**MARKING MEMORANDUM**

**GRADE 10 P2 NOV 2018**

**QUESTION 1**

1.1.1 D ✓

1.1.2 A ✓

1.1.3 B ✓

1.1.4 A ✓

1.1.5 B ✓

1.1.6 D ✓

1.1.7 C ✓

1.1.8 D ✓

1.1.9 C ✓

1.1.10 A ✓1.2.1 Shareware ✓

1.2.2 Zero Insertion Force ✓ (ZIF) Socket

1.2.3 Biometric Scanners ✓

1.2.4 Extranet ✓

1.2.5 Creative Commons ✓

Or Copy Left

1.2.6 Device Drivers ✓

1.2.7 Wiki ✓

1.2.8 Digital Divide ✓

1.2.9 Green computing ✓

1.2.10 Trojan Horse ✓ 1.3.1 False.

Flowchart ✓

1.3.2 True ✓

1.3.3 False

For loop ✓

OR

While loop is a conditional loop

1.3.4 True ✓

1.3.5 True ✓

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| --- | --- | --- | --- | --- | --- |
| **QUESTION 2** | | | |  |  |
| 2.1 | Hardware refers to all the parts of the computer that you can physically touch – the screen, the keyboard, cables and the components inside the computer. | | | ✓ | (1) |
| 2.2 | 2.2.1 | Keyboard, mouse ✓ | |  | (1) |
|  | 2.2.2. | Processor, primary memory✓ | |  | (1) |
|  | 2.2.3 | Monitor✓ | |  | (1) |
| 2.3 | Memory is the place where the computer temporarily stores those sets of instructions and data it is currently working with. Programs and data cannot be processed unless they are temporarily loaded into memory. ✓ | | |  | (1) |
| 2.4 | 2.4.1 | Intel✓ | |  | (1) |
| 2.5 | 1024 GB ✓ | | |  | (1) |
| 2.6 | 2.6.1 | | They are slower than hard disk drives ✓  They are limited in storage capacity✓ |  | (2) |
|  | 2.6.2 | | Small in size – therefore portable, much faster than optical or magnetic storage, ✓  Less likely to be damaged compared to hard drives and optical drives ✓  Larger storage capacity when compared to optical discs  Low cost  Connect to the computer via the USB port.  (any two) |  | (2) |
|  | 2.6.2 | | Universal Serial Bus ✓ |  | (1) |
| 2.7 | * Solid State drives are electronic while magnetic hard drives are mechanical ✓ * SSDs are faster than magnetic hard drives ✓ | | |  | (2) |
| 2.8 | 2.8.1 | It refers to the number of pixels used to form the screen image ✓✓ | |  | (2) |
| 2.9 | 2.9.1 | * System software   Is the software used to manage and control the operation of the computer ✓, Examples operating system ✓, utilities, and device drivers   * Application software   Carries out tasks for computer users, such as allowing them to create documents or play games or update a database. ✓ Examples Word processor ✓, Database, Spreadsheet, games | |  | (4) |
| 2.10 | 2.10.1 | Windows 10 Home ✓ | |  | (1) |
|  | 2.10.2 | * **Provides an interface** for us to interact with the computer and with programs on the computer ✓ * **Process and task management** manages the CPU and how it runs programs ✓ * **Memory management** – manages how programs use the memory ✓ * **Input/output management** manages how programs use the input and output devices * **Disk management** – manages how data is organised on storage devices and how programs access the storage devices.   (any three) | |  | (3) |
|  | 2.10.3 | Proprietary Software. ✓ Windows is software where you have to pay a license fee to be allowed to use the software. ✓ | |  | (2) |
| **TOTAL SECTION B:** | | | |  | **[26]** |

**QUESTION 3**

3.1 Any TWO✓✓

* High level of expertise needed to set it up hence a network administrator needs to be hired.
* High level of security needs to be set up
* Malware can spread easily
* Additional cost of hardware for example cables, router.
* If the network develops a problem it prevents the users from using network resources.
* A central fault in the network such as the server crashing can cause a loss of data.

3.2.1

* Easy to install✓
* Cheap✓

3.2.2 A router makes communication possible between different networks/ Allows access to the Internet.✓

A switch makes communication possible between devices in a network.✓

The school needs both as there will be communication within the LAN as well as online communication via the Internet.✓

3.3.1 Light beams✓

3.3.2 Radio waves✓

3.3.3 Any TWO✓✓

* Relatively complex to install and configure.
* If a section of the cable gets damaged the entire cable has to be replaced as it cannot be repaired.
* Network interfaces and other devices used with this type of cable are expensive to purchase.

