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**Provincial Department of Education - NWP**

දෙවන වාර පරීක්ෂණය – **11 ශ්‍රේණිය** – 2023
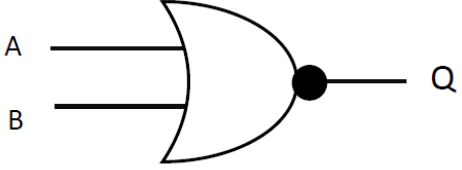**Second Term Test - Grade 11 - 2023**

**Information and Communication Technology I** | **01 hour**

**Index No.**

● **Answer all the questions.**

01. Consider a situation when you go to get fuel using QR code at a filling station. The employee of the filing station scans the customer's QR code on his mobile phone and checks the amount of fuel related to his quota and delivers the fuel. After the given amount of fuel is marked, the customer received a short message indicating the given amount of fuel and the remaining amount of fuel. Which of the following answers can be considered as a data processing including in this process?

    (1) Scanning the QR code by mobile phone.

    (2) Receiving a text message on the phone.

    (3) Acess the database and finding the record related to the QR code.

    (4) Marking the given amount of fuel.

02. Which of the following answers showing only the essential devices for an online video conference conducted over the internet?

    (1) A computer, a mobile phone, an internet connection

    (2) An internet connection, a computer, a microphone, a web camera

    (3) A microphone, a web camera, a computer, a mobile phone

    (4) A mobile phone, an internet connection, a computer, a microphone, a web camera

03. Which of the following answers does not belong to either an input device or an output device ?

    (1) CRT Monitor    (2) Main Memory    (3) Scanner    (4) Light Pen

04. Consider the following E-government services.

    A. Loan facilities to government employees.    B. Visa facilities and constitutions

    C. Gazettes and circulars

    Among the above services, which answer includes the services provided by the government to employees?

    (1) A only    (2) B only    (3) A and C only    (4) All A, B and C

05. Instead of using a computer connecting to a network from one place, small portable computers were used by connecting to internet wirelessly from anywhere. Not only that, computers that were capable of recognizing letters and sounds have also been emerged. During this period, the invention of machines with artificial intelligent also took place.

    Which of the following computer generations matches the above paragraph?

    (1) First Generation      (2) Fourth Generation

    (3) Third Generation      (4) Fifth Generation

06. What is the correct answer when input devices in a computer system is indicated with their access speed to the central processing unit in ascending order
    (1) Main Memory, Cache memory, Register memory.
    (2) Register memory, Main Memory, Cache memory
    (3) Cache memory, Register memory, Main Memory
    (4) Register memory, Cache memory, Main Memory

07. As computers are connected to a centralized device by a single cable, breakdown of one computer does not affect the whole network which of the following network topologies matches with this statement?
    (1) Star topology　　(2) Bus topology　　(3) Mesh topology　　(4) Tree topology

08. Which of the following answers represents the Decimal 80310 in BCD code system?
    (1) $100000100011_{BCD}$ (2) $100000000011_{BCD}$ (3) $100000100111_{BCD}$ (4) $110000100101_{BCD}$

09. If the binary representation of Character **'C'** in ASCII code is 1000011, which character represents the binary 1000111 in ASCII code system?
    (1) G　　　　　　(2) G　　　　　　(3) E　　　　　　(4) H

10. Which of the following statements is correct regarding these two numbers? (A) $A9_{16}$ and (B) $10011111_{2}$
    (1) Number (A) is smaller than number (B)　　(2) Number (A) is larger than number (B)
    (3) Both numbers have same value　　　　　　(4) The value of both the numbers is 169

11. What is the answer when decimal 25510 is converted to a binary number?
    (1) $10101010_{2}$　　(2) $11111111_{2}$　　(3) $111001000_{2}$　　(4) $100000000_{2}$

12. What is the logic gate which consists of this truth table?
    (1) AND Gate
    (2) NOR Gate
    (3) NAND Gate

    (4) OR Gate

| Input | | Output |
|---|---|---|
| X | Y | F |
| 0 | 0 | 1 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 0 |

13. Consider the following logic gate. When the value of A is 1 then what could be definite value of 'Q' output?
    (1) O　　　　　　　(2) A
    (3) B　　　　　　　(4) I

14. Which of the following answers is correct regarding the process of booting the computer after turning on the main switch of the computer?
    (1) After power-up, the self-test (POST) is run and then system files (MBR) are loaded into Random Access Memory (Main Memory)
    (2) System files (MBR) are loaded into Random Access Memory (Main Memory) and Self-Test (POST) is run after the power-up
    (3) After power-up, Self-Test (POST) and loading the system files (MBR) into Random Access Memory (Main Memory) occur simultaneously.
    (4) After power-up only Self-Test (POST) is run and boot the computer.

