Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 11

NOVEMBER 2017

**INFORMATION TECHNOLOGY P2
MARKING GUIDELINE**

MARKS: 150

This marking guideline consists of 10 pages.

QUESTION 1

1.1.1   B ✓   It is very fast compared to RAM. (1)

1.1.2   C ✓   You will increase the level of efficiency (1)

1.1.3   A ✓   a coding error (1)

1.1.4   D ✓   Virtual Private Network (1)

1.1.5   B ✓   HTML5 (1)

1.1.6   D ✓   Images (1)

1.1.7   B ✓   Rich Internet Application (1)

1.1.8   B ✓   Currency (1)

1.1.9   D ✓   Can adapt to user needs and preferences. (1)

1.1.10   B ✓   Capturing and entering data in a database (1)

1.2.1   POST ✓ (1)

1.2.2   RAID ✓ (1)

1.2.3   Streaming ✓ (1)

1.2.4   Field ✓ (1)

1.2.5   Entity Relationship Diagrams (ERD) ✓ (1)

[15]

QUESTION 2

2.1 2.1.1 Intel ✓ (1)

      2.1.2 2.00 GHz ✓ (1)

2.2 2.2.1 Graphic Processing Unit ✓ – This processor processes graphics and videos ✓ (2)

      2.2.2 Fetch, Decode, Execute, Transfer ✓✓✓✓ (4)

2.3 2.3.1 ROM ✓ (1)

      2.3.2 Firmware is software ✓ that is permanently installed on ROM chips used to control the basic operation of a device. ✓ (2)

      2.3.3 Newer features, ✓ Security updates ✓ Bug Fixes ✓ (3)

      2.3.4 Wiping all existing contents and replacing with an updated version. ✓ (1)

2.4 2.4.1 Virtualisation is creating an entity that only exists in software ✓ (1)

      2.4.2 **Step 1** – Install the main operating system ✓
Step 2 – Install the virtual machine software ✓
Step 3 – Install the different operating software on the virtual machine ✓
Step 4 – Install the app on the virtual operating software ✓
Step 5 – Repeat step 3 to 5 many for each operating system you want to test. ✓ (5)

[21]

QUESTION 3

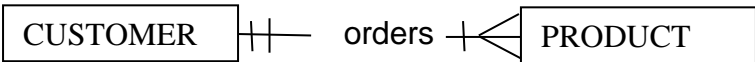3.1   3.1.1   Any TWO of ✓
- To share resources
- To share data
- To communicate
- Entertainment   (2)

        3.1.2   Any TWO of ✓✓
- Purchasing the network cabling and file servers can be expensive.
- Managing a large network is complicated, requires training and a network manager usually needs to be employed.
- If the file server breaks down the files on the file server become inaccessible. E-mail might still work if it is on a separate server. The computers can still be used but are isolated.
- Viruses can spread to other computers throughout a computer network.
- There is a danger of hacking, particularly with wide area networks. Security procedures are needed to prevent such abuse, e.g. a firewall   (2)

        3.1.3   Advantages (any TWO) ✓✓
- Faster speeds
- Reliable
- More secure   (2)

3.2   3.2.1   3G ✓ and ADSL ✓   (2)

        3.2.2   Any ONE of ✓
- WiMax is faster
- WiMax has bigger bandwidth.   (1)

        3.2.3   A Router ✓   (1)

3.3   3.3.1   Voice Over Internet Protocol ✓   (1)

        3.3.2   Any TWO ✓✓
- Skype
- Viber
- Whatsapp call
- Facebook messenger, etc.   (2)

3.4   3.4.1   They generally include (ANY TWO) ✓✓
- A touchscreen interface and
- Multiple sensors such as gps,
- Accelerometer,
- Gyroscope, etc.   (2)

3.4.2   ANY THREE of, ✓✓✓
- Android
- Windows CE
- Windows Mobile
- iOs
- Blackberry OS, etc.   (3)

3.4.3   It refers to software or programs designed to run on portable devices. ✓   (1)

3.4.4   Any TWO of ✓
- They need to transfer less data leading to faster speeds.
- They give users a better interface and more control over what they can do.
- They allow users to receive automatic updates and notifications when content on the web is changed or added.   (2)

3.5   3.5.1   Protocol ✓ A set of rules for encoding and decoding data for transmission across networks ✓   (2)

3.5.2   HTTPS is a protocol used for secure encrypted communication over the internet. ✓   (1)

3.6   3.6.1   RSS is a web or news feed that automatically provides users with updated content or notifications of new content. This content can then be accessed from a central application without having to check each website separately. ✓   (1)

3.6.2   Any ONE of ✓
- To be alerted to new blog entries on blogs that you subscribe to.
- To be informed of items that match the search criteria you have set to track searches on websites such as Google, Bing and Yahoo.
- To keep track of new video clips on YouTube channels that you have subscribed to.
- To be alerted to new music on iTunes.
- To be alerted whenever your name or your company's name pops up in web searches.   (1)

         [26]

QUESTION 4

4.1   4.1.1   (a)   Any ONE of ✓
                       CustomerID, OrderID, ProductID, UnitPrice, Quantity, Total   (1)

              (b)   Any one of ✓ the rows in the table   (1)

              (c)   MyClientsTB ✓   (1)

       4.1.2   The field Total ✓ it can be calculated ✓   (2)

       4.1.3   (a)   It uniquely identifies each record ✓   (1)

              (b)   OrderID ✓   (1)

4.2   4.2.1   (a)   Distributed Databases are very big databases that are spread
                       across servers in different locations. ✓   (1)

              (b)   You just need a small database in an office. ✓   (1)

