# ICD2O – Exam Review

## Unit 1 - Hardware

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| 1. Name the piece of hardware that cools the computer. | Fan |
| 2. Name the piece of hardware that holds the RAM, ROM and CPU. | Motherboard |
| 3. What does RAM stand for? | Random Access Memory |
| 4. What does ROM stand for? | Read Only Memory |
| 5. What does HD stand for? | Hard Drive |
| 6. What does CPU stand for? | Central Processing Unit |
| 7. Name the piece of hardware that is used to boot the computer. | ROM |
| 8. Another name for the CPU. | Processor |
| 9. Name the piece of hardware that remembers things for the CPU. | RAM |
| 10. Name the piece of hardware that is the brain of the computer. | CPU |
| 11. Name the piece of hardware that is both input and output. | Touch screen |
| 12. Name the piece of hardware that stores saved files. | Hard Drive |
| 13. Name the piece of hardware that stores open files. | RAM |
| 14. Name the piece of hardware that allows you to input words. | Keyboard |
| 15. Name the piece of hardware that is output for sound. | Speakers |
| 16. Name the piece of hardware that is input for light. | Camera |
| 17. Name the piece of hardware that that output light. | Screen (Projector, LEDs) |
| 18. Name the piece of hardware that outputs on paper. | Printer |
| 19. Name the piece of hardware that that detects the x.y co-ordinate the user wants to select on the screen. | Mouse |
| 20. What are the two components of a graph? | Nodes, Edges |
| 21. On a graph, how do you draw a node? | Circle, with a letter in it. |
| 22. On a graph, how do you draw an edge? | Line<br>Straight<br>Avoid crossing if the question requests it. |
| 23. On a graph, what is the name for traveling over edges between nodes? | Path |
| 24. What type of path can go over each of the edges once without repeating? | Euler path |
| 25. Can an Euler path visit a node more than once? | Yes. |
| 26. Can an Euler path visit an edge more than once? | No. |
| 27. How a string (balloon) be used to model an Euler path? | 1. The string is like the path<br>2. The path can twist around like a string<br>3. There can be two ends to the path, like the two ends of the string |

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| 28. | What is the name of the place where Euler figured out the math behind an Euler path? | Konigsberg |
| 29. | What is the name for the number of edges that connect to a node? | Degree |
| 30. | If 5 edges connect to a node, what type of node is it? | Odd |
| 31. | If 2 edges connect to a node, what type of node is it? | Even |
| 32. | How many odd nodes in an Euler path? | A maximum of 2. (0, 1, or 2). |
| 33. | What property does an odd node have in a Euler path? | It must be an end place. One of the times you come, there is no leaving path. |
| 34. | What property does an even node have in a Euler path? | It can be in the middle of your path. When you come to the node, you leave again. |
| 35. | Your eyes feel like they are burning. | Eye Strain |
| 36. | You hear a high-pitched noise all the time. | Ringing Ears |
| 37. | You can't fall asleep and you wake up in the night. | Trouble Sleeping |
| 38. | You have burning pain in your wrists and hands. | Carpal Tunnel |
| 39. | You have burning pain in your index finger. | Texter's Finger |
| 40. | You have burning pain in your thumb. | Nintendo Thumb |
| 41. | You have burning pain in your neck. | Neck Strain |
| 42. | You have burning pain in your pinky finger. | Smartphone Pinky |
| 43. | You have "pin & needles" feelings in your legs. | Numb Legs |
| 44. | Your back really hurts. | Back Strain |
| 45. | Your head really hurts after looking at a screen for hours. | Headache |
| 46. | You type with your wrists bent for long periods of time. | Carpal Tunnel |
| 47. | Your chair is too high. Your legs dangle and don't touch the floor. | Numb Legs |
| 48. | You use a headset at maximum volume for hours daily. | Ringing Ears |
| 49. | You use your cell phone until you lay down to sleep. | Trouble Sleeping |
| 50. | You use your index finger to text for a few hours every day. | Texter's Finger |
| 51. | You use your computer in full sunlight. There is a constant glare off your computer screen. | Eye Strain |
| 52. | You look down at your laptop screen when you use it from a seated position. | Neck Strain |
| 53. | You have a claw hand position when you use your mouse. | Carpal Tunnel |
| 54. | You sit hunched over. | Back strain |
| 55. | You phone your smart phone all day in your hands. | Smartphone pinky. |
| 56. | Name four ergonomics issues that occur on your hands. | Carpal Tunnel Texter's Finger Smartphone Pinky Nintendo Thumb |
| 57. | The study of how to help your workers use equipment safety without injury to themselves | Ergonomics |
| 58. | Injuries that occur after months or years of repeated small movements. | Repetitive Stress Injuries |