15. Which of the following answers includes an operating system , language translator and utility software respectively?

    (1) Linux, Compiler, Task Manager
    (2) Task Manager" Linux, Compiler
    (3) Windows, Task Manager" Interpreter
    (4) Task Manager" Linux ,Compiler

16. What is the answer when the facilities in a word processing software are used for changing the font size and correcting grammatical errors that is shown respectively?

    (1) Auto Correct & Change Case
    (2) Formatting & Mail merge
    (3) Font Size & Change Case
    (4) Font Size & Auto correct

17. What are the shortcut keys used to replace words and add a hyperlink in a word processing software ?

    (1) Ctrl+K and Ctrl+H
    (2) Ctrl+H and Ctrl+K
    (3) Ctrl+K and Ctrl+R
    (4) Ctrl+R and Ctrl+K

18. Which of the following is the answer that shows only correct formulas out of the given spreadsheet formulas ?

    A = MAX (B2:B6)                    B = MAX (B2:B6, C2,C3:C6)
    C = MAX(B2+B3,B4+B5,D6)

    (1) A only     (2) A and B only     (3) B and C only     (4) All A,B and C

19. Which of the following indicates a function that both word processing software and presentation software can perform?

    (1) Adding animations to objects
    (2) Mail Merge facility
    (3) Setting the order of displaying the slides
    (4) Adding Hyperlinks

20. In the following spreadsheet the formula =A$1*$B1 is entered in cell 'C1'when this formula is copied into cell 'C3' What could be in cell 'C3'

    |   | A | B | C |
    |---|---|----|-----|
    | 1 | 5 | 20 | 100 |
    | 2 | 6 | 30 |     |
    | 3 | 7 | 40 |     |

    (1) 150          (2) 280          (3) 140          (4) 200

21. If the function = COUNT(A2:C2,A3:C3) is entered in the cell 'C6' in following spreadsheet ,what could be the answer ?

    |   | A | B | C |
    |---|----|----|-----|
    | 1 | 60 | 70 | 25 |
    | 2 | 63 | 75 | NO |
    | 3 | 65 | 20 |    |

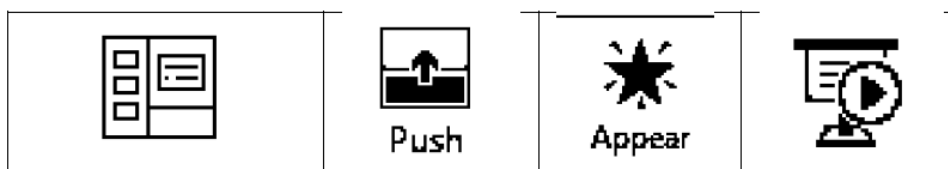    (1) 6          (2) 4          (3) 5          (4) 2

(03)

**To answer questions from 22 to 24.use the information given in incomplete tables of a database prepared by the ICT teacher at the school to give out tabs**

| Tab table | | |
|---|---|---|
| **Tab_No** | **Brand** | **Type** |
| T1 | Lenovo | Teacher |
| S1 | Lenovo | Student |
| S2 | Asus | Student |
| S3 | Lenovo | Student |

| Teacher table | | |
|---|---|---|
| **Techer_No** | **Teacher_Name** | **Subject** |
| 0102 | Kelum | Sinhala |
| 0103 | Nayana | History |
| 0104 | Senaviratne | ICT |
| 0105 | Bandara | Science |

| Tab_Teacher table | | | |
|---|---|---|---|
| **Tab_No** | **Teacher_No** | **Grade** | **Date** |
| S2 | 0105 | 6A | 2023/08/01 |
| S1 | 0106 | 7B | 2023/08/02 |
| T5 | 0105 | 6A | 2023/08/01 |
| S2 | 0107 | 10B | 2023/08/04 |

22. which of the following answers that indicates two foreign keys found in this database.?
    (1) In Tab-Teacher table Tab_No and Grade
    (2) In Tab table Tab_No and In Teacher table Techer_No
    (3) In Teacher table, Techer_Name and in Tab table, Tab_No
    (4) In Tab table, Tab_No and Techer_No

23. The answer when the number of fields and the number of records in Tab- Teacher table are shown respectively is,
    (1) 4, 3        (2) 3, 4        (3) 4, 4        (4) 3, 5

24. If a new teacher named Kumarasiri gets a Tab computer named S3,for teaching Grade 10, which table/tables should be updated to keep the details about it.
    (1) Tab table                  (2) Tab table and Teacher table
    (3) Tab-Teacher table and Teacher table    (4) Tab-Teacher table and Tab table

25. Consider the following statements regarding relational data base. which of the following answers that contain only the correct statements.
    A - Data duplication can occur.        B - Efficiency of the database is high.
    C - Possibility to get inaccurate data is low.
    (1) A only      (2) A and B only      (3) B and C only      (4) All A,B and C

26. Which of the following answers has got the correct sequence of tasks performed by the tools of a presentation software?