       4.2.2   A desktop database ✓   (1)

       4.2.3   Any ONE of ✓✓
                • Ms Access
                • Base
                • Filemaker Pro   (1)

       4.2.4   Yes it would be possible. ✓ It allows many people to connect and
               make changes to the database at the same time. ✓   (2)

4.3   •   Inserting or adding of new records. ✓
       •   Deleting records that are no longer required. ✓
       •   Updating or maintaining records to make sure that data is accurate. ✓   (3)

4.4   4.4.1   A relational database containing many tables linked together through
               relationships. ✓   (1)

       4.4.2   Foreign keys are used to link ✓ one table to another table. ✓   (2)

       4.4.3

               A Customer✓ orders✓ Product✓

               CUSTOMER ╫── orders ─┤< PRODUCT

               symbols ✓✓   (5)

                                                                    [24]

QUESTION 5

5.1   5.1.1   It is a variable or an argument that is provided as input to a
                  subroutine. ✓   (1)

        5.1.2   Return means that the function will produce a result. ✓   (1)

        5.1.3   Any acceptable simple function with parameter
                  e.g. StrToInt(); IntToStr()   (1)

        5.1.4   A function returns a value ✓
                  A procedure does not return a value ✓   (2)

        5.1.5   sSurname ← Get Surname ✓
                  sPass ← '' (blank string) ✓
                  i ← length of sSurname ✓
                  Loop from 1 to i ✓
                   If sSurname[i]   ✓ is NOT a vowel ✓
                      sPass ← sPass + SSurname[i]   ✓ (creates new string)
                  end Loop ✓   (8)

5.2   5.2.1   The while loop is used because the length of the file is not initially
                  known. ✓   (1)

        5.2.2   (a)   the reset procedure opens a file given by FileHandle for
                        read   ✓   (1)

                  (b)   The **Append** procedure opens a file given by FileHandle to
                        allow subsequent writes to **add lines** to the end of the
                        file   ✓   (1)

                  (c)   The AssignFile procedure assigns a value to FileHandle for
                        a FileName in preparation for reading or writing to that file✓   (1)

5.3   5.3.1   An array is a data structure that contains a group of variables
                  containing values of the same type. ✓   (1)

        5.3.2   One of the variables in an array. ✓   (1)

        5.3.3

y	x	Index	Result		
			[3]	[2]	[1]
-	5	0	-	-	-
1	2	1	-	-	-
0✓	1✓	2✓	-	0✓	-
1✓	0✓	✓3	1✓	-	-

                                                                                                  (8)
                                                                                                 [25]

QUESTION 6

6.1 6.1.1 An attempt to manipulate or 'con' someone into giving out sensitive personal information/data or installing malware. ✓ (1)

6.1.2 Spoofing ✓ – Using electronic technologies to fool people into believing that the communication is coming from another legitimate person or institution ✓

OR

Phishing Attempts from people, generally employing e-mails to direct people to fake websites, where they are tricked into releasing personal information. (2)

6.1.3 Any TWO of: ✓✓
- Guard your personal information.
- Pay attention to the URL of the website you are on to at least see that its 'legit.'
- Use e-mail and web browser software that has anti-phishing features to warn you of potential phishing threats.
- Any other acceptable answer. (2)

6.2 6.2.1 Location Based Computing ✓ (1)

6.2.2 GPS ✓ or 3G (1)

6.2.3 Advertising/Marketing ✓ – Specific adverts depending on the location of the person can be sent/pushed to the device of the user. ✓ (2)

6.2.4 (a) Basic data used to describe other data. ✓ (2)

(b) Geo tag ✓ (1)

6.3 6.3.1 Internet is a worldwide computer network consisting of computers, devices and networks connecting to other networks. ✓ (1)

6.3.2 IPTV: Delivers traditional television broadcasts over the internet ✓ It is scheduled just like normal TV. ✓

VOD: Viewers watch content or programs on demand✓ Similar to a catch up service. ✓ (4)

6.4 6.4.1 End-user Acceptable Use Policy documents outline the rights and responsibilities of users on a network. ✓ (1)

6.4.2   Any TWO of ✓✓
- A code of conduct educating users and governing their behaviour when using the network or internet.
- Details on where and when portable media such as flash drives may be used.
- Details on restrictions on installing or uninstalling software.
- Clear consequences of violating conditions spelt out in the document.
- Any other acceptable aspect.   (2)

6.4.3   The network managers need to monitor what users do on the network. ✓ When violations a detected, take clear, visible action against the offender. ✓   (2)

6.5   6.5.1   Any THREE of✓✓✓
- Have software programming skills
- Have graphic design skills
- Have creativity and imagination
- Keep up to date with the advances in computer technology   (3)

6.5.2   Any TWO of✓✓
- Produce new content and write it in an interesting way
- Source artwork and images to be used
- Maintain ad update the website regularly   (2)

6.5.3   No. He/she will have to learn some web programming or graphic design skills✓

<div align="center">**OR**</div>

Yes, most web authors have these skills already before becoming authors.   (2)

6.6   6.6.1   Any TWO of✓✓
- Poorly written and designed software systems
- Information overload and the need to verify information
- Profitability
- Availability of skilled people
- Poor support infrastructure
- Limiting government policies   (2)

6.6.2   Any TWO of✓✓✓
- Improving and enhancing the ability to communicate
- Automating repetitive tasks
- Collecting and mining data at an incredibly large scale
- Increasing awareness
- Making stores of information readily available   (3)

6.7   6.7.1   Crowd-funding refers to situations where groups of people pool their money together, often via the Internet and organisations like Kickstarter ✓who then use this money for projects they feel have merit. ✓   (2)

6.7.2   Any THREE of ✓✓✓
- The effective exchange of information,
- Global trade
- Immigration
- Critical technologies such as communications and transport (especially air transport).   (3)

[39]

TOTAL: **150**