KZN DEPARTMENT OF EDUCATION

GREENBURY SECONDARY SCHOOL

SEPTEMBER CONTROL TEST

INFORMATION TECHNOLOGY

GRADE 10

Date: 30 – 09 – 2015

DURATION: 1½ HOURS   MARKS: 60

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INSTRUCTIONS:

1. Answer **ALL** Questions.

2. This paper consists of **4** questions and **6** pages including the cover page.

3. Number your answers exactly as the numbering in the question paper.

4. Read **ALL** the questions carefully. Do not do more than is required by the question.

5. Write clear and concise answers.

6. Use the mark guideline as an indicator to the number of points to write.

QUESTION ONE – { Multiple Choice }

1.1. A service that allows you access to your e-mails by using software such as MS Outlook or Outlook Express.

    A) SMTP   B) web-based e-mail
    C) ISP-based e-mail   D) gmail

1.2. The total amount of data that can be carried from one point to another in a given time period is called_____.

    A) Bandwidth   B) Broadband
    C) ADSL   D) CAP

1.3. A built in connection to another webpage.

    A) ICON   B) Website
    C) Hyperlink   D) TAB

1.4. A numerical address that uniquely identifies a computer either on a network or the internet.

    A) URL   B) IP Adress
    C) WebID   D) Serial number

1.5. An _____is a network where access is provided to the organisations' private network to users from outside the organisation.

A) Internet   B) Intranet
C) GAN   D) Extranet

1.6. Also called a base station, consists of a sender/receiver (transceiver) and an antenna Which transmits and receives radio signals so that the devices that have a wireless network card are able to communicate with the rest of network.

A) MODEM   B) Access point
C) Router   D) Server

1.7. A_____ refers to a Web site or service that offers a broad array of resources and services, such as e-mail, forums, search engines, and online shopping malls.

A) Portal   B) Social media site
C) Weblog   D) Wiki

1.8. A _____is a website or web application that gathers different web content from many different on-line sources.

A) Web Application website   B) News website
C) Content aggregator   D) Cloud

1.9. A computer with full CPU, memory, backing storage and local software connected to a Network using a Server-Client setup.

A) Server   B) Fat client
C) Host   D) Peer

1.10. _____ is an internet service which can provide on-line applications, store data on-line
and in a recent trend provide hardware for use on-line.

A) Cloud computing   B) Interactive processing
C) Batch processing   D) Caching

[10]

QUESTION TWO

Match the statements in 2.1. to 2.10. with the letter of the phrase or term in column B.

COLUMN A	COLUMN B
2.1. An area where wireless internet connectivity is made available to users with a password.	A. Thin Client
2.2. Provides emergency power during a power failure.	B. Pharming
2.3. A website that allows people to create and edit web content collaboratively.	C. Bluetooth
2.4. Magnetic fields in two wires that interfere with each other.	D. EMI
2.5. Wireless data transfer used over short distances with relatively small files.	E. RFID
2.6. An electronic signal that interferes with a normal network signal.	F. Attenuation
2.7. A computer on a network with reduced CPU, memory and storage.	G. HTTP
2.8. Type of communication media that is completely immune to eavesdropping.	H. Hot Spot
2.9. The loss of signal strength over increasing distance.	I. Firewall
2.10. Software that hides your computer from other's and denies certain programs access to internet.	J. Crosstalk
	K. Wiki
	L. UPS
	M. Fibre Optics

[10 ÷ 2 = 5]

QUESTION THREE

Your expertise in I.T. is required to help the administration manager of a local SPCA,
Mr.Peter Parker, to solve hardware, software and network-related problems. They have
six offices all within a radius of about 100 square metres.

3.1. Mr Parker wants to link the ten computers at headquarters which has five
different offices. They chose to go with Ethernet LAN standard in a ring
topology using fibre optic cables.

3.1.1. Briefly describe the terms below:

    a) WLAN (1)
    b) Topology (1)

3.1.2. State two advantages of having a network of computers to the organisation. (2)

3.1.3. Explain to Mr Parker why a wireless network is not feasible in this situation. State two reasons. (2)

3.1.4. Explain the purpose of a switch in the network. (2)

3.1.5. State two advantages of having centralisation of data. (2)

3.2. Mr Parker was told to setup a ring topology in the LAN at the SPCA.

3.2.1. What is a disadvantage of ring topology? (1)
3.2.2. Draw a diagram to illustrate what a ring topology looks like. Show how the computers will be connected as well as the flow of data. (2)

3.3. Mr Parker was told to setup email accounts for all his staff. Explain the following e-mail concepts to Mr Parker.

3.3.1. Cc (1)
3.3.2. Bcc (1)
3.3.3. What is the accepted limit of an e-mail attachment? How would you overcome the issue of sending a larger e-mail attachment. (2)

3.4. Define the terms below:

3.4.1. Netiquette (1)
3.4.2. Twitter (1)
3.4.3. WAP (1)

[20]