3.4.1 A fat client runs most of its applications from its local hard drive and makes little use of network services while a thin client has low specifications and depends almost completely on a server to run applications and store data files. ✓✓

3.4.2 Any TWO✓✓

* E-mail servers
* Internet/Proxy servers
* Print servers

3.4.3 Any THREE✓✓✓

|  |  |
| --- | --- |
| **Peer To Peer LAN** | **Client Server LAN** |
| * All computers function on an equal status and perform the same communication functions | * Each computer is either a client or a server and servers are more powerful than clients and functions differently than clients |
| * No server is necessary | * A server is necessary |
| * All computers have high specifications with large disk capacity and powerful processors | * Only the server is powerful, the rest of the computers do not have large disk capacities and powerful processors |
| * Software is cheaper as it is often built into many operating systems | * A specialized network operating system has to be installed on the server side |
| * Is suitable for a small number of computers | * More suitable for a larger number of computers |
| * Can be installed by a person with reasonably low technical skills and no need for a dedicated network administrator | * Has to be installed by a person with high technical skills and needs a dedicated network administrator |
| * Can have a slow performance | * Faster performance |
| * Security is limited | * Security is far more sophisticated |

3.5.1 Any TWO valid sites:✓✓

* Facebook
* Twitter
* LinkedIn etc

3.5.2 Any TWO✓✓

* Employees spend too much of time on these sites instead of focusing on work
* Abuse of company resources in terms of uploading and downloading large files such as videos and photographs
* To prevent employees from transgressing company policy and ethical codes
* Gossiping about fellow colleagues online/Cyber bullying etc.

3.5.3 Voice over Internet Protocol (VOIP) ✓

3.5.4 Advantage: Any ONE✓

* Save money and time**,** lower costs on business travels and staff training; less time for meetings, training and projects because of improved communication among participants, trainees and teammates.
* One can join a video conference on their laptop, smart phone, iPad or other mobile devices.

Disadvantage: Any ONE ✓

* Although we can use the video conferencing tool to create a virtual face-to-face meeting, it still lacks personal interaction to some extent
* There might be a slight audio delay between responses in different places, even with a fast Internet connection. It makes conversations quite stilted in comparison to the in-person meetings.
* Only a good Internet connection can guarantee a reliable and smooth communication and cooperation, otherwise the bandwidth issue could cause the sound or video to be temporarily lost.
* Technical Problems  
  The major disadvantages are the technical difficulties associated with smooth transmissions that could result from software, hardware or network failure. Remote connections are sometimes known to be hampered by environmental changes.

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| --- | --- | --- | --- | --- |
| **QUESTION 4** | | |  |  |
| 4.1 | Data is raw unprocessed facts, information is the result of the processing of data and should be useful and meaningful ✓✓ | |  | (2) |
| 4.2 | 5MB ✓✓ | |  | (2) |
| 4.3 | 110012 = 1x +0x +0x +1x +1x ✓  = 1+8+16 ✓  = 25 ✓ | |  | (3) |
| 4.4 | 4B2C16  = Cx + 2x + Bx + 4x ✓  =12 + 32 +2816+16384 ✓  =19244 ✓ | |  | (3) |
| 4.5 | |  |  |  | | --- | --- | --- | | 8 | 632 |  | | 8 | 79 | 0 | | 8 | 9 | 7 | | 8 | 1 | 1 | |  | 0 | 1 |   ✓✓  632 = 11708 ✓ | |  | (3) |
| 4.6 | 4.6.1 | A path is the sequence of folders that indicate how to get to a file or where it is stored, and the file name is the single name (with an extension) by which the file is identified.✓✓ |  | (2) |
|  | 4.6.2 | Path - E:\Grade 10 IT\November\ ✓  file name - PractTest1.docx ✓ |  | (2) |
|  | 4.6.3 | Docx ✓ |  | (1) |
|  | 4.6.4 | To identify the type of file ✓, as well as which program should be used to open it. ✓ |  | (2) |
|  | 4.6.5 | The file might become unusable. ✓✓  Windows may no longer recognise the file type and thus not be able to open it. |  | (2) |
|  |  | |  |  |
| **TOTAL SECTION D:** | | |  | **[22]** |

**QUESTION 5**

5.1.1 Any THREE✓✓✓

* One activity per step
* clear, unambiguous instructions
* The algorithm must have a clear beginning and end.
* Completeness-all steps should be formulated as part of the solution.
* All steps must be in the correct order
* No unnecessary steps-all steps must be related to the task at hand.
* Should be as efficient as possible making use of structures like decisions and repetition to make the solution as short as possible.

5.1.2 The algorithm must be able to be interpreted and understood by programmers using any programming language. ✓✓

OR

It is a plan and not the actual solution.

5.1.3.1 The number of people who will be participating in the rating is unknown. ✓✓

5.1**.**3.2 The value of the ticket number is not being changed inside the loop. ✓✓

OR

The ticket number remains the same throughout the algorithm, resulting in step 4 always being true.

