සියලු ම හිමිකම් ඇවිරිණි / முழுப் பதிப்புரிமையுடையது /All Rights Reserved]

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இலங்கை பரீட்சைத் திணைக்களம்
Department of Examinations, Sri Lanka

80 | E | I, II

අධ්‍යයන පොදු සහතික පත්‍ර (සාමාන්‍ය පෙළ) විභාගය, 2022(2023)
கல்விப் பொதுத் தராதரப் பத்திர (சாதாரண தர)ப் பரீட்சை, 2022(2023)
General Certificate of Education (Ord. Level) Examination, 2022(2023)

තොරතුරු හා සන්නිවේදන තාක්ෂණය I, II
தகவல், தொடர்பாடல் தொழில்நுட்பவியல் I, II
Information & Communication Technology I, II

පැය තුනයි
மூன்று மணித்தியாலங்கள்
Three hours

අමතර කියවීම් කාලය - මිනිත්තු 10 යි
மேலதிக வாசிப்பு நேரம் - 10 நிமிடங்கள்
Additional Reading Time - 10 minutes

Use additional reading time to go through the question paper, select the questions and decide on the questions that you give priority in answering.

Information & Communication Technology I

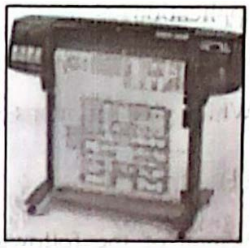
Instructions:

* *Answer all questions.*
* *In each of the questions* **1** *to* **40**, *pick one of the alternatives* (1), (2), (3), (4) *which is correct or most appropriate.*
* *Mark a cross* (X) *on the number corresponding to your choice in the answer sheet provided.*
* *Further instructions are given on the back of the answer sheet. Follow them carefully.*

1. An association is willing to donate computer equipment to a school. If the school is planning to build its library management system, which of the following hardware are suitable for the school to request from the association?
(1) Desktop computer, barcode reader
(2) Desktop computer, plotter
(3) Laptop computer, joystick
(4) Laptop computer, light pen

2. Which of the following lists only **output** devices?
(1) Barcode reader, magnetic ink character reader, scanner
(2) Joystick, microphone, webcam
(3) Keyboard, light pen, mouse
(4) Plotter, projector, speaker

3. The device similar to the one shown is usually used by Architects who design buildings. What is it?



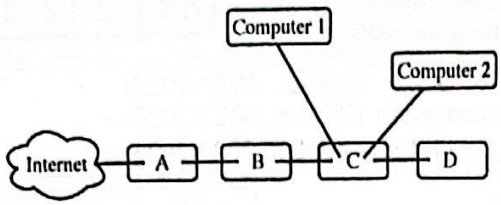
(1) Dotmatrix printer
(2) Inkjet printer
(3) Multimedia projector
(4) Plotter

4. Which of the following lists the correct order of instruction flow when the user executes a computer **program**?
(1) Hard disk → cache memory → main memory → registers
(2) Hard disk → main memory → cache memory → registers
(3) Main memory → hard disk → registers → cache memory
(4) Registers → hard disk → cache memory → main memory

[see page two

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5. The following diagram shows a computer network connected to the Internet:



Which of the following gives a correct listing of the devices A-D?

(1) A – firewall, B – switch, C – printer, D – router
(2) A – firewall, B – printer, C – router, D – switch
(3) A – router, B – firewall, C – switch, D – printer
(4) A – router, B – switch, C – printer, D – firewall

6. Which of the following is the largest?

(1) $1000\ 0100_2$ (2) 15_8 (3) 85_{10} (4) $C2_{16}$

7. Which of the following is the decimal equivalent of binary $1000\ 0101_2$?

(1) 85_{10} (2) 133_{10} (3) 161_{10} (4) 266_{10}

8. Which of the following is the hexadecimal equivalent of octal 1156_8?

(1) $26E_{16}$ (2) 484_{16} (3) $109C_{16}$ (4) 2204_{16}

9. Amara wants to copy the following four files (with the given file sizes) to a USB drive:
invitation.doc (15kB), yesterday.mp3 (26MB), concert.mp4 (150MB), tajmahal.jpg (28kB)
From the following four empty USB drives with the given capacities, which is the **most economical** drive that can be used to store the above files? (Ignore the space in the USB drive that is required for file management.)