# Unit 2&3 – AppLab, Variables, Ifs

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| 59. | T && T | T |
| 60. | T && F | F |
| 61. | F && T | F |
| 62. | F && F | F |
| 63. | T \|\| T | T |
| 64. | T \|\| F | T |
| 65. | F \|\| T | T |
| 66. | F \|\| F | F |
| 67. | !T | F |
| 68. | !F | T |
| 69. | In a text variable, they are the addresses of each character. | Index |
| 70. | In a text variable, they are the space that holds each character. | Element |
| 71. | The index numbers of the text CAT would be this. | 0 to 2 |
| 72. | The length of the text CAT would be this. | 3 |
| 73. | List the 7 text functions | 1. charAt<br>2. includes<br>3. indexOf<br>4. Length<br>5. Substring<br>6. toLowerCase<br>7. toUpperCase |
| 74. | Which text function gets an address and returns the character in that element? | charAt |
| 75. | Which text function gets a letter and returns the first index of that character? | indexOf |
| 76. | Which text function can slice a text variable up into smaller pieces? | Substring |
| 77. | Which text function tells you the number of characters in the text? | Length |
| 78. | Which text function converts the text to have all capital letters? | toUpperCase |
| 79. | Which text function converts the text to have all small letters? | toLowerCase |
| 80. | Cat > Dog | F |
| 81. | Zebra > Dog | T |
| 82. | Zebra != Zebra | F |
| 83. | Why would we compare two text variables? | To put them in alphabetical order |
| 84. | An encryption technique from ancient Rome. | Caesar Shift |

| 85. | An unbreakable encryption technique | RSA |
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| 86. | An encryption technique where you move the first letter to the end and add ay | Pig latin |
| 87. | An encryption technique where you shift each letter | Caesar Shift |
| 88. | The people on the Western front in WWII who spoke over the radios in an unbreakable "code" | Cree Code Talkers |
| 89. | Functions are used to represent this on a binary tree. | Nodes |
| 90. | Function calls are used to represent this on binary tree. | Edges |
| 91. | What is a named block of code that can be called? | Function |
| 92. | What is a subprogram? | Function |
| 93. | How do you call a function? | With its name, brackets and a semi-colon. Eg. Name(); |
| 94. | How do we code a node? | With a function |
| 95. | How do we code an edge? | With a function call |

## Unit 4 – Loops, Privacy, Security

| 96. | What is the first part of a loop? [Prompt with starting letters if needed] | Initialize Loop Stopping Variable |
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| 97. | What is the second part of a loop? [Prompt with starting letters if needed] | Test Loop Stopping Condition |
| 98. | What is the third part of a loop? [Prompt with starting letters if needed] | Steps To Repeat |
| 99. | What is the fourth part of a loop? [Prompt with starting letters if needed] | Progress To The Loop Stopping Condition |
| 100. | What is the JavaScript shortcut for add one to i? | i++ |
| 101. | What is the JavaScript shortcut for subtract one from i? | i-- |
| 102. | What is the JavaScript shortcut for add three to i? | i+=3 |
| 103. | What is the JavaScrip shortcut for multiply i by 5? | i*=5 |
| 104. | What is the top of a for loop that goes 10 times? | for(var i=0; **i<10**; i++) * note < sign |