(1)  Normal view "Animation, Slide Transition, Slide Show

(2)  Normal view " Slide Transition "Animation, Slide Show

(3)  Animation, Slide Show" Normal view"Animation

(4)  Slide Show" Animation, Slide Transition" Normal view

27.  Which of the following actions can be used to move to the next slide in slide show

A   Using Enter key .

B   Pressing the letter N on the keyboard

C   Pressing the Page Down key

(1)  A only           (2)  A and B only        (3)  B and C only         (4)  All A, B and C

28.  What is the correct answer when the following internet related protocols are matched with the protocols description and the protocols denoted from A to D.
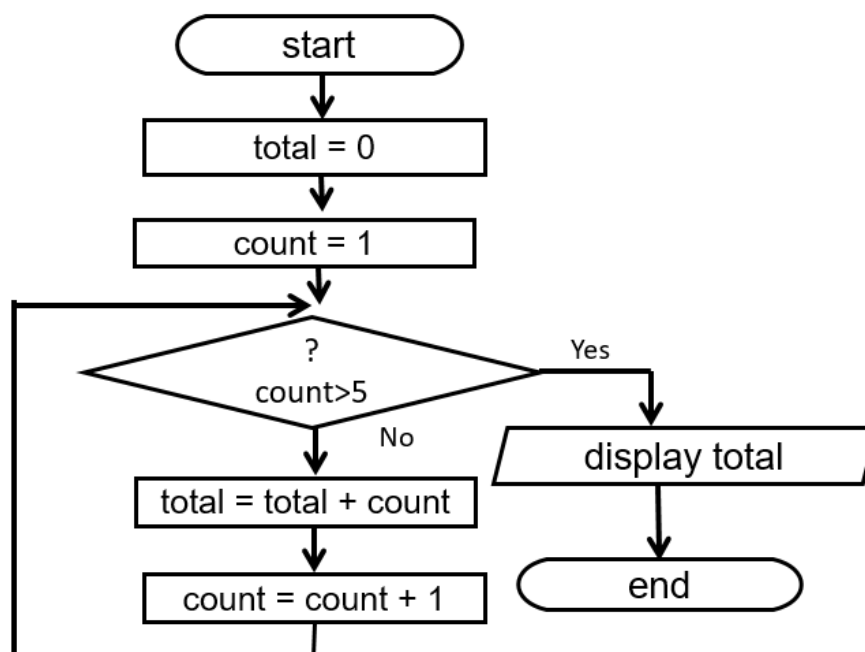
| Protocols Description | Protocol |
|---|---|
| Controls the exchange of E-mails | A  HTTP |
| Controls the exchange of web sites | B  ICMP |
| Controls the exchange of large files | C  SMTP |
| Controls the exchange of error messages | D  FTP |

(1)  C, A, B, D           (2)  C, A, D, B           (3)   B, D, A, C           (4)  B, C, D, A

29.  Which of the following E-mail addresses has got errors?

(1)   saman.kumara@gmail.com                (2)   kelum_23451@hotmail.com

(3)   www.pathira_siri.gmail.com              (4)   nelumKumari75@ymail.com

30.  Under which service in cloud computing matches the giving the client the opportunity to save the required data in a server computer on the internet and providing various services through it.

(1)   Platform as a service(PaaS)              (2)   Infrastructure as a service (IaaS)

(3)   Software as a service (SaaS)             (4)   Visibility as a service. (VaaS)

31.  Which one is the correct answer when the parts labelled  A,B,C,D are listed  in order  in the following Uniform Resource Locator.



(1) Domain Name, Top level Domain, Resource, Protocol

(2) Protocol, Domain Name,Top level Domain,Resource

(3) Protocol, Top level Domain,Domain Name,Resource

(4) Top level Domain,Domain Name,Resource, Protocol

32. Which statement correctly describe the Pilot Deployment in the System Development Life Cycle
    (1) The existing and new systems are used parallelly for a certain period of time.
    (2) Completely removing the existing system and installing the new system only on a selected part
    (3) Install the new system only on a selected part and see its success while the previous system remains the same.
    (4) Phase by phase installation of the new system only to a selected part while the previous system remains the same.