(1) 1GB (2) 2GB (3) 128MB (4) 256MB

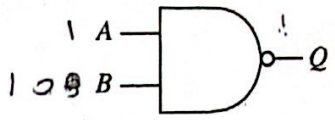
10. Consider the **character – value** mappings from the ASCII table given below:

O - 79 / - 47 L - 76 o - 111 l - 108

Which of the following will be the ASCII representation of O/L in binary?

(1) 1001111 1001100
(2) 1101111 1101100
(3) 1001111 0101111 1001100
(4) 1101111 0101111 1101100

11. Consider the following logic gate:



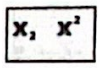
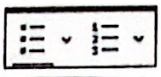
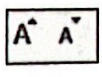
When A=1, what would **definitely** be the output at Q?

(1) 0 (2) 1
(3) B (4) $\overline{B}$

12. What is the shortcut key combination to undo your last action or actions, in a word processing application?

(1) Ctrl+H (2) Ctrl+N (3) Ctrl+Y (4) Ctrl+Z

13. Which pair of icons can be used to convert a selected text into two different types of lists?

(1) 
(2) 
(3) 
(4) 

14. Which of the following are true regarding a word processing software?

A - Any two cells in a table of a document can be merged.
B - A word in a document can be selected by double clicking the mouse on that word.
C - An already saved document can be saved using a different name by using the "File → Save as" option.

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

15. What is the shortcut key combination to select the entire document in a word processing software?

(1) Ctrl+A (2) Ctrl+C (3) Ctrl+N (4) Ctrl+X

[see page three

● Consider the following spreadsheet segment to answer questions **16** and **17**.

	A	B	C	D
1	3	2	4	
2	5	7	6	
3	8	9	1	

16. What will be displayed in cell D1, if the formula =COUNT(A1:C1, B2) is entered to it?
(1) 3 (2) 4 (3) 7 (4) 9

17. What will be displayed in cell D3, if the formula =A1^C3*(C1–B1) is entered to it?
(1) 6 (2) 9 (3) 10 (4) 79

18. Which of the following (I, II, III, IV) are valid cell addresses?
I – K2 II - K2 III – K2$ IV – K2
(1) I and II only (2) I and IV only
(3) II and III only (4) III and IV only

● Consider the following partially shown database tables to answer questions **19** to **22**. The tables are taken from a database of an electricity billing system.

Customer

Cus_ID	Name	Address
C001	Anil	Rajagiriya
C002	Shane	Borella
C003	Raj	Nugegoda
C004	Sharaf	Dehiwala

Meter

Meter_ID	Cus_ID
001	C003
002	C004
003	C001
004	C004
005	C002

Usage

Meter_ID	Date	Meter_ Reading
001	28/02/2023	1000
002	28/02/2023	1000
003	28/02/2023	1500
004	28/02/2023	2500
001	31/03/2023	4000

19. What is the primary key of the **Usage** table?
(1) *Date* (2) *Meter_ID*
(3) *Meter_ID + Date* (4) *Meter_Reading*

20. What is the most suitable data type for *Cus_ID* field?
(1) Boolean (2) Currency (3) Number (4) Text

21. The monthly electricity bills are generated using the meter readings to compute the units used. Which tables are to be used to generate the monthly electricity bill of *Anil*?
(1) **Usage** only (2) **Customer** and **Meter** only
(3) **Customer** and **Usage** only (4) **Customer**, **Meter** and **Usage**

22. Which table/tables needs/need to be updated when entering next month's meter readings? (Assume that new customers/meters are not added during a month.)
(1) **Customer** only (2) **Meter** only
(3) **Usage** only (4) **Meter** and **Usage** only

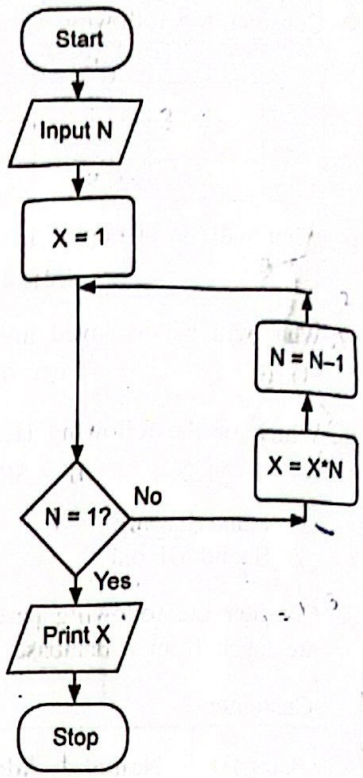
23. A student is developing the school website. One of the requirements of the school is that the pages of the website to open quickly. Which of the following file types should the student use for the graphics of the site to suit the above requirement?
(1) JPEG (2) MP3 (3) RAW (4) WAV

