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# Level 3 Technical Level

# ENTERTAINMENT TECHNOLOGY

# T/507/6611

Unit 2 Digital asset management

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Mark scheme

January 2019

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Version/Stage: 1.0 Final

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 students' 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 students' 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 students' 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](http://aqa.org.uk)

## Level of response marking instructions

Level of response mark schemes are broken down into levels, each of which has a descriptor. The descriptor for the level shows the average performance for the level. There are marks in each level.

Before you apply the mark scheme to a student's answer read through the answer and annotate it (as instructed) to show the qualities that are being looked for. You can then apply the mark scheme.

### Step 1 Determine a level

Start at the lowest level of the mark scheme and use it as a ladder to see whether the answer meets the descriptor for that level. The descriptor for the level indicates the different qualities that might be seen in the student's answer for that level. If it meets the lowest level then go to the next one and decide if it meets this level, and so on, until you have a match between the level descriptor and the answer. With practice and familiarity you will find that for better answers you will be able to quickly skip through the lower levels of the mark scheme.

When assigning a level you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best fit approach for defining the level and then use the variability of the response to help decide the mark within the level, ie if the response is predominantly level 3 with a small amount of level 4 material it would be placed in level 3 but be awarded a mark near the top of the level because of the level 4 content.

### Step 2 Determine a mark

Once you have assigned a level you need to decide on the mark. The descriptors on how to allocate marks can help with this. The exemplar materials used during standardisation will help. There will be an answer in the standardising materials which will correspond with each level of the mark scheme. This answer will have been awarded a mark by the Lead Examiner. You can compare the student's answer with the example to determine if it is the same standard, better or worse than the example. You can then use this to allocate a mark for the answer based on the Lead Examiner's mark on the example.

You may well need to read back through the answer as you apply the mark scheme to clarify points and assure yourself that the level and the mark are appropriate.

Indicative content in the mark scheme is provided as a guide for examiners. It is not intended to be exhaustive and you must credit other valid points. Students do not have to cover all of the points mentioned in the Indicative content to reach the highest level of the mark scheme.

An answer which contains nothing of relevance to the question must be awarded no marks.

The following list indicates the correct answers to be used in marking candidates' responses to the multiple choice questions.

**KEY LIST**

01	B
02	B
03	B
04	C
05	B
06	B
07	A
08	A

**0 9 . 1** Explain the term interoperability.

**[2 marks]**

**1 mark** for implying:

The ability for systems to work with other systems/interfaces

**1 mark** for reference to:

Time based ie now, in the future, without restrictions to access

**0 9 . 2** Name two standard bodies and for each one describe their function.

**[4 marks]**

**1 mark** each up to **max of 2 marks** for stating: ISO, ANSI or W3C

**1 mark** for giving one feature for each body identified:

- ISO: provides guidelines/sells supportive literature/international support/developing computer systems.
- ANSI: Sells standards/USA based/business focus/for developing systems.
- W3C: web standards/international focus/open web for all philosophy/sharing knowledge and ideas.

1 0 . 1

**Describe three benefits of using a version control system.**

**[3 marks]**

Award **1 mark** for each stated from the following – **3 marks max**

- Can revert files back to a previous state
- Revert the entire project back to a previous state
- Review changes made over time
- See who modified something that might be causing a problem
- See who introduced an issue and when.

1 0 . 2

**Describe three characteristics of a distributed version control system.**

**[3 marks]**

Award **1 mark** for each feature from the following– **3 marks max**

- Used for web development and system admin
- No singular centralised code base to draw code from/not reliant on one master copy of software
- Free open source
- Different branches host different areas of code
- Not as easy to learn as other options – not ideal for beginners
- Fast and efficient system

1 1 . 1

**Forking**

**[3 marks]**

Award **1 mark** for each – **3 marks max**

- Taking a copy of someone else's project or repository
- To improve
- To add to your own project
- Does not affect the original project or repository
- Can be sync to original repository to take on board other changes.