33. Which of the following is the testing method that checks whether the inputs produce the expected results under system testing in system development life cycle?
    (1) Unit Testing                          (2) System Testing
    (3) Integrated Testing                     (4) Acceptance Testing

34. Consider the following statements regarding computer languages.
    A - Machine language is a programming language that uses simple English letters.
    B - A program written in machine language does not need to be translated.
    C - Compilers are used to translate codes written in Assembly language.
    D - When writing programs in machine language the knowledge on computer hardware is necessary.
    Which of the above statements is a false statement/statements?
    (1) A, B and D only     (2) A and D only     (3) A and C only     (4) All A, B, C and D

- **Use the flow-chart below to answer questions 35 to 36**



35. Which of the following answers is the value output by this flow chart?
    (1) 10                (2) 15                (3) 20                (4) 1, 3, 6, 10, 15

36. What is the output when 'Count=Count+1'is changed as 'Count = Count + 2'
    (1) 2, 4               (2) 6                (3) 9                (4) 2, 4, 9

37 Rain fall figures of 7 days are shown in the following array called 'K'. which of the elements of array shows the highest rainfall.

| 100mm | 90mm | 80mm | 120mm | 200mm | 115mm | 105mm |

(1) K[3]          (2) K[4]          (3) K[5]          (4) K[6]

38 what is the output of the following Pascal code?

```
Program display_num;
        var m:integer;
Begin
        For m := 0 to 4 do
                write(m*5);
        readln;
End.
```
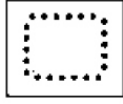
(1) 5, 10, 15, 20     (2) 015101520     (3) 05101520     (4) 0, 5, 10, 15, 20

39. How many colours can be used in a digital graphic that has 16 bits per pixel?
    (1)    2 x 16          (2)    $2^{16}$    (3)    16777216    (4)    255x255

40. The table below shows some tools labelled as A, B, C, D used in a graphic editing software.



| | A | B | C | D |

| Number | Description |
|--------|-------------|
| 1 | Select the adjacent areas with same colour in a graphic |
| 2 | Replacing amount of pixels from one location to another. |
| 3 | Select a required area as a square. |
| 4 | Select the part of a graphic to a desired shape |

Which of the following is the correct answer when comparing the tools labelled A to D and the tasks can be done in the table.
(1) A-4, B-3, C-1, D-2                    (2)  A-3, B-3, C-1, D-2
(3) A-1, B-3, C-2, D-1                    (4)  A-4, B-3, C-2, D-1

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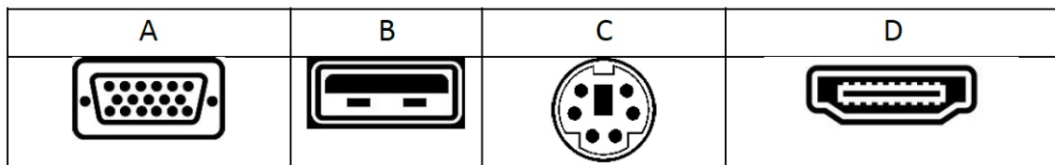**Second Term Test - Grade 11 - 2023**

| Information and Communication Technology II | 02 hours |

**Index No.**

- **Answer only 05 questions including the first question.**

- **The first question carries 20 marks and each other question carries 10 marks.**
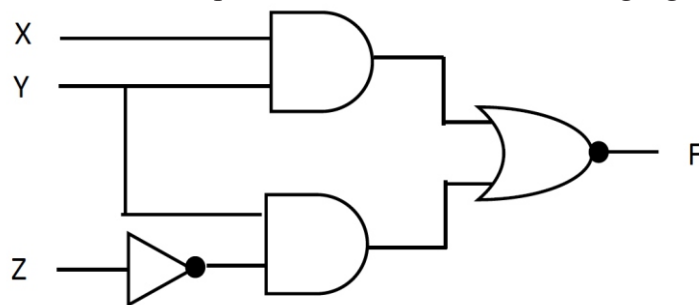
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(01) (i) Write down two significant changes that took place in the evolution of the computers from the first generation to the fifth generation. (2 marks)

(ii) (a) Write two advantages that agricultural sector can get based on internet (1 mark)

(b) Write two services provided to businessmen under e- government. (1 mark)

(iii) Consider the following figures that are labelled as A-D.



Using the list below, identify each of the above ports and write the corresponding label and name of the port (2 marks)

(List: PS2 port, USB, HDMI, VGA)

(iv) (a) $546_8$ Convert 5468 to its Decimal equivalent . (1 mark)

(b) $BF9_8$ Convert BF916 to its Binary equivalent (1 mark)

(v) Write down the Boolean expression for the **F** of the following logic circuit (1 mark)



(vi) Consider the types of software that are labelled A to D below.

| Label | Description |
|-------|-------------|
| A | An operating system that has Command Line Interface |
| B | It belongs to the category of Utility software |
| C | A Computer Language translating software |
| D | An Open-Source Operating System software |

Identify the software related to each of above description from the list below and write the description label and software respectively. (2 marks)

(Complier, Anti-Virus Software, Linux, DOS)

(vii) A part of the formatted word processing text is shown below.