| 105. | What is the top of a for loop that goes from 10 to 1? | for(var i=10; **i>=1**; i--)<br>\* note > sign |
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| 106. | Three kinds of malware | Virus<br>Worm<br>Trojan |
| 107. | A form of malware that gives complete access of a computer to a hacker. | Trojan |
| 108. | Unauthorized access to a computer. | Hacking |
| 109. | A form of malware that can spread itself. | Worm |
| 110. | Malware that makes your computer run slowly and lose hardware space. | Virus |
| 111. | Software intended to harm a computer. | Malware |
| 112. | When a hacker uses bots to send messages to a server. This overwhelms the server and takes it off-line. | D-Dos |
| 113. | The hacker in-charge of the D-Dos attack. | Herder |
| 114. | A computer **network** inflected with a Trojan; Used in a D-Dos attack. | Botnet |
| 115. | A computer that is used in a D-Dos attack. | Bot |
| 116. | An attack by a nation-state (country) using malware or hacking. | Cyberwar |
| 117. | An attack that has never been used before. | Zero-day |
| 118. | Luring someone with an innocent-looking email that actually contains a virus. | Phishing |
| 119. | A user's files are encrypted. To unlock them, the user must pay the hackers. | Ransomware |
| 120. | An attack where the hacker monitors wifi packets. | Sniffing |
| 121. | A virus that took the power grid off-line in 2003. | Blaster |
| 122. | A worm that was used in a cyberwar attack against Iran's nuclear reactors. | Stuxnet |
| 123. | The attack used by Russian hackers against Estonia in 2007. | D-Dos |
| 124. | A trojan used by Chinese hackers. Found in 2010. | Ghostnet |
| 125. | Effects of the Blaster Virus. | Slowed down infected computers.<br>Accidentally took down the power grid in eastern USA and Canada. |
| 126. | Effects of the Stuxnet worm. | Caused centrifuges in nuclear reactors to overheat and burn out.<br>Took Iran's nuclear reactors offline. |

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| 127. | Effects of Russia's cyberwar attack of 2007. | Took all of Estonia's networks (including banking) down for 3 weeks. |
| 128. | Effects of Ghostnet. | Could turn on webcam and microphones without user knowing and monitor room where computer was located. |
| 129. | Payment method for Ransomware attack. | Bitcoin |
| 130. | Victim of ransomware attack in Dec 2022. | Toronto's Sick Kids |
| 131. | Being free from being observed or disturbed by other people. | Privacy |
| 132. | A company who gathers your information from online sources to sell to others. | Dataminer |
| 133. | The world's largest dataminer. | Blue Kai |
| 134. | Amount of information in a dataminer's database. | Exabyte (size = all words ever spoken) |
| 135. | Dataminers violate this social and ethical principle. | Privacy |
| 136. | Who buys from dataminers? | Advertisers (People who want to manipulate you) |
| 137. | 4 problems with datamining | 1 – your privacy is invaded. 2 – They might be able to guess things about you that you want secret 3 – **They** make a lot of money off **your** private data. 4 – Advertisers use this information to manipulate you |
| 138. | 3 benefits of datamining | 1 – better stocked stores 2 – can catch identify theft 3 – expensive products (ie social media) available for free. They make money off your data (a lot of money), you don't have to pay. |
| 139. | The piece of information Dataminers use to link your packets across platforms. | Device ID |
| 140. | In Canada, 3 groups who can't sell your data. | Healthcare, Schools, Government |
| 141. | A second copy of a file in another location. | Backup |
| 142. | 4 low security solutions | Backup Password Firewall Virus Scanner |
| 143. | 5 medium security solutions | 1- Network Use Policy And better versions of: 2- Backup |

|  |  | 3- Password<br>4- Firewall<br>5- Virus Scanner |
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| 144. | 1 very high security solution | Air Gap |
| 145. | Hackers use this program to break into passwords | Password cracker |
| 146. | A second copy of the file, re-installed when you get a virus. | Back up |
| 147. | A program that checks a list of virus code against your computer's files to see if any are infected. | Virus Scanner |
| 148. | A program that checks a list of virus code against incoming internet traffic to find viruses and stop them entering your computer. | Firewall |
| 149. | A very secure computer with no network connections. | Air Gap |
| 150. | A set of rules to keep your network safe and free of viruses, and to encourage good digital citizenship. | Network Use Policy |
| 151. | An attack that has never been used before. Virus scanners can't stop them. | Zero Day |
| 152. | Needed to make a secure password | 1 - Long (over 8 characters)<br>2- Upper and lower case<br>3 -Numbers<br>4 -Special characters<br>5- Avoid names, birthdays |
| 153. | Direction?<br>VelocityX = 0<br>VelocityY = 5 | Down |
| 154. | Direction?<br>VelocityX = 5<br>VelocityY = 0 | Right |
| 155. | Direction?<br>VelocityX = –5<br>VelocityY = 0 | Left |
| 156. | Direction?<br>VelocityX = 0<br>VelocityY = –5 | Up |