The answers on this worksheet have been taken from the 2018 OCR GCSE Computer Science Paper 1

6-A-Day – Computer Science GCSE (p1.5-2016)

Q1

1 mark per bullet to max 4
Max 3 if only stating features
e.g.

- Portable
- Lightweight
- ….e.g. device needs to be carried
- Small physical size
- …e.g. can fit in a small camera
- Durable
- No moving parts
- …e.g. device is moved so may be dropped // won't be damaged when moving around
- Reliable
- …e.g. needs to work when out in the 'field'
- Sufficient/large capacity
- …Videos are large file size // store more videos
- Fast **access/read/write** speed
- …e.g. the device will retrieve the videos without delay
- Efficient power consumption
- …e.g. run on battery // longer battery life

4
AO1 1b (1)
AO2 1a (1)
AO2 1b (2)

Award marks for why solid state is most appropriate, not why others aren't.

Award descriptions of portable/durable etc., not looking for key words.

Do not just allow can transfer data elsewhere.

Fastest without quantifying read/write speed is not enough.

Allow: quietest and expansion.

Do not award cost.

Small on its own is insufficient as it could mean physical or memory size.

Q2

1 mark for working, 1 mark for answer

- 1024(1000) / 100 // 10*100 = 1000
- = 10 (videos)

2
AO2 1a (1)
AO2 1b (1)

Final answer must be 10, not 10.24

Q3

1 mark per bullet to max 6

- Output asking for file size (in megabytes)
- Taking number of MB as input
- Multiplying by 1024 or 1000
- Multiplying by 1024 or 1000 (may be same line as bullet 3, this must be the final value with no further changes)
- Outputting the final bytes value…
- …in an appropriate message

```
output "Please enter the file size in
megabytes"
input numberMB
numberKB = numberMB * 1024 (or 1000)
numberBytes = numberKB * 1024 (or 1000)
output "There are " & numberBytes & " bytes
in " & numberMB & "MB"
```

6
AO3 2b (6)

Award bullet 5 even if bullets 3 and 4 are wrong. Do not award if outputting the original input value.

Bullet 4 must be the final calculation to get the mark. If there are any further calculations, or changes to the final bytes value then bullet 4 cannot be awarded.

`Input = value` is incorrect, variable must be on left.

Bullet 6 is dependent on bullet 5.

Input must be stored e.g. `user input` – no mark

Outputs must have "" around strings, variable identifiers must not have "".

If bullet 5 is not given because the variable is in "", still award bullet 6 if correct.

Bullet 3 and 4, could be multiplying by 1,000,000 or 1,048,576 (award both bullets).

`numberMB = input("Enter the file size")` would get both bullets 1 and 2.

Concatenation is not required for the final bullet.

`input("Filesize")` will get 1 mark for outputting File size, it will not get the input as there is no variable.

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Q4	1 mark per bullet to max 3 e.g. Incremental: • Only the changes need to be backed up • The software/OS/settings are unlikely to have changed between backups • Small number of files likely to be used/edited between backups • Take less time to backup • Each backup will take less memory space to store Full: • Backup all the data/files and software • It might not take a significant time to back up entire system • He might only have a small number of files to be backed up each time • Safer as have more past versions to revert to • User may have changed settings on computer • Faster to restore the backup • Needs to do a full before he can do an incremental	3 AO2 1a (1) AO2 1b (2)	Discussion must match the backup given. Either method is acceptable, marks are awarded for the justification. Allow marks for why the other is not appropriate. If there is no method given, or both, then read the answer and mark their justifications. It must be clearly given which method each point refers to.
Q5	1 mark for naming program, 2 for description of use e.g. • Encryption software • Scramble/encode/mix up data • …so it cannot be read/understood if intercepted/stolen • Defragmentation • Move free space together • Move files together • E.g. Faster access to files • (Data) compression • Reduce the file size of files // makes files smaller • To use less storage space • Faster transmission • To store more files • Anti-virus / anti-malware • To help protect computer/data against viruses/malware • To scan the computer to look for/quarantine/remove viruses/malware • Disk analysis and repair • Scan disk and look for faults • Prevent loss of data due to faulty disk • Auto-update • Checks Internet for new versions of software/OS • Downloads and installs without user interaction • Firewall • Examine ingoing and outgoing traffic • To help restrict/prevent unauthorised access • …over a network/external source	3 AO1 1a (1) AO1 1b (1) AO2 1b (1)	Must be appropriate to scenario. For encryption, no mark for 'it encrypts data' Do not award: any form of backup or device driver. Do not award: encryption stops data being stolen. Do not award: brand names. But read description. Mark program first. If incorrect 0 marks. If wording is not clear, or terminology not exact but it can be understood, marks can be awarded for description of use. Defragmentation – do not award marks for describing a fragmented disk this is a NAQ.
Q6	1 mark per bullet to max • Allows free distribution // other people can use/edit his work • **Other people** can redistribute his work • Can **choose** to restrict other people to be able to use/edit/share the videos • Work is still copyrighted // others cannot claim it as their own • No-derivative • …William can set that if others edit it they cannot redistribute it with the edits • attribution • …Can insist e.g. on having his name on it if re-used // referencing // must be credited • Can insist on non-commercial use // others cannot sell/profit from his work // personal use only	3 AO1 1b (1) AO2 1a (1) AO2 1b (1)	"People need to ask to use it" is not enough.