History of Sri Lanka ← (A)

(B)

Sri Lanka, officially known as the **Democratic Socialist Republic of Sri Lanka**, has a rich and diverse history that spans thousands of years. Here is an overview of key periods and events in Sri Lankan history to 23$^{rd}$ September 2023:

(C)
1. Buddhism
2. Ancient kingdom

(D)

| P | Q | R | S | T | U |
|---|---|---|---|---|---|
| **B** | *I* | <u>U</u> | $x^2$ | 1— 2— 3— ▾ | ≡ |

In the formatted word processing section, select the tools P to U that used for each formatting labeled as A to D and write the corresponding letter pair. (2 marks)

(viii) Write down an advantage of selecting parallel deployment when deploying a system according to the System Development Life Cycle. (2 marks)

(ix) Consider the following Pseudo Code that was setup to represent sequence of numbers automatically. (2 marks)

```
Begin
  n=1
  do while n<10
    display n
    n = n + 1
  end while
end
```

Write down the corresponding Pascal code using the While -Do loop to get the output of this Pseudo Code

(x) Below is a Hexa-Decimal code used to create tertiary colors using RGB colors. Calculate the Decimal Values of the colors Red, Green, Blue related to this code and write them separately (2 marks)

#A945A3          RED – .......... GREEN-.........BLUE - ..........

(02) The following is a part of a Data Base of after school Computer course conducted by the students' computer club of Veragala Central College.

Student Table - Whether the student is a member of the club or not is indicated by True and False

| Student_ID | Student_Name | Grade | ICTClub_Member |
|---|---|---|---|
| ST20 | Menaka | 12 | True |
| ST21 | Gayani | 13 | False |
| ST22 | Nawaz | 11 | True |
| ST23 | Fathima | 12 | True |
| ST24 | Sumandiran | 11 | True |

**Course Table** – The maximum students for a course are 20

| Course_ID | Name | No of Students |
|---|---|---|
| CS01 | Office Application | 20 |
| CS02 | Graphic Design | 20 |
| CS03 | Computer Hardware | 20 |
| CS04 | Networking | 20 |

**Student-Course Table** – Student registered courses are included

| Student ID | Course_ID | Date of Registered |
|---|---|---|
| ST22 | CS04 | 01/03/2023 |
| ST23 | CS02 | 07/03/2023 |
| ST22 | CS02 | 01/03/2023 |
| ST20 | CS01 | 14/03/2023 |

(i) (a) Write down two Primary Keys of this Data Base with its Table names (1 mark)

   (b) Write down a composite Key with the Table name of this Data Base (1 mark)

(ii) What Table(s) should be updated to do the following changes?

   (a) A student named Heshan who is in grade 12 got a membership of student club and registered for the Graphic Design course on 16/05/2023 (1 mark)

   (b) Student named Gayani got the membership of the student club (1 mark)

(iii) (a) To make the changes of above (ii) (A), what is/ are the record(s) that should be entered to the tables? Write down the Table name →Record1, Record 2…. (Take the student ID as ST25) (2 marks)

   (b) The student club is starting a new course called Software Development and recruiting a maximum of 25 students. If a student named Nawaz will register this course what are the new records should be entered to do the changes in the tables. Write down as Table name →Record1, Record2 (2 marks)

(iv) which Table(s) should be joined to create a query to find which courses that Nawas has registered for? (1mark)

(v) What is the relationship between the Student Table and the Course Table ( 1 mark)

(03) (a) Study the relevant incident in the following paragraph carefully and answer the questions given below.

The management of Niwungama Super Mart intends to replace the existing manual transaction processing system with a computerized system to increase the efficiency of their retail store. The tasks were handed over to a software company called IT solution, and its staff has started the related work as follows. On January 22nd of 2022, officers Aruna and Siddhith of that company came and observed the activities of the concerned institution and then conducted an interview with the manager and the cashier. they contacted the institution For a few days and collected the relevant information and handed it over to Thamilan, and the system was planned by him. Sadamali designed the software and the Unit testing herself. At the end of all tasks, a cashier of the store was brought to check as

an end user and finally it was confirmed that the problems of the system have been reduced to a lager extent. On March 12,2023, Sudhiran an Naveen came to the institution and installed the system in the institution, while the existing system remained the same. After about two months, Muditha came and some minor changes were made in the system.