24. A raster image of resolution 2400 × 3000 uses 24 bits to keep the information of each pixel. What is the maximum number of colours that the image can use?
(1) 24 (2) $24 \times 2400 \times 3000$ (3) 2^{24} (4) $2^{7200000}$

[see page four

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● Answer the questions **25** to **27** using the given flowchart.



25. What would be the output of the flowchart if 3 is given as the input?

(1) 1 (2) 3
(3) 6 (4) 24

26. Which of the following constructs are best suited to be included in a computer program based on this flowchart?

A - *if then*
B - *if then else*
C - *while-endwhile*

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

27. In this algorithm, N always has to be a positive integer. Which of the following is recommended for the flowchart to fulfill the above condition?

(1) Keeping the flowchart as it is
(2) Changing the **N= 1?** condition to **N= 0?**
(3) Changing the **N= 1?** condition to **N= –1?**
(4) Checking the value of N immediately after it is input and stopping the flow if N is negative

28. The array named A holds the average price of an egg for each month of last year:

A:	20	25	50	55	70	65	50	60	65	50	55	49

Which array element contains the highest average price?

(1) A[0] (2) A[4] (3) A[10] (4) A[11]

29. What will be the output if the following Pascal code is executed?

```
Program testPrint(input, output);
Var count: integer;
Begin
      For count:=1 to 4 do
        Write(count);
End.
```

(1) 1
(2) 4
(3) 123
(4) 1234

30. The following pseudocode is to find the sum of the numbers from 1 to 10.

```
Begin
      sum = 1
      number = 1
      repeat
            A
            sum = sum + number
      until number < 10
      display sum
End
```

What is the suitable replacement for label A?

(1) `number = number + 1`
(2) `number + 1`
(3) `number = 0`
(4) `sum = 2`

31. Consider the following pseudocode:

```
Begin
      P = 0
      while P<6
            display '*'
            P = P + 3
      endwhile
End
```

How many times will * be printed according to it?

(1) 1
(2) 2
(3) 3
(4) 4

[see page five

32. Consider the following pseudocode fragment:

```
if weakness < 40
      if character > 70
            suitability = "Good"
      endif
endif
```

Which of the following is true?

(1) If `weakness < 40` then `suitability = "Good"`
(2) If `character > 70` then `suitability = "Good"`
(3) If `weakness < 40` and `character > 70` then `suitability = "Good"`
(4) If `weakness < 40` or `character > 70` then `suitability = "Good"`

33. Consider the following statements.

A - A machine language code consists of 0s and 1s.
B - A Pascal program is easier to understand than its machine language equivalent.
C - A Pascal code needs to be compiled to convert into its equivalent machine language code.

From the above which statement/statements is/are correct?

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

34. Which of the following lists the selected activities of the *System Development Life Cycle* in the correct order?

(1) Coding → Solution design → Requirement identification → Testing → Deployment
(2) Requirement identification → Solution design → Coding → Testing → Deployment
(3) Solution design → Coding → Requirement identification → Deployment → Testing
(4) Solution design → Requirement identification → Coding → Deployment → Testing

35. Assume a complex software system consisting of many units is being developed. Which of the following lists the types of testing involved in this development in their correct order?

(1) Acceptance testing by the users → system testing → unit testing → integration testing
(2) Integration testing → acceptance testing by the users → system testing → unit testing
(3) Unit testing → integration testing → acceptance testing by the users → system testing
(4) Unit testing → integration testing → system testing → acceptance testing by the users

36. Which of the following is a correct example for an IP address?

(1) 255.64.80 (2) 170.63.80.23 (3) 170.248.16.31.56 (4) 192.248.16.300

37. Which of the following does the translation of domain names to IP addresses?

(1) DNS server (2) Mail server (3) Media server (4) Web server

38. Which of the following is **not** essential for an officer in Sri Lanka to join a video conference involving officers in USA and Japan?

