



**Tertiary and Vocational Education Commission**  
**Knowledge Assessment – March/ April 2021**  
**Information and Communication Technology Technician**  
**National Vocational Qualification – Level 04**



**Time: 03 Hours**

**Instructions for the Candidates**

- This question Paper Consists of two parts namely Part 1 & Part 2
  - This question Paper also includes Multiple Choice Questions and short answer questions
  - Part 1 - Choose the most suitable answer from the given four answers of each questions and mark as "X" in the appropriate places of the answer sheet given separately.
  - Answer all the questions in Part 2 in the space given in the same paper.
  - This question paper consists of 14 pages.
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**Part 1**

1. Which of the following is an Operating System?
  - a. Microsoft Word
  - b. Microsoft Excel
  - c. Microsoft Access
  - d. Microsoft Windows
  
2. What is the correct order that starting with the smallest unit first and going down to the largest unit?  
(i) Kilobyte      (ii) Byte      (iii) Megabyte      (iv) Terabyte      (v) Gigabyte      (vi) Bit
  - a. vi, ii, i, iii, iv, v
  - b. vi, ii, i, iv, v, iii
  - c. vi, ii, i, iii, v, iv
  - d. vi, ii, i, iv, iii, v
  
3. With regard to computer memory, which of the following statement(s) is/are TRUE?  
P: Read Only Memory (ROM) is "Volatile" memory  
Q: Random Access Memory (RAM) is "Volatile" memory  
R: Secondary Memory is "Volatile" memory
  - a. P only
  - b. Q only
  - c. P and Q only
  - d. P and R only

4. What is the feature of MS Office that saves the document automatically after certain interval?
  - a. Save
  - b. Save As
  - c. Auto Save
  - d. Backup
5. Which feature is used to make selected sentence to **All Capital Letters or All Small Letters**?
  - a. Change Letter
  - b. Change Case
  - c. Change Sentence
  - d. Change Word
6. How MS Word will respond in repeated word?
  - a. Green wavy line under the repeated word
  - b. Red wavy line under the repeated word
  - c. A Blue wavy line under the repeated word
  - d. None of above
7. Which place in an Excel window allows entering values and formulas?
  - a. Title Bar
  - b. Menu Bar
  - c. Formula Bar
  - d. Standard Tool Bar
8. Which symbol is used to start formula in Excel?
  - a. /
  - b. \*
  - c. \$
  - d. =
9. If the cell C5 is 59, what will this IF function gives you as a result?  
IF (C5>75, "Pass", "Fail")
  - a. Pass
  - b. Fail
  - c. 59
  - d. 75
10. What is the feature that allows to view slides in a slide show without manually changing slides?
  - a. adding build effect
  - b. setting slide time
  - c. adding transition
  - d. adding bullets

11. What is the difference between Slide Design and Auto Content Wizard?
- There is no difference
  - AutoContent Wizard is just the wizard version of Slide Design
  - Slide Design asks your choice in steps but Auto Content Wizard does not let you make choices
  - Slide Design does not provide sample content but Auto Content Wizard provides sample content too
12. Which object in Microsoft Access database, is used to extract specific information based on specific criteria?
- Query Object
  - Table Object
  - Report Object
  - Form Object
13. How do you define **One-to-One Relationship** in Microsoft Access database?
- A relationship where one record in one table can be related to one or more records in another table.
  - A relationship where one or more records in one table can be related to one or more records in another table.
  - A relationship where one record in one table can be related to exactly one record in another table.
  - A relationship where one or more records in one table can be related to one record in another table.
14. What do you call a primary key field included in another table?
- Foreign key
  - Parent key
  - Child key
  - Index
15. What is the memo data type field used for?
- To add table
  - To store objects created in other programs
  - For long text entries
  - For short text entries of no more than 255 characters
16. What is the meaning of "www" in URL?
- work while web
  - word wide web
  - work with web
  - world wide web

17. By considering following email fields, which of the email addresses will "saman" be able to see when he receives the message?