(i) Who has gathered the information under the phase of identifying the requirements of the System in system Development Life Cycle? What e techniques have been used for that? (2 marks)

(ii) Write two tasks that Thamilan might have done in the process of designing the system. (2 marks))

(iii) Sandamali herself has done the Unit testing of the prepared system and for which testing the cashier of the shop was brought? (1 mark)

(iv) State the technique used to establish the system and write two more such techniques (2 marks)

(b) Following table shows the 4 stages of the system development life cycle of developing a new system and the 4 tasks performed under it. Choose the required answer for A, B, C, D from the list below and write as the label and answer.

| Stages | Tasks |
|---|---|
| A | Interviews |
| System Testing | B |
| C | Parallel Deployment |
| D | Updating the system according to new user requirements |

(Maintain the system, Integration Testing, Deployment of the system, Identifying requirements)

(04) Following part of spread sheet represents the channeling charges of Suwa Medura Medical Center on 8th of August 2023

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | SUWA MEDURA MEDICAL CENTRE | | | | |
| 2 | Date | 8/8/2023 | | | Center Charges | 20% | |
| 3 | Doc No | Doc Name | No of Pationts | Charges | Total Charges | Centre Charges | Doctor Fees |
| 4 | D102 | Dr. Prasanna Jayakody | 52 | 2,300.00 | 119,600.00 | 23,920.00 | 95,680.00 |
| 5 | D104 | Dr. Hemachandra | 12 | 2,000.00 | 24,000.00 | 4,800.00 | 19,200.00 |
| 6 | D105 | Dr. Kelum Abekoon | 24 | 2,300.00 | 55,200.00 | 11,040.00 | 44,160.00 |
| 7 | D106 | Dr. Ariyasen De Silwa | 61 | 2,300.00 | 140,300.00 | 28,060.00 | 112,240.00 |
| 8 | D107 | Dr. Satharasinghe | 10 | 2,500.00 | 25,000.00 | 5,000.00 | 20,000.00 |
| 9 | D108 | Dr. Nirasha silwa | 63 | 2,300.00 | 144,900.00 | 28,980.00 | 115,920.00 |
| 10 | D109 | Dr. M. Wetakeyawa | 16 | 1,800.00 | 28,800.00 | 5,760.00 | 23,040.00 |
| 11 | | | | | 537,800.00 | 107,560.00 | 430,240.00 |
| 12 | | | | | | | |

(i) (a) Write down the appropriate formula to find the income received by Dr. Prasanna Jayakody from channel service in cell E4. (2 marks)

(b) Write the formula as it appears in cell E8 (1 mark)

(04)  (ii)  if 20% is charged as center charges out of the total charges received from a doctor for facilitating the channel service, write the formula to find the center charges in cell F4. (Copying this formula should also enable to find the center charges of other doctors)

(2 marks)

(iii)  What is the formula used to find the charges of Dr. Prasanna in cell G4?        (2 marks)

(iv)  Write down the formula to find the total center charges in F11 as, Function (Cell1:Cell2)

(2 marks)

(v)  If a chart is prepared to show the income that received from each doctor, write down a suitable chart type                                                       (1 mark)

(05)  (a)  Consider the statements labelled as A to F. Select the correct answer from the given list and write down the label and answer appropriately.                           (6 marks)

A)  By ……………………………………. in the Domain name shows, what kind of a web site is it or the identity of the country that it belongs to.

B)  ……………………… are used to identify a device that connects to the internet uniquely.

C)  In internet management, by ……………………………………………. Control the exchanging of web sites.

D)  A collection of HTML documents related to some unique subject content is called as ………………………………

E)  If we do not know the URL or Domain name …………………………… can be used to browse something easily on the internet

F)  Converting domain names in to IP addresses by ……………………………, the request of web site sends to server by web browser.

(Domain Name Server, Search Engines, IP addresses, Top Level Domain, Web Site, HTTP)

(b)  Following figure is a sample of an Email message being prepared to be sent by a certain financial company. In this context, write the following statements as true of false with the statement number given.                                                      (2 marks)

| To | saman69@gmail.com, nimal2020@gmail.com |
|---|---|
| Cc | aberatne22@gmail.com, samaranayaka7@gmail.com |
| Bcc | bocmanager@gmail.com, bocinfo@gmail.com |

(i)  Saman knows that this e mail was also received by the nimal2020@gmail.com (      )

(ii)  Nimal knows this e mail was also received by the bocinfo@gmail.com        (      )

(c)  Write two advantages of Cloud Computing                           (2 marks)