(1) A computer or an equivalent device with a camera, microphone and a speaker
(2) An internet connection
(3) Relevant video conferencing software
(4) USB drive

39. Raja wants to send a job application email with his resume as an attachment to *abcCompany@gmail.com*. Which of the following options in the email application should Raja use to **attach the resume**?

(1) : To (2) Subject (3)  (4)

40. Which of the following HTML statements has **incorrect** syntax?

(1) Sri Lanka Railways
(2) <h2> WORK </h2>
(3) <img http://www.w3schools.com/images/picture.jpg border = "3">
(4) Sri Lanka

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* *

[see page six

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இலங்கைப் பரீட்சைத் திணைக்களம்
Department of Examinations, Sri Lanka

80 | E | I, II

අධ්‍යයන පොදු සහතික පත්‍ර (සාමාන්‍ය පෙළ) විභාගය, 2022(2023)
கல்விப் பொதுத் தராதரப் பத்திர (சாதாரண தர)ப் பரீட்சை, 2022 (2023)
General Certificate of Education (Ord. Level) Examination, 2022 (2023)

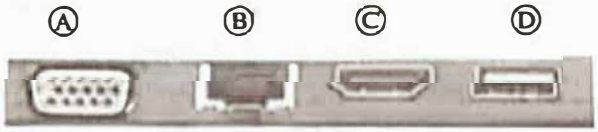
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தகவல், தொடர்பாடல் தொழில்நுட்பவியல் I, II
Information & Communication Technology I, II

Information & Communication Technology II

* *Answer five (05) questions only, including the first question and four others.*
* *First question carries 20 marks and each of the other questions carries 10 marks.*

1. (i) To minimize the inconvenience to patients, the Out Patients Department (OPD) of a hospital decides to implement a computerized appointment scheduling system. The OPD is open for patients everyday from 8am to 5pm with a 12-1pm lunch break. The OPD plans to divide each hour into four 15-minute time periods, and to allocate three patients for each such time period. In the proposed computer system, five pieces of information are stored with respect to each appointment that is made. The patient's NIC number, name and phone number are three of them. Write down the other two pieces of information.

(ii) Four ports on a laptop labelled Ⓐ – Ⓓ are shown in the figure.

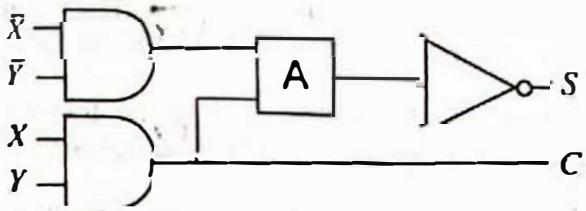


(a) Write down the label of the port which can be used to connect a projector with a VGA cable.

(b) Write down the label of the port which can be used to connect a USB flash drive in order to take a backup of the important files in the laptop.

(iii) Convert 63_{10} to its (a) octal and (b) hexadecimal equivalents.

(iv) In the circuit shown, A represents a **2-input** logic gate.

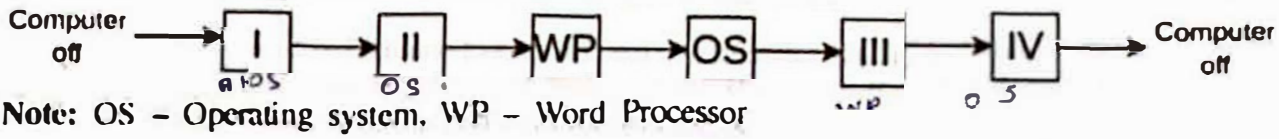


(a) **From the two gates AND and OR,** what should the gate A be so that *S* is according to the shown truth table?

(b) Write down the Boolean expression for *C*.

X	Y	S
0	0	0
0	1	1
1	0	1
1	1	0

(v) Raja powers on a computer and types a document using a word processor application. Then he shuts down his computer through the operating system.
What runs on the processor of this computer during this scenario is shown in the following figure.



Note: OS – Operating system, WP – Word Processor

Write down the suitable replacements for I, II, III and IV choosing from the following list:
List : {BIOS, OS, OS, WP}

(vi) Some formatting options available in a word processing software are shown below:

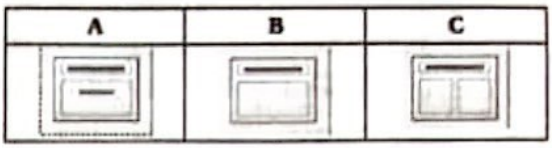
Option	12	B	I	U	S	A^2	A_2
Label	P	Q	R	S	T	U	V

Write down the labels of the options that have been used to do the following sentence formatting.