To: info@slt.lk

Cc: nimal@gmail.com;kamal@yahoo.com

Bcc: saman@mail.com;ad@yahoo.uk

- a. info@slt.lk
- b. info@slt.lk; nimal@gmail.com; kamal@yahoo.com
- c. info@slt.lk; ad@yahoo.uk
- d. info@slt.lk; ad@yahoo.uk; nimal@gmail.com; [kamal@yahoo.com](mailto:kamal@yahoo.com)

18. What is the correct IP address?

- a. 202.265.55.2
- b. 192.300.256.10
- c. 202.100.20.148
- d. 172-100-258-2

19. A distributed network configuration in which all data/information pass through a central computer is

- a. bus network
- b. star network
- c. ring network
- d. Point-to-point network

20. Which one of the following **is not** an image/graphic file format?

- a. PNG
- b. GIF
- c. BMP
- d. GUI

21. Bitmap image is also known as.....

- a. Vector Images
- b. Picture
- c. Photo
- d. Raster Images

22. Internet Explorer (IE) is a type of.....

- a. Operating System
- b. Browser
- c. Compiler
- d. IP address

23. What is the usage of HTML?
- to create machine language program
  - to create high level program
  - to create web server
  - to create web page
24. You were asked to create a hyperlink for "About NVQ" word, by using URL:"http://www.nvq.gov.lk". What is the correct format of following codes?
- `<a href="About NVQ">http://www.nvq.gov.lk</a>`
  - `<a href="http://www.nvq.gov.lk">About NVQ</a>`
  - `<a href="http://www.nvq.gov.lk" alt="About NVQ"></a>`
  - `<a src="http://www.nvq.gov.lk">About NVQ</a>`
25. Consider following two statements regarding computer programming
- It is possible to use reserved words in computer programming language as variable names.
  - It is possible to assign different values for variables in different situation.
- What is the correct answer with reading above statements?
- (i) is correct
  - (ii) is correct
  - (i) and (ii) both are correct
  - (i) and (ii) both are incorrect
26. Which of the following is the most important phase of SDLC?
- Requirements analysis
  - Design
  - Testing
  - Coding
27. The \_\_\_\_\_ symbol is used to represent process in flowchart.
- Circle
  - Rectangle
  - Diamond
  - None of these
28. What is the advantage of array?
- Objects of mixed data types can be stored
  - Elements in an array cannot be sorted
  - Index of first element of an array is 1
  - Easier to store elements of same data type

29. Resolving errors in a program is known as...

- a. Debugging
- b. Re-fixing Error
- c. Checking
- d. Problem Solving

30. Consider following Pseudo code program;

```
READ a, b, c
value =0
IF (a>b) THEN
    IF (a<c) THEN
        value=a
    ELSE
        value=c
    ENDIF
ENDIF
DISPLAY value
```

If you enter values for a=40, b=25, c=65, what is the output value?

- a. 0
- b. 25
- c. 40
- d. 65

(1 × 30 = 30 Marks)

## Part 2

## Answer all Questions

1. What is an Operating System? Give two examples for operating systems (03 Marks)
2. When your computer is running slow, how do you improve the speed of the computer? Give five(05) solutions (05 Marks)
3. What are differences between **Search Engine** and **Web Browser**? Give two examples for each (04 Marks)

Search Engine	Web Brower
<b>Examples:</b>	<b>Examples:</b>

4. Library system is used following tables which are created by using MS Access database. Answer following questions based on these tables.

Table name: **Library\_User**

First_Name	Last_Name	Member_ID	Date_of_Join	Member_Status
Nimal	Jayaweera	M0001	20/05/2018	Active
Sunil	De Silva	M0002	10/07/2017	Active
Kamal	Jayaweera	M0003	12/09/2019	Active
Nilanthi	Perera	M0004	02/05/2012	Inactive
Niluka	Jayathilake	M0005	15/10/2018	Active
Kamal	Gamage	M0006	25/07/2018	Active

Table name: **Books**

Book_ID	Title	Status
B0001	Mastering Bit coin	Reserved
B0002	The Second Machine Age	Reserved
B0003	The Art of Computer Programming	Not
B0004	Computer Networking	Reserved
B0005	Windows Server 2008 Administrators	Not

Table name: **Reservation**

Rev_ID	Member_ID	Date	Book_ID
R001	M0001	02/07/2020	B0001
R002	M0003	13/04/2020	B0002
R003	M0006	22/05/2020	B0004

- 4.1 Identify the primary key field of the each table

(03 Marks)

Table name	Primary key field
Library_User	
Books	
Reservation	

- 4.2 Give one example for **foreign key**. Write down table name and the key field (01 Marks)