(06) (a) The following criteria are used to select a prefect of the school

- Average marks of last year term test should be 65 or greater than 65 or,
- The marks obtained for the certificates of Sports and extra curriculum activities should be 50 or greater than 50 and,
- The average marks given by school teachers should be 60 or greater than 60

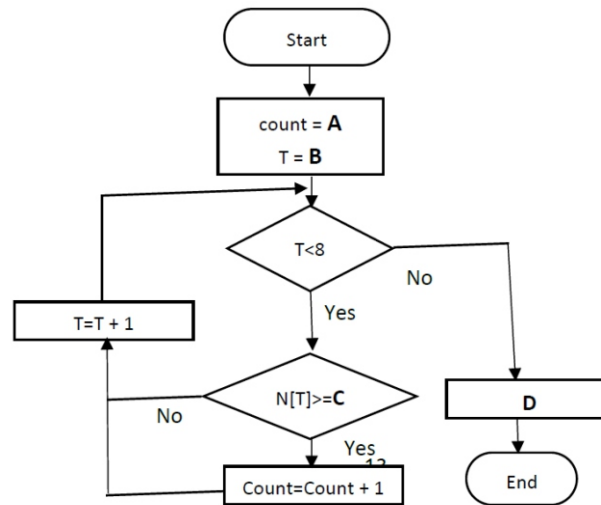| Student Name | Average marks of term test (Avg_marks) | Certificate marks (CF_marks) | . Teachers' marks (T_marks) |
|---|---|---|---|
| Kamal | 75 | 34 | 63 |
| Anjana | 65 | 52 | 55 |
| Pathum | 75 | 86 | 70 |
| Wikum | 34 | 30 | 60 |

(i) According to above table write down the names that were selected as school prefects

(2 marks)

(ii) Below shows the Pseudo code created according to above criteria. Write down the pseudo code again by filling the correct answers for the labels P, Q, R, S (4 marks)

```
Begin
        Input Avg_marks, CF_marks & (P)
        IF Tmarks>= (Q) then
                If Avg_marks>= 65 then
                        Qualified to Prefect
                else
                        IF CF_marks>=50 then
                        …………….(R)…………
                else
                        Not Qualified to Prefect
                End IF
            End IF
        else
        …………….(S)…………
        End IF
    End
```

(b) After rolling a dice 8 times, the values obtained are stored in an array called N. Write the substitutes for A, B, C, D positions in the flow chart below prepared for the number of times that 5 or more are obtained. (4 marks)
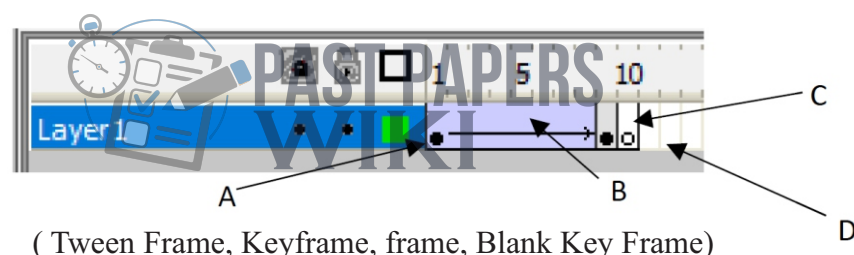


(07) (a) Write the pair of English letters corresponding to the tools indicated as P, Q, R, S that can be used to perform the tasks expected to be performed by an audio editing software from A to D below. (4 marks)

A    Can save the selected part of an audio frequency section and remove the other parts
B    Mute a selected segment
C    Time Shifting
D    Marking the necessary Audio part

| P | Q | R | S |
|---|---|---|---|
| I | ↔ | ʍ\|ʍ | ‑ʍ‑ |

(b) State whether the following statements about digital graphics are true or false. (4 marks)
   (i)   Vector graphics are commonly used than Raster graphics for high quality creations.
                                                                                        (   )
   (ii)  The maximum number of colors that can be represented by 6 bits of a pixel is 32 (   )
   (iii) By combination of Red and Green in RGB colors makes Yellow color          (   )
   (iv)  The sequence of appearing of graphics can be set using the timeline of a video editing software                                                                            (   )

(c) Following figure represents a part of time line of a two-dimensional animation software. Write down the suitable elements by selecting the list given below according to label A, B, C, D.                                                                                 (2 marks)