Sentence before formatting : Work is a great remedy for all ailments.

Sentence after formatting : ***Work is a great remedy for all ailments.***

(vii) (a) A slide containing *a title*, some text bullets and *an image* has to be included in a presentation. From the slide layouts shown at right, write down the label of the correct slide layout that the user can use for the above purpose.



(b) There are accepted characteristics in a good electronic presentation. Write down **one** such characteristic with respect to the maximum number of text lines that should be placed on a slide.

(viii) Assume that a player can receive a score between 1 and 10 for a game.

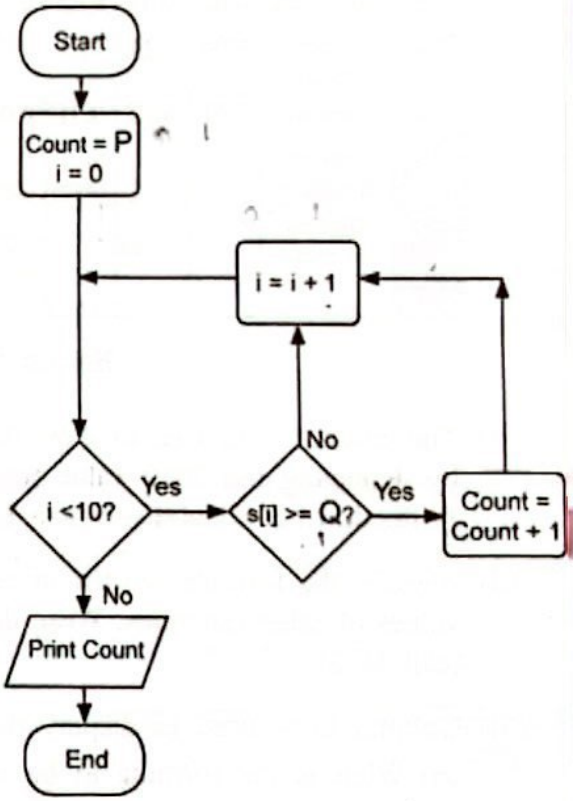
The scores a particular player has received in 10 games are stored in an array S as follows:

S:

10	5	3	4	7	5	9	2	1	7

It is required to find how many times the player scored 5 or higher.

The flowchart drawn for that purpose is shown. Write down the correct replacements for labels P and Q.



(ix) For the success of a software system developed using the waterfall model, it is important to get all client requirements clearly and exactly before leaving the first step of the model. Why?

(x) Draw the expected output of the following HTML code segment:

```
<dl>
        <dt>HTML</dt>
        <dd>is a markup language</dd>
        <dt>Java</dt>
        <dd>is a programming language</dd>
        <dt>SQL</dt>
        <dd>is a query language</dd>
</dl>
```

2. The following spreadsheet shows some statistics related to the amount of energy generated from solar power for the period 2010–2021 in 12 selected countries:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Solar electricity in years 2010-2021 (TWh)														
2	Country	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Increase in 12 years	Increase in 2021 relative to 2020
3	Australia	0.39	1.39	2.33	3.48	4.01	5.02	6.21	8.07	9.93	14.9	23.85	28.04	27.65	4.19
4	Bangaladesh	0.07	0.06	0.09	0.13	0.16	0.2	0.22	0.25	0.28	0.33	0.39	0.47	0.4	0.08
5	China	0.7	2.61	3.59	8.37	23.51	39.48	66.5	118	177	224	261.1	327	326.3	65.9
6	Finland	0	0.01	0.01	0.01	0.01	0.01	0.02	0.05	0.09	0.15	0.22	0.3	0.3	0.08
7	Greece	0.16	0.61	1.69	3.65	3.79	3.9	3.93	3.99	3.79	4.43	4.45	5.25	5.09	0.8
8	India	0.11	0.83	2.1	3.43	4.91	6.57	11.6	21.5	36.3	46.3	58.68	68.31	68.2	9.63
9	Malaysia	0	0	0.01	0.14	0.23	0.27	0.31	0.33	0.63	0.94	1.17	1.5	1.5	0.33
10	Pakistan	0.01	0.03	0.07	0.14	0.24	0.38	0.68	0.92	0.92	0.93	1.03	1.26	1.25	0.23
11	Singapore	0	0.01	0.01	0.02	0.04	0.07	0.15	0.17	0.24	0.41	0.5	0.67	0.67	0.17
12	Sri Lanka	0.02	0.02	0.02	0.02	0.03	0.03	0.05	0.11	0.23	0.36	0.44	0.54	0.52	0.1
13	United Kingdom	0.04	0.24	1.35	2.01	4.05	7.53	10.4	11.5	12.7	12.9	13.32	12.47	12.43	-0.85
14	Vietnam	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.1	5.25	10.86	25.77	25.76	14.91
15	*Lowest increase*														-0.85
16	*Highest increase*														65.9
17															