1 1 . 2

**A pull request**

**[3 marks]**

Award **1 mark** for each – **3 marks max**

- Change to a system based on a request of another developer
- Contributing your idea to a system
- To make the system better
- Discuss ideas
- Before committing, being accepted to a project or system.

**1 2 . 1** Explain three benefits of using remote backup as part of a data backup strategy. **[3 marks]**

Award **1 mark** for each benefit – **3 marks max** (indicative content)

- Data is stored away from the scene of loss/disaster
- Can be accessed from anywhere provided there is a network connection so normal operations might be restored quickly.
- Managed by an outside agency who may not have been affected by the disaster
- Back ups are automatically carried out
- Other sensible relating to remote storage

**1 2 . 2** Explain the term 'recovery time objective'. **[3 marks]**

**1 mark** for: Target duration of time that a company hopes to be operational after a disaster

**1 mark** for: So that all business processes are restored or business can function again as normal

**1 mark** for: Avoiding adverse effects on the running of the business or avoid unacceptable consequences

Other sensible clear explanation

1 3 . 1

**Unintentional Action**

**[2 marks]**

Unintentional Action – **2 marks max**

**1 mark:** Train staff to use system properly, **1 mark:** review procedures regularly

**Or**

**1 mark:** Limit personnel to use only the data they require, **1 mark:** through the use of access levels or (group) permission settings.

Other sensible clear explanation

1 3 . 2

**Crime**

**[2 marks]**

Crime – **2 marks max**

**1 mark:** Use firewall to stop unauthorised access, **1 mark:** update it regularly

**Or**

**1 mark:** Reference to physical security, **1 mark:** with clear procedures

Other sensible clear explanation

1 3 . 3

**System failure**

**[2 marks]**

System failure – **2 marks max**

**1 mark:** Use an uninterrupted power supply, **1 mark:** save work immediately before battery on UPS runs out.

**Or**

**1 mark:** Use a back up system that stores data as it is added simultaneously to a system **1 mark:** so that only recently added data might be lost.

Other sensible clear explanation

**1 4 . 1** State three types of work that are covered by copyright law.

**[3 marks]**

Award **1 mark** for each mentioned up to **3 marks max**

- Text-based works – books, essays, newspapers or other articles
- Musical
- Dramatic
- Artistic
- Sound recording
- Film
- Broadcast
- Literary
- Typographical

**1 4 . 2** Explain the term ‘fair use’ in this context.

**[3 marks]**

Explanation may include:

**1 mark** Copyright laws might be too restrictive; this allows for the lawful use of reproduction of work without permission from owners.

**Max of 2 from the following**

**1 mark** For purposes of reference or adding an extract in academia

**1 mark** For purpose of News reporting

**1 mark** For purpose to comment on

**1 mark** If work is unintentional included fair use can be used as a defence



1 5 . 1

**Attribution**

**[2 marks]**

Award **up to 2 marks** from the points below

**1 mark:** Allows for the distribution, remixing, tweaking

**1 mark:** For commercial purposes

**1 mark:** Credit must be given for the original creation.

**1 mark:** Recommended for maximum dissemination and use of licensed materials.

Award other valid responses

1 5 . 2

**Share-alike (copyleft)**

**[2 marks]**

Award **up to 2 marks** from the points below

**1 mark:** Allows for the distribution, remixing, tweaking for commercial purposes

**1 mark:** New creation must be licenced under identical terms

**1 mark:** Copyleft, free and open source license

**1 mark:** Recommended for materials that would benefit from incorporating content from Wikipedia and similarly licensed projects.