Question Four

Study the scratch program below and answer the questions that follow:

```
when [flag] clicked
ask [ENTER A SENTENCE] and wait
set [count] to [1]
set [sent] to [answer]
set [spaces] to [0]
repeat until < count = length of sent >
    if < letter count of sent = [ ] >
        change [spaces] by [1]
    change [count] by [1]
say join [         4.2.         ] [spaces + 1] for [2] secs
```

4.1. Determine the output for the input values:

4.1.1. sent = School is fun when its closed. (1)

4.1.2. sent = I don't like cold-Mondays. (1)

4.2. Write the statement that is missing in the code for 4.2. (1)

4.3. What is the purpose of the code above? (2)

4.4. Write down, from the code, the three steps of the iteration structre. (3)

4.5. A list is given to you as shown below:

Jay	Rodney	Patrick	Molly	Sharon	Leona	Rody	Rene

You are required to write algorithm to show Mr Parker the steps he would perform search for a specific input name in the above list. Your algorithm must show the search value(Entered by user) and stored in a variable sName. The loop variable is called loop and the list above should be called NameList.

(8)

4.6. The Scratch code below is designed to move duplicate elements to the end of a list. The missing pieces of the code have been removed and replaced by the letters (a) to (i). The missing pieces of code is labelled [1] to [9] on the right of the scratch code. Examine the code and complete the missing values (a) to (i) by writing only the number [1] to [9] that matches the letter found in the code.

Example:

(a) [4]

(b) [1] etc

```
when [flag] clicked
delete (all▼) of (NumList)
ask (How many numbers do you have?) and wait
set (size) to (a)
repeat (size)
    ask (ENTER A NUMBER) and wait
    add (answer) to (NumList)
set (i▼) to (1)
repeat until (b)
    set (j▼) to (c)
    repeat until (d)
        if <(item (e) of (NumList)) = (item (j) of (NumList))>
            set (k▼) to (j)
            repeat until (f)
                replace item (k) of (NumList) with (g)
                change (k▼) by (1)
            replace item (last▼) of (NumList) with (h)
        change (j▼) by (1)
    change (i▼) by (1)
```

[1] (item (k + 1) of (NumList))

[2] <(k > size - 1)>

[3] (item (j) of (NumList))

[4] (j)

[5] <(i > size - 1)>

[6] <(j > size)>

[7] (i)

[8] (answer)

[9] (i + 1)

(9)

[25]

TOTAL = 60

Q.1 (10)

1.1. C
1.2. A
1.3. C
1.4. B
1.5. D
1.6. B
1.7. A
1.8. C
1.9. B
1.10. A

Q.2 (10)

2.1. H
2.2. L
2.3. K
2.4. J
2.5. C
2.6. D
2.7. A
2.8. M
2.9. F
2.10. I

Q3.

3.1.1.a) WLAN - A type of LAN That does not use any Cables (Wireless LAN)
b) Topology - physical layout of Computers in a network

3.1.3. - SPCA IS FUNDED BY SPONSORS AND wireless is expensive
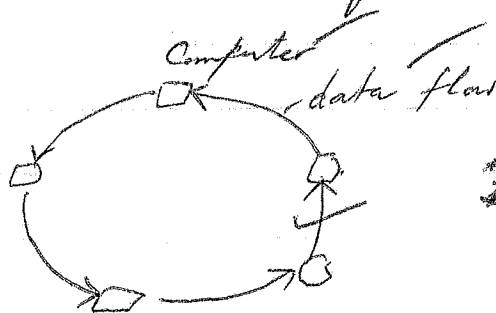- Security - open to Hackers / infiltration.   2

3.1.2. - Easy transfer - quick   2
- Sharing devices / Software..

3.1.4. A Device Used to Manage Network Collisions and to   2
act as a physical Connection point for Network Cabling.

3.1.5. - Easy to Maintain integrity of data (It doesn't become outdated)
- Allow others to access and use files on your Computer
- Reduce likelihood of having duplicates   2

3.2.1. - If one Computer shuts down others Wont work
- Must pass all IC's before it to get to last elents

3.2.2.

Computer
data flow

2

3.3.1. Cc – Carbon/Courtesy Copy – All Names Visible to others

3.3.2. BCC – Blind CC – Copy sent Addresses Not Visible in TO &
cc fields

3.3.3. 2MB – ·ZIP – Compress – WINZIP.   2

Q.4.

4.1.1. No. Words is 6 ✓✓   2

4.1.2. No. Words is 4. ✓✓   2

4.2. The Number of Words is. ✓   2

4.3. Inputs a Sentence and displays the Number of Words?

4.4. initialize – Count = 1, Set Count to 1 ✓

increment – change Count by 1 ✓

Until Count = length of Sent. ✓   3

4.5.) 1) Start

2) Enter Name you Searching for (SNAME) —

3) Set Count ← 1 ✓

4) Set found ← False ✓   12
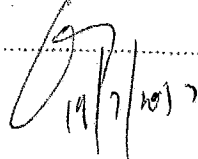
5) Repeat Until – found = true or count > Name list(size)

{ if (SNAME = Name list [C] ✓

{ Found = true;

}

}

c ← c+1; ✓

}