiple choice questions, only **one** answer per question is allowed.

For each answer completely fill in the circle alongside the appropriate answer.

CORRECT METHOD ● WRONG METHODS ⊗ ⊙ ⊜ ⌀

If you want to change your answer you must cross out your original answer as shown.

If you wish to return to an answer previously crossed out, ring the answer you now wish to select as shown.

0 1 Which one of the following compression algorithms is lossy?

A VP8 encoding **(Answer)**   ○

B Lempel-Ziv encoding   ○

C Runtime length encoding   ○

D Lempel-Ziv-Welch encoding   ○

[1 mark]

0 2 Which of the following file formats would be most appropriate for storing architectural drawings?

A GIF   ○

B BMP   ○

C SVG **(Answer)**   ○

D PNG   ○

[1 mark]

0 3 Which one of the following file formats is lossy?

a) SVG   ○

B MP3 **(Answer)** ◯

C FLAC ◯

D HTML ◯

[1 mark]

0 4 Which one of the following best describes how you would create a copy of a Git repository?

A Fork the repository **(Answer)** ◯

B Push the repository ◯

C Submit a branch request to the repository ◯

D Submit a pull request to the repository owner ◯

[1 mark]

0 5 Which one of the following statements is true?

A Git operates on a client-server model ◯

B All Git repositories are visible to anyone ◯

C Git is a distributed revision control system **(Answer)** ◯

D Git requires at least two computers to operate ◯

[1 mark]

0 6 When should differential backups be made?

A Daily ◯

B Weekly ◯

C Monthly ◯

D Whenever you like **(Answer)** ◯

[1 mark]

0 7 Which one of the following statements is true?

A GPL software may not be charged for ◯

B Public domain software has no copyright attached to it **(Answer)** ◯

C All works shall be copyrighted for at least 50 years after the author's death ◯

◯

D Model Release is not required for commercial use of public
domain images

[1 mark]

| 0 | 8 |

Which of the following Creative Commons licenses is also known as copyleft?

A Attribution (BY)

B Share-alike (SA) **(Answer)**

C Non-commercial (NC)

D No Derivative Works (ND)

[1 mark]

| 0 | 9 |

Write the number of characters in the phrase

The quick brown fox jumps over the lazy dog

as a) a decimal constant, b) a binary constant and c) a hexadecimal constant

a) Decimal: 43   [2 marks]

b) Binary: 101011

[2marks]

c) Hexadecimal: 2B   [2 marks]

| 1 | 0 |

Which of the following file formats are most often used for raster images, which are most often used for audio and which are most often used for video:

AIFF, BWF, FLAC, GIF, PNG, YUV

Write your answers in the appropriate column in the table below:

Raster Images	Audio	Video
GIF	AIFF	YUV
PNG	BWF	
	FLAC	

[6 marks]

| 1 | 1 | What benefits can be expected from using an ISO standard?

[6 marks]

Describing how worldwide interoperability is guaranteed by an ISO standard
3 marks

Explaining the value of complete, publicly-available documentation
3 marks

| 1 | 2 | Describe the typical operations for modifying the contents of a Git repository. |

[6 marks]

Describing how forking creates a copy of the repository for private changes
2 marks
Mentioning that once a fork exists, the content can safely be changed
2 marks
Describing how to submit a pull request and the effect of the original owner accepting it
2 marks

| 1 | 3 | Describe three causes of data loss.

[6 marks]

Stating that storage media can and does fail
2 marks

Describing how user error can corrupt or destroy data
2 marks

Describing malicious activity such as sabotage or criminal activity
2 marks

Describing how natural disaster can affect different types of storage media
2 marks

(Maximum 6 marks)

1	4

Compare and contrast three types of storage media suitable for long-term backup.

[6 marks]

Mentioning hard disk drives
2 marks

Mentioning flash memory
2 marks

Mentioning optical disk
2 marks

Mentioning tape
2 marks

The candidate should describe MTBF, vulnerability to environmental factors such as damp, heat and humidity

(Maximum 6 marks)

| 1 | 5 | Identify six different types of copyright works as described by the Copyright, Designs and Patents Act 1988.

[6 marks]

Literary   1 mark
Dramatic   1 mark
Musical   1 mark
Artistic   1 mark
Sound recordings 1 mark
Film   1 mark
Broadcasts 1 mark
Typography 1 mark

Examples should be limited to identifying individual works. For example:
Literary: Name any two books
Dramatic: Name any two plays
Musical: Name any two songs
Artistic: Name any two paintings
Sound recordings: Name any two music albums
Film: Name any two films
Broadcasts: Name any two radio programmes
Typography: Name any two fonts
(Maximum 6 marks)

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ANSWER IN THE SPACES PROVIDED**

Section B

Answer **both** questions in this section

Total for this section: 30 marks

1 **7** A small business creates art, animation and movie assets for a number of clients around the world. Projects run for between two and six weeks. It employs twenty content creators, and generates about eighty gigabytes of data a week. Employees copy the latest version of their work to a common server at the end of every working day.

a) Describe the benefits of using a version control system

Review may lead to clients requesting backtracking to an earlier implementation: version control will enable this.

Early versions of assets can be used as a basis for different versions, improving client choice.

Many people can work on the same asset and review different versions for submission.

Version control provides an audit trail.

In certain circumstances it can act as a backup procedure.

[5 marks]

b) Compare the use of a client-server version control system with a distributed version control system, and recommend a version control strategy.

Client-server is good for large assets.
1 mark

Distributed stores the complete history on every machine.
1 mark

Distributed still works if the network is temporarily unavailable.
1 mark

Branching is cheaper for distributed systems.
1 mark

Committing, reviewing etc. are faster on distributed systems.
1 mark

Recommending a client-server system.
1 mark

Highlighting the volume of data that will be stored on each user's machine.
2 marks

Noting that this outweighs the greater cost of branching in a small organisation.
2 marks

[10 marks]

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1	8

The building that the business occupies has a basement area that is used for housing the servers. The owner of the business performs a complete backup of the servers once a month and an incremental backup once a week. The backups are kept in a fire safe in the server room.

a) Describe how the business might recover from a flood in the basement.

One mark each:

Buy new servers.

Reinstall operating system.

Recover tapes from the fire safe, restore last full backup and each incremental backup.

[3 marks]

b) Describe any shortcomings of the business's current backup regime.

One mark each, maximum four marks:

No offsite backup.

Fire safes are normally only good for an hour.

Fire safes are not necessarily waterproof.

Business owner is the wrong person to be doing backups.

Too much time between backups OR too long between restore points.

Too much being backed up: only need to backup user generated data.

Should take into account user's machines.

[4 marks]

c) Outline the most appropriate backup routine the business should implement.

One mark each, maximum eight marks:

Delegate the task to someone who is always on site.

Backup completed projects fully and remove them from the backup burden.

Consider using flash memory as a backup medium.

Fully backup unfinished projects each week. Incrementally backup unfinished projects each day.

Keep track of how long backups are taking and consider daily full backups.

Keep media in a fire safe out of the basement.

Keep copies of the backups at an offsite location.

Consider backing up to a cloud service in addition to physical media.

[8 marks]

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