4.3 What is the title of the book which is reserved by **Kamal Jayaweera**? (03 Marks)

4.4 Write a SQL quarry to display “Reserved” books. (03 Marks)

5. What are the benefits of primary key in database? Give four (04) benefits. (04 Marks)

6. Consider following excel sheet to answer following questions

	A	B	C	D	E	F	G	H	I
1	Index	Name	Subject 1	Subject 2	Subject 3	Total	Average	Grade	Rank
2	ST0001	Nimal	55	62	78	195	65.00	B	5
3	ST0002	Saman	45	75	56	176	58.67	C	7
4	ST0003	Kamal	66	52	76	194	64.67	B	6
5	ST0004	Nilantha	72	59	80	211	70.33	B	3
6	ST0005	Kumari	42	75	51	168	56.00	C	8
7	ST0006	Nemalie	88	54	65	207	69.00	B	4
8	ST0007	Ajith	40	64	42	146	48.67	D	10
9	ST0008	Nuwan	86	82	70	238	79.33	A	1
10	ST0009	Sumith	50	66	52	168	56.00	C	8
11	ST0010	Jayantha	76	80	59	215	71.67	B	2

**Grade Calculation:**      Average > 75 ---> A  
Average <= 75 AND Average >60 ---> B  
Average <= 60 AND Average >50 ---> C  
Average Less than or equal 50 ----> D

6.1 Write a formula to calculate total marks of the three subjects in cell **F2**. This formula can be used to calculate total marks of the other students by copying the formula in cell F2 to F11. (01 Marks)

6.2 Write a formula to calculate average marks of the three subjects in cell **G2**. This formula can be used to calculate total marks of the other students by copying the formula in cell G2 to G11. (01 Marks)

6.3 Write a formula to calculate the grade by using above **grade calculation ranges**. (03 Marks)

6.4 Write a formula to rank the students based on their average marks. Rank should be in Descending order. (03 Marks)

7. Why we used absolute cell reference in MS Excel. Give example for absolute cell reference. (03 Marks)

8. What is the difference between vector and raster graphics? Give three (03) differences (03 Marks)

<b>Raster</b>	<b>Vector</b>

9. Briefly describe the following terms related to computer networking (06 Marks)
- 9.1 IP Address

9.2 “IPconfig” command

9.3 “Ping” command

10. Write down the colour code which is used for **End point 2** of the network cable to make crossover network cable. (04 Marks)

End point 1		End point 2	
1	White - Orange	1	
2	Orange	2	
3	White - Green	3	
4	Blue	4	
5	White - Blue	5	
6	Green	6	
7	White - Brown	7	
8	Brown	8	

11. By considering following web page, you have to fill missing HTML tags in the given HTML script (10 Marks)

## Drones Work And What Is Drone Technology



**UAV drone technology is constantly evolving as new innovation and big investment**

Dorne Sensors	Drone Components
1. Vision Sensor	• Motor Stator
2. Ultrasonic	• Windings
3. Infrared	• Bearings
4. Lidar	• Cooling System
5. Time of Flight (ToF)	• Electronic Speed Controllers
6. Monocular Vision	• ESC Updater
	• Propellers

**More about Drone Technology you have to visit: [Drone Zone](#)**

```

<HTML>
< ..... >
<Title>Drone Technology</title>
</ .....>
<Body>
<Center><h3>Drones Work and What Is Drone Technology</h3></center>
<Center><..... src="Drone.jpg" width="300" height="180"></center>
<.....><center><h3>UAV drone technology is constantly evolving as new
innovation and big investment </h3><center></.....>
<table border="4" align="center">
<.....><.....>Drone Sensors</th><th>Drone
Components</.....></.....>
<.....>
  <.....>
    <.....>
      <li>Vision Sensor</li>
      <li>Ultrasonic</li>
      <li>Infrared</li>
      <li>Lidar</li>
      <li>Time of Flight (ToF)</li>
      <li>Monocular Vision</li>
    </.....>
  </.....>
  <.....>
    <.....>
      <li>Motor Stator</li>
      <li>Windings</li>
      <li>Bearings</li>
      <li>Cooling System</li>
      <li>Electronic Speed Controllers</li>
      <li>ESC Updater</li>
      <li>Propellers</li>
    <.....>
  </.....>
</.....>
</table>
<center><h3>More about Drone Technology you have to visit: <a
.....="https://www.dronezon.com/"> Drone Zone</a></h1></center>
</body>
</HTML>

```

12. Briefly explain following terms in related to computer programming

(06 Marks)

a) Syntax error

b) Variables

c) Flowchart

13. Draw a flow chart to determine, whether given number N is Even or Odd.

(04 Marks)