5.1.3.3 Input ticket number✓

Between lines 10 and 11✓

5.2.1

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Instr No.*** | ***number*** | ***x*** | ***y*** | ***sJoin*** | ***count*** | ***count < number*** | ***z*** | ***Output*** |
| 1 | 7 |  |  |  |  |  |  |  |
| 2 |  | 0 | 1 |  |  |  |  |  |
| 3 |  |  |  | 0 1 |  |  |  |  |
| 4 |  |  |  |  | 2 |  |  |  |
| 5 |  |  |  |  |  | TRUE |  |  |
| 6 |  |  |  |  |  |  | 1 |  |
| 7 |  |  |  |  | 3 |  |  |  |
| 8 |  |  |  | 0 1 1 |  |  |  |  |
| 9 |  | 1 | 1 |  |  |  |  |  |
| 5 |  |  |  |  |  | TRUE |  |  |
| 6 |  |  |  |  |  |  | 2 |  |
| 7 |  |  |  |  | 4 |  |  |  |
| 8 |  |  |  | 0 1 1 2 |  |  |  |  |
| 9 |  | 1 | 2 |  |  |  |  |  |
| 5 |  |  |  |  |  | TRUE |  |  |
| 6 |  |  |  |  |  |  | 3 |  |
| 7 |  |  |  |  | 5 |  |  |  |
| 8 |  |  |  | 0 1 1 2 3 |  |  |  |  |
| 9 |  | 2 | 3 |  |  |  |  |  |
| 5 |  |  |  |  |  | TRUE |  |  |
| 6 |  |  |  |  |  |  | 5 |  |
| 7 |  |  |  |  | 6 |  |  |  |
| 8 |  |  |  | 0 1 1 2 3 5 |  |  |  |  |
| 9 |  | 3 | 5 |  |  |  |  |  |
| 5 |  |  |  |  |  | TRUE |  |  |
| 6 |  |  |  |  |  |  | 8 |  |
| 7 |  |  |  |  | 7 |  |  |  |
| 8 |  |  |  | 0 1 1 2 3 5 8 |  |  |  |  |
| 9 |  | 5 | 8 |  |  |  |  |  |
| 5 |  |  |  |  |  | FALSE |  |  |
| 10 |  |  |  |  |  |  |  | 0 1 1 2 3 5 8 |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓✓ |

5.2.2 Inputs the number of terms and determines and outputs the Fibonacci sequence.✓✓

5.2.3 0 1 1 2 3 5 8 13 21 34✓✓

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| --- | --- | --- | --- | --- |
| **QUESTION 6** | | |  |  |
| **The demands of a student these days has increased. You need to constantly research information for many projects, download information, print information etc.** | | |  |  |
| 6.1 | 6.1.1 | EULA – End User License Agreement ✓ |  | (1) |
|  | 61.2 | The document is a legally binding contract. You sign it by clicking on the ′*I accept′* button. So afterwards, you cannot hold the company accountable if the software harms your computer. ✓✓ |  | (2) |
| 6.2 | Proprietary software is protected by copyright law. His friend will be breaking the law. He will need to purchase his own license to use the software. ✓✓ | |  | (2) |
| 6.3 | 6.3.1 | Carpel Tunnel Syndrome ✓  Repetitive Strain Injury ✓ |  | (2) |
|  | 6.3.2 | * *Make sure that there is adequate lighting and ventilation* ✓ * *Make use of ergonomically designed furniture / devices* ✓ * *Place your mouse close to the keyboard* * *Adjust the height of your chair so that your elbows can*   *comfortably rest on the desk and your feet can be flat on the*  *ground.*   * *Make sure that your back is properly supported by your chair* * *Sit upright, don’t slouch*   (any two) |  | (2) |
| 6.4 |  | * Switch off computers and other electronic devices when not in use instead of leaving them on standby mode✓ * Dispose of E-waste in a safe manner ✓ * Limit the amount of printing by   Printing on both sides or going paperless - Transfer files electronically✓   * Use energy efficient devices and set up your devices such that power saving options are activated   (any three) |  | (3) |
| 6.5 |  | * Never give out personal details ✓ * Don’t make arrangements to meet someone you chat with online ✓ * Always be aware that the person you are communicating with, may not be who they say they are ✓   (any three valid reasons) |  | (3) |
| 6.6 | Files suddenly start disappearing ✓  The computer slows down dramatically✓  Programs stop working properly ✓  Free space on the computer suddenly gets reduced  The computer no longer boots up | |  | (3) |
| 6.7 | 6.7.1 | Spam refers to the electronic equivalent of junk mail. ✓  or Emails being sent to you in the form of advertising products that you did not request. |  | (1) |
|  | 6.7.2 | Spyware – it is software that tries to monitor and track the way you use your computer. It is installed on the users’ computer without their knowledge. ✓ |  | (1) |
|  | 6.7.3 | A computer worm is malware that is able to distribute itself over a network and reproduce so many times that your computer’s memory/free hard disk space gets used up. ✓ |  | (1) |
| 6.8 | 6.8.1 | Identity theft is when someone steals your personal details such as your ID number, credit card details or driver’s license to commit fraud or another crime ✓✓ |  | (2) |
|  | 6.8.2 | Phishing ✓ |  | (1) |
| 6.9 |  | * Never accept information at face value. Always question what you read. ✓ * Always check the source of information and determine whether it is reliable. ✓ * When people try to legitimise the information by saying it happened to a friend of a friend recognise that this is based on urban legend rather than facts. ✓   any 3 valid ways. |  | (3) |
|  |  | |  |  |

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