( Tween Frame, Keyframe, frame, Blank Key Frame)

| 01. (3) | 02. (2) | 03. (2) | 04. (3) | 05. (4) | 06. (1) | 07. (1) | 08. (2) | 09. (1) | 10. (2) |
|---|---|---|---|---|---|---|---|---|---|
| 11. (2) | 12. (2) | 13. (1) | 14. (1) | 15. (1) | 16. (4) | 17. (2) | 18. (2) | 19. (4) | 20. (4) |
| 21. (2) | 22. (2) | 23. (3) | 24. (3) | 25. (4) | 26. (2) | 27. (4) | 28. (2) | 29. (3) | 30. (2) |
| 31. (2) | 32. (3) | 33. (2) | 34. (3) | 35. (2) | 36. (3) | 37. (2) | 38. (3) | 39. (2) | 40. (4) |

(40 marks)

| 01 | (i) | | Minimize the size, Increase the efficiency, Increase the capacity, Low power | 2 marks |
|---|---|---|---|---|
| | (i) | (a) | Using robot technology for harvesting, Chronometers, Automatic water supply, any correct 2 answers | 1 mark |
| | | (b) | Register Business, Banking Information, Investments Details A – VGA, B-USB,   C-PS2,      D-HDMI | 1 mark |
| | (iii) | | A – VGA,   B-USB,   C-PS2,      D-HDMI | 2 marks |
| | (iv) | a. | $358_{10}$  (Should write the steps of the answer) | |
| | | b. | $010111111001_2$ (Should write the steps of the answer) | 2 marks |
| | (v) | | X.Y + Y.Z | 2 marks |
| | (vi) | | A – DOS,  B - Anti Virus Software  C- Compiler   D - Linux | 2 marks |
| | (vii) | | A – R,   B-P,   C-T,      D-S | 2 marks |
| | (viii) | | If there is any defect on new system, the data still safe on the old system Give time for users to familiar to the new system | 2 marks |

| | (ix) | | 2 marks |
|---|---|---|---|

```
Program program1();
   var n : integer;
begin
   n:=1;
   while n<10 do
      begin
         writeln(n);
         n:=n+1;
      end;
end.
```

or

```
begin
   n:=1;
   while n<10 do
      begin
         writeln(n);
         n:=n+1;
      end;
end.
```

| | (x) | # | A9 | 45 | A3 | ← Should convert like this | 2 marks |
|---|---|---|---|---|---|---|---|

RED – 169  GREEN-69    BLUE - 163

| 02 | (i) | (a) Student table → Student_ID,  Course table → course_ID | |
|---|---|---|---|
| | | (b)  Students_Course table → Student_ID and course_ID | 2 marks |
| | (ii) | (a)  Students table and Student_Course table | |
| | | (b)  Students table | 2 marks |
| | (iii) | (a)    Students table ⟶ ST25, Heshan, 12, True | 2 x 2 |
| | | (b)    Course table ⟶ CS05, Software Developing, 25 | = 4 marks |
| | (iv) | Students  table Course table Students_Course table | 1 mark |
| | (v) | Many-many relationship | 1 mark |

| 03 | (a)(i) | Aruna and Siddhith      Observation and Interview | 2 marks |
|---|---|---|---|
| | (ii) | Create algorithms, create data bases, create user interfaces | 1 mark |
| | (iii) | Acceptance testing | 1 mark |
| | (iv) | Parallel Deployment, Direct Deployment, Pilot Deployment, Phase Deployment | 2 marks |
| | (b) | A – Identify Requirements,    B-Acceptance Test   C-System Deployment  D- Maintenance of the system | 4 marks |
| 04 | (i) | a.   = C4*D4  b.   = C8*D8 | 2 marks  1 mark |
| | (ii) | = E4*FS4  or  = E4*SFS4 | 2 marks |
| | (iii) | = E4 - F4 | 2 marks |
| | (iv) | = SUM (F4:F10) | 2 marks |
| | (v) | Column Chart,  Bar Chart,  Line Chart | 1 mark |
| 05 | (a) | A - Top level domain   B - IP Address,   C - HTTP,   D - Web Site  E - Search Engine    F - DNS | 1 x 6  = 6 marks |
| | (b) | (i)  True        (ii)  False | 2 marks |
| | (c) | Access your files wirelessly from any place  No cost for software  Saving the capcity of the computer  Increase the performance, No need to update software | 2 marks |
| 06 | (i) | Kamal, Pathum | 2 marks |
| | (ii) | P - T_marks ,   Q – 60,   R - Qualified to  be Prefect,  S – Not Qualified to be Prefect | 4 marks |
| | (iii) | A - 0,  B – 0, C – 5, D-Display Count / Output count / Print Count | 4 marks |
| 07 | (a) | A - S,  B – R, C – Q, D-P | 4 marks |
| | (b) | (i)  True        (ii)  False      (iii)  True       (iv)  True | 4 marks |
| | (c) | A–Keyframe,   B – Tween Frame,  C – Blank Keyframe,  D-Frame | 2 marks |