Source: https://ourworldindata.org/renewable-energy

(i) The column N is used to show the solar power generation increase in 12 years. This is calculated by deducting the 2010 value from the 2021 value.
Write down a suitable formula for cell N3 to get the 12 year increase for Australia.

(ii) Assume the formula written in cell N3 is copied to the cell range N4:N14 to get the increased values of other countries. Write down the formula which shows the increased value for Sri Lanka (cell N12).

(iii) Column O is used to display the increase in power generation in 2021 relative to 2020.

(a) What is the formula to be written in cell O15 to display the lowest increase value?

(b) What is the formula to be written in cell O16 to display the highest increase value?

Note: These formulae must be written in the *=function(cell1:cell2)* form.

(iv) Assume that in cell P3 (not shown) the formula =(O3/O16)*100 is entered to display the ratio between Australia's increase and the highest increase. However, this formula is not suitable to be copied to the cell range P4:P14 to display the ratios for the other countries. Write down the correct formula that needs to be entered to cell P3 to fulfil the above purpose.

(v) **From line and pie charts**, what is most suitable to compare the changes of solar power generation of these countries over the period 2010–2021? Briefly justify your answer.

3. A school lends sports equipment to its students. To manage this process, a three table relational database is used. The tables keep student information, sports items available for borrowing, and borrowed items as shown below.

Student

StudentID	StudentName	Grade
S001	Saman	7
S002	Kamalan	8
S003	Shane	8
S004	Ahmed	9

Item

ItemID	ItemType
001	Badminton racket
002	Volleyball
003	Cricket bat
004	Basketball
005	Cricket bat

Borrowed_Items

ItemID	StudentID	BorrowedDateTime	ReturnedDateTime
002	S002	10/02/2023 14:00:05	15/02/2023 14:15:00
004	S001	13/02/2023 14:08:00	01/03/2023 14:16:00
004	S002	05/04/2023 14:15:00	NULL
001	S004	05/04/2023 14:20:00	NULL
002	S002	06/04/2023 14:00:06	NULL

(i) (a) Write down the primary key of the **Borrowed_Items** table.

(b) Write down the foreign key(s) of the **Borrowed_Items** table.

(ii) Which tables need to be updated to accommodate the following?

(a) the school deciding to allow students to borrow Tennis rackets

(b) Shane borrowing a Tennis racket on 20/04/2023

(iii) A new student Raj (StudentID: S150) joined the school for grade 10 and was selected for the Cricket team on 25/04/2023. He borrowed a Cricket bat (ItemID:005) on the same day at 14:00:05 hrs. Write down the new record(s) to be added to the relevant table(s) for the above scenario.

Note: Use the tablename → (field1, field2, ..) format for each new record.

(iv) It is required to find the names of students who borrowed sports items on 05/04/2023. The type of item borrowed must also be shown. Which tables are to be joined for this purpose?

4. A student can go to school either by bicycle, school van or bus. It can be chosen based on the total distance as follows:

- When the total distance is less than or equal to 5 km: ≤ 5
  Use the bicycle
- When the total distance is more than 5 km but less than or equal to 15 km:
  If the distance from home to nearest bus stop is less than 1 km, use the bus. Otherwise use the school van.
- When the total distance is greater than 15 km:
  If the monthly van fare is less than two times the monthly bus fare use the school van. Otherwise use the bus.

(i) Write down the most suitable transportation modes (bus, van or bicycle) for Sithara, Ganesh, Saleem and Nimal based on the information given below.

