

8(a)	1 mark for each correct explanation, max 2 marks Virus: Malicious program/software that replicates/copies itself and deletes/alters files/data stored on a computer Pharming: Malicious code/software installed on a computer which redirects user to a fake website to obtain personal data
8(b)	1 mark per bullet point, max 3 marks e. g. • Students should consider privacy issues • Students should not make inappropriate use of social networking // Students should not engage in cyberbullying • Students should not copy work that is not their own • Students should abide by the school rules/guidelines for accessing the network • Students should only use the school network for legitimate purposes • Students should not hack / crack other computers
8(c)	1 mark per bullet point, max 4 marks e. g. Negative Impacts • If students use AI to shortcut learning, they may miss out on developing reasoning and problem-solving skills // Students may not be learning anything // It could lead to a decline in specific skills • It could have negative impacts on student communication // heavy reliance on AI may limit opportunities for collaboration, teamwork, and face-to-face communication • Emphasises the digital divide// some students may not have access to the technology • The AI answer might not be correct leading to mis-information • Increased screen time and isolation could contribute to anxiety or loneliness Positive Impacts • Students given additional support may do better • Pupils who struggle in traditional settings may gain self-esteem through AI-assisted learning at their own pace Long-Term Impacts • Protection of intellectual property // ethical issues and considerations • Schools may need to redesign curricula and/or assessment to integrate AI

2(a)	1 mark for each correct row, max 4 marks <table border="1"> <thead> <tr> <th>Term</th><th>Description</th></tr> </thead> <tbody> <tr> <td>Copyright</td><td>Gives the holder the legal right of ownership of intellectual property</td></tr> <tr> <td>Open Source (Initiative)</td><td>Software can be freely copied, distributed or adapted</td></tr> <tr> <td>Shareware</td><td>Gives the user a trial period / limited functionality before a payment/sign up may be required</td></tr> <tr> <td>Software Licence</td><td>A (legal) agreement that defines the rights and terms of usage for the software</td></tr> </tbody> </table>	Term	Description	Copyright	Gives the holder the legal right of ownership of intellectual property	Open Source (Initiative)	Software can be freely copied, distributed or adapted	Shareware	Gives the user a trial period / limited functionality before a payment/sign up may be required	Software Licence	A (legal) agreement that defines the rights and terms of usage for the software
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2(b)	1 mark per bullet point, max 2 marks e.g. - to create a safe, respectable and professional working environment for all employees - to ensure that employees understand the expectations ... and the consequences of their actions - to provide a clear outline of what is considered good practice - so there are clear rules to follow in certain situations - to protect the reputation of the organisation // maintain public trust										
10(a)	1 mark per bullet point, max 4 marks Max 2 from each section. Interpreter: - Use an interpreter while writing/coding the program ... to test / debug the partially completed program ... because errors can be corrected and processing continue from where the execution stopped // errors can be corrected in real time // errors are identified one at a time Compiler: - Use the compiler after the program is complete ... to create an executable file so source code not seen - Use the compiler to repeatedly test the same completed section without having to re-interpret every time										
10(b)	1 mark per bullet point, max 2 - The software is free of restrictions - The software is not necessarily free of charge - The <u>source code</u> comes with the program // A user can edit the <u>source code</u> to add functionality / suit their needs - Users can share the software with others										
10(c)	1 mark for a correct answer Digital Signature										

7(a)	1 mark per point, max 2 marks e.g. • The learning experience could be improved • ... by identifying students who are struggling • and employing more personalised learning • There could be early Intervention • ... to determine which students require extra support • Teachers and students could understand the challenges better • ...and identify optimal times for learning • There could be privacy concerns • students / teachers could be uncomfortable with constant surveillance • ... students might not want their data / actions passed to third parties • There could be Mental Health concerns • due to constant monitoring and pressure • contributing to student stress and anxiety
7(b)	1 mark for the working 1 mark for the correct answer Working: $(4000 \times 3000 \times 30 \times 16) / (8 \times 1000 \times 1000 \times 1000)$ $/// (4000 \times 3000 \times 30 \times 2) / (1000 \times 1000 \times 1000)$ Answer: 0.72 gigabytes
7(c)	1 mark for the name 2 marks for the matching description, max 3 marks • Parity Byte Check • a parity bit is added to each byte to make the number of 1s match the parity, odd or even • each byte can be checked on receipt and request to be resent if the byte does not match parity • Parity Block Check • a bit is added to each byte, but a parity byte is also set for each block • the location of an error can be found using vertical and horizontal parity • Checksum • A calculation is made from the data and transmitted with the data • The receiver performs the same calculation and compares with received checksum to see if they match

7(d)	1 mark per reason, 1 mark for corresponding justification x2 max 4 marks • Lower cost per unit of storage • ... so the high capacity of storage required for large number of video files will be less costly • A large number of read/write operations are being performed continuously • ... and magnetic storage is likely to have a longer life span compared with solid state
7(e)	1 mark for each validation check correctly identified, max 3 marks Range Check Existence Check Format Check