Award other valid responses

1 5 . 3

**Non-commercial**

**[2 marks]**

Award **up to 2 marks** from the points below

**1 mark:** Allows for the distribution, remixing, tweaking, for non-commercial purposes

**1 mark:** Do not have to license on same term as original work

Award other valid responses

1 6 . 1

**State four properties of alternative physical data storage that Hamid should consider when purchasing storage for his business requirements.**

**Briefly describe the importance of each property stated.**

**[8 marks]**

1 mark for property stated - 4 marks max	1 mark each for expansion of stated property – 4 marks max.
Capacity	Reference to how much data can it hold/gives a unit of data to support answer
Cost	Relate to affordability in relation to purpose/value for money
Longevity	How long it will last/robustness/likely to be used on other systems in the future/number of times it can be used before it fails
Obsolescence	Reference to how long the technology/device is likely to be useful or accepted by other computer system/able to use in the future on other systems.
Transfer rate/bandwidth	How fast the data transfers from the computer or other devices to the storage device.
Viability	Able to recover data if lost from device/robust error detection methods when reading and writing data
Susceptibility	Robustness/tolerate many environmental conditions ie temperatures. Does not go blank when exposed to magnetic fields
Mean Time Between Failures	How long it is likely to last before it starts to fail/ reliability factor given by producers/other relating to reliability.

**1 6 . 2** Evaluate with recommendations whether Hamid should continue using CDs or if he should switch to using flash storage instead.

**[7 marks]**

<b>A response that includes</b>	<b>Max marks 7</b>
A logical and coherent argument which analyses both the pros and cons of each approach and makes a fully justified recommendation.	6 – 7 marks
Attempts to analyse the pros and cons of each approach but response may lack some coherence. Makes a recommendation but fails to justify this fully	3 – 5 marks
One or two brief points made and may only focus on one of the approaches. Fails to make a recommendation with any kind of justification.	1 – 2 marks
Nothing worthy of credit	0 marks

Response may include reference to:

- Capacity required and if it is appropriate
- Value for money of CDs V flash
- CDs are easy to damage
- Newer desktops do not have CD drives
- Customer preference
- Speed of transfer of data
- Ease of use of flash storage
- Other sensible if related to the content of the question

**1 7 . 1** Recommend a file format for each asset before the final production is exported into a container file.

Give a reason for each recommendation.

**[8 marks]**

**1 mark** to be awarded for each file format given for each asset – **4 marks max.**

- Audio can be saved as AIFF/BWF/FLAC/MP3/ACC, M4A, MP4
- Video can be saved as 3GP/M4V/YUV/WMV
- Graphics can be saved as JPEG/PNG/RAW/TIFF/other sensible
- Animation can be saved as GIF/FLIC/SWF/APNG/ANI/other sensible

**1 mark** to be awarded for reason given for choice of each format - **4 marks max.**

Could refer to:

- Quality
- Compatibility
- File size
- Transfer rate
- Popularity

**1 7 . 2** Dinah wants to save the final production as an MP4.

Suggest why she would decide to use this option.

**[3 marks]**

Award **1 mark**, up to **max of 3 marks** from:

- Industry standard for high definition video
- Provides the most practical way of distributing video content on the web
- File sizes relatively small but high quality
- Compatible with online and mobile browsers

Other sensible

**1 7 . 3** Complete column 3 in the table below to explain a potential problem of each asset storage method.

**[4 marks]**

Award **1 mark** for each sensible issue, max **1 mark per asset**.

- Drawings – paper could be damaged by water/fire or ripped or paper discolours over time or other sensible
- Songs – could be scratched or may jump or warped if heated or other sensible
- Photographs – ruined if exposed or easy to damage/scratch or not easy to store or other sensible
- Video – could be recorded over by mistake or problems with tape getting stuck in machine or other sensible.

**Assessment Outcomes Grid**

Question	Assessment Outcome 1	Assessment Outcome 2	Assessment Outcome 3	Assessment Outcome 4	Assessment Outcome 5	Question Total
<b>Section A</b>						
1	1					1
2					1	1
3	1					1
4				1		1
5			1			1
6		1				1
7				1		1
8					1	1
9		6				6
10			6			6
11			6			6
12				6		6
13				6		6
14					6	6
15					6	6

**Section B**

16.1	8					8
16.2	7					7
17.1		8				8
17.2		3				3
17.3		4				4
<b>Total</b>	<b>17</b>	<b>22</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>80</b>