Student	Total Distance (km)	Distance to bus stop (km)	Monthly van fare (Rs)	Monthly bus fare (Rs)
Sithara	10	0.5	3000	2000
Ganesh	20	2	8500	4000
Saleem	14	1.5	6000	3000
Nimal	3	0.5	2000	1200

(ii) Write a pseudocode to input the required data for a student (total distance [TD], distance to bus stop [D], monthly van fare [VF] and monthly bus fare [BF]) and to output the suitable transport mode for him/her.

5. (i) Match the descriptions labelled P – S with the correct terms from the list given and write the relevant term against each label in the **label → term** format.

Label	Description
P	Used for the communication between web server and web client – HT
Q	Used to uniquely identify a web page in a web server – URL
R	Used to identify a computer uniquely on the Internet – IP a
S	Used to transfer emails between two email servers – SMTP

List : {DNS, email address, FTP, HTTP, hyperlink, IP address, SMTP, URL}

(ii) Choosing from the examples given in the list, write down the correct example suitable for each of the labelled items **A** to **G** given below in the **label → example** format.

A – A content management system

B – A top level domain name

C – A web browser

D – A search engine

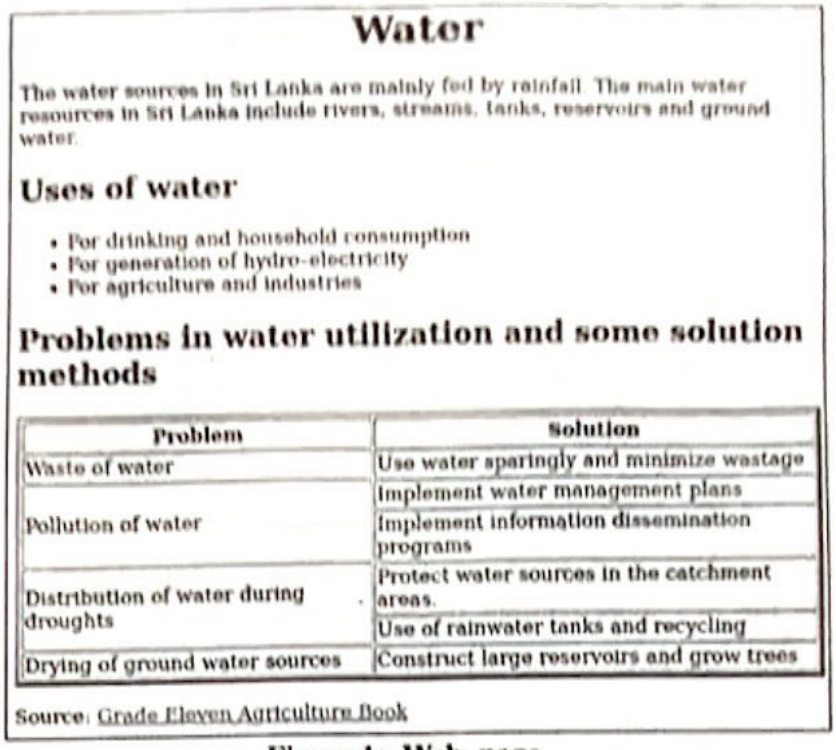
E – A social network

F – A cloud computing service

G – A programming language used for web page development

List : {.lk, Firefox, Google, IaaS, Pascal, PHP, Twitter, Wordpress, www.nie.lk}

(iii) The HTML source of the web page shown in below Figure 1 is given in Figure 2 with certain missing tags labelled ❶ to ⓬.



Water

The water sources in Sri Lanka are mainly fed by rainfall. The main water resources in Sri Lanka include rivers, streams, tanks, reservoirs and ground water.

Uses of water

- For drinking and household consumption
- For generation of hydro-electricity
- For agriculture and industries

Problems in water utilization and some solution methods

Problem	Solution
Waste of water	Use water sparingly and minimize wastage
Pollution of water	Implement water management plans
	Implement information dissemination programs
Distribution of water during droughts	Protect water sources in the catchment areas.
	Use of rainwater tanks and recycling
Drying of ground water sources	Construct large reservoirs and grow trees

Source: Grade Eleven Agriculture Book

Figure 1: Web page

```
<html>
<❶> <title>Water</title> </❶>
<body>
<center><❷>Water</❷></center>
<❸>The water sources in Sri Lanka are mainly fed by rainfall. The main water resources in Sri
    Lanka include rivers, streams, tanks, reservoirs and ground water.</❸>
<❹>Uses of water</❹>
<❺>
    <❻>For drinking and household consumption</❻>
    <❻>For generation of hydro-electricity</❻>
    <❻>For agriculture and industries</❻>
</❺>
<❹>Problems in water utilization and some solution methods</❹>
<❼ border="4" align="center">
<❽><❾>Problem</❾><❾>Solution</❾></❽>
<❽><❿>Waste of water</❿><❿>Use water sparingly and minimize wastage</❿></❽>
<❽><❿ ⓫="2">Pollution of water</❿><❿>Implement water management plans</❿></❽>
<❽><❿> Implement information dissemination programs</❿></❽>
<❽><❿ ⓫="2">Distribution of water during droughts</❿><❿>Protect water sources in the catch-
    ment areas.</❿></❽>
<❽><❿> Use of rainwater tanks and recycling</❿></❽>
<❽><❿>Drying of ground water sources</❿><❿>Construct large reservoirs and grow
    trees</❿></❽>
</❼>
Source: <⓬ href="http://www.edupub.gov.lk" > Grade Eleven Agriculture Book </⓬>
</body>
</html>
```

Figure 2: HTML Source

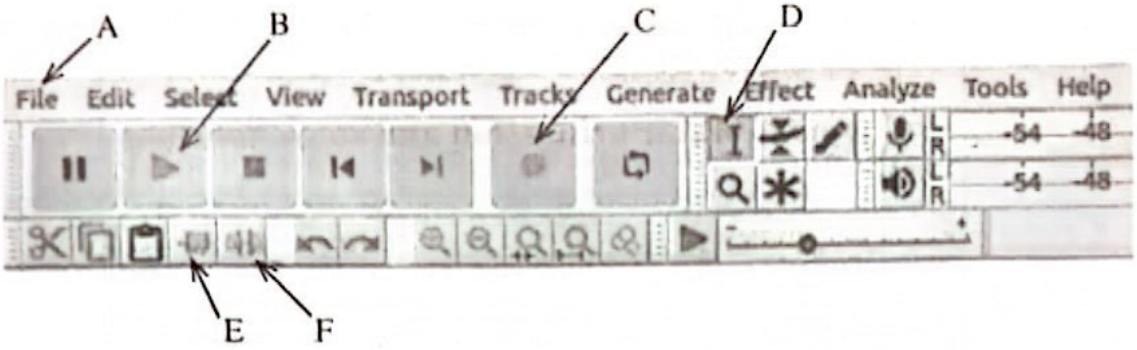
Select the correct tags for the labels ❶ to ⓬ of Figure 2 from the list given below. Write down each label number and the corresponding HTML tag.

List : {a, colspan, dl, h1, h2, head, li, link, p, rowspan, table, td, tr, ul}

6. (i) Compared to raster files, vector files are more suitable to store images like institution logos that frequently need resizing. Explain the reason for it.

(ii) Assume that you recorded an original song and stored it as an audio file. The file consists of **two** silent portions, one before the actual song begins and the other after the song ended. You want to remove those two silent portions using *Audacity*.

A part of the *Audacity* interface is shown below.



(a) Explain how you would use the interface options **selecting** from those labeled A-F to remove the two silent portions describe above.

(b) Write down the label of the interface option that you will use to play your modified file.

(iii) Assume that you are creating a video with *Windows Movie-maker*.

(a) What is the importance of the *timeline* stage in the interface?

(b) List **three** features that you could add to your video through the software.

7. (i) Match the following descriptions labelled A – D with the correct terms from the list and write down the relevant term number against each label in the **label → term number** format.

Label	Description
A	Patients in remote locations connecting to hospital specialist units through the use of ICT
B	An application that helps teachers / students in teaching / learning
C	Creating detailed images of internal parts of the body
D	Buying and selling of goods and services via the Internet and the transfer of funds and data to complete the sales

List : {1 – Cardiac screening, 2 – Electronic banking, 3 – Electronic commerce, 4 – Learning Management System (LMS), 5 – Magnetic Resonance Imaging (MRI), 6 – Medical teletraining, 7 – School Management System, 8 – Telemedicine}

(ii) Sunil's computer which operated at high speed initially has become very slow lately. One of Sunil's friends asks him to discard it and buy a new one.

Do you agree with Sunil's friend? Explain.

(iii) Write down **one** method to avoid plagiarism when reproducing information from the Internet.

(iv) "*Technology should be one's servant and not the master.*" What is meant by 'becoming the master' and 'becoming the servant' in this statement?