

**ගම්පහ අධ්‍යාපන කලාපය**  
**Gampaha Education Zone**

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**දෙවන වාර පරීක්ෂණය - 2025**  
**Second Term Evaluation - 2025**

ශ්‍රේණිය  
Grade

12

විෂයය  
Subject

**Information and Communication Technology I**

2 hours

- Answer all the questions.
- In each of the questions **1 to 50**, pick one of the alternative from **1 to 5** which is **correct or most appropriate**.

1). Amali teacher was appointed as the class teacher of Grade 6-A in the year 2025. She worked as the class teacher of Grade 7-B in 2023. Upon taking over the new class, the parent details of the 7-B class that were stored on her computer were deleted.

According to the data life cycle, the above incident belongs to:

- |                              |                     |                     |
|------------------------------|---------------------|---------------------|
| (1) Data Creation            | (2) Data Management | (3) Data Processing |
| (4) Removal of obsolete data | (5) Data Updating   |                     |

2). The correct answer that shows the challenge faced when processing big data, which cannot be handled by traditional data processing software, is:

- (A) Data gaining and storage  
(B) Data presentation  
(C) Protecting the privacy of information
- |                  |                   |                  |
|------------------|-------------------|------------------|
| (1) A only       | (2) B only        | (3) A and B only |
| (4) A and C only | (5) A,B and C all |                  |

3). In cloud computing, providing an environment for developing and running applications such as databases and web service servers belongs to the basic service model of .....

- |  |                                  |
|--|----------------------------------|
| (1) Infrastructure as a Service (IaaS) | (2) Platform as a Service (PaaS) |
| (3) Software as a Service (SaaS)       | (4) Desktop as a Service (DaaS)  |
| (5) Function as a Service (FaaS)       |                                  |

4). From the following devices, which is not use as a data collection tool.

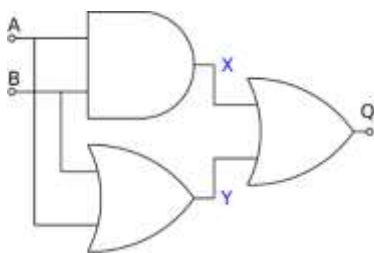
- |                                    |   |
|------------------------------------|---|
| (1). Touch Pad                     | (2). Optical Mark Recognition           |
| (3). Optical Character Recognition | (4). Magnetic Ink Character Recognition |
| (5). Bar Code Reader               |   |

5) Among the following statements, the one that correctly defines the term *Digital Divide* is:

- (1) The economic and social inequalities that arise due to the inability to equally access technological resources.  
(2) The economic and social inequalities that result from a lack of literacy in the use of information and communication technology.  
(3) The economic and social inequalities caused by differences in access to, use of, or impact of information and communication technologies.  
(4) The economic and social inequalities based on the ability to access internet services.  
(5) The economic and social inequalities arising from the use of digital devices.

- 6) Which of the following is *not* a result of green computing?
- (1) Efficient and environmentally friendly use of resources.
  - (2) Safe disposal of e-waste.
  - (3) Recycling of electronic components.
  - (4) Introduction of laws and regulations to prevent unsafe disposal of e-waste.
  - (5) Minimization of the production of new electronic devices.
- 7) Select the Incorrect statement from following.
- (1) The First mechanical computer was created by Sir Charles Babbage.
  - (2) MARK 1 is the first automatic computer.
  - (3) By using Pascaline machine can do subtraction and addition of two digits.
  - (4) The first digital electronic machine is EDSAC.
  - (5) EDVAC was created according to the stored programme concept.
- 8) According to the access speed of computer memory, which of the following is correctly arranged in ascending order?
- (1) Magnetic tape → Magnetic disk → Main memory → Cache memory → Memory register
  - (2) Magnetic tape → Main memory → Cache memory → Magnetic disk → Memory register
  - (3) Magnetic tape → Magnetic disk → Main memory → Memory register → Cache memory
  - (4) Magnetic disk → Magnetic tape → Main memory → Memory register → Cache memory
  - (5) Magnetic tape → Magnetic disk → Memory register → Cache memory → Main memory
- 9) A storage device that uses optical technique to read and write data.
- |                  |                   |                 |
|------------------|-------------------|-----------------|
| (1) Hard Disk    | (2) Flash Drive   | (3) Memory Card |
| (4) Compact Disk | (5) Magnetic Tape |                 |
- 10) Correct statement/s regarding multi core processor.
- A** – Ability to execute multiple instructions of a single program simultaneously.
- B** – Increases in the speed of program execution within the computer.
- C** – Allowing parallel processing within the computer.
- D** – Ability to maximize the performance of the computer.
- |                     |                  |                  |
|---------------------|------------------|------------------|
| (1) A only          | (2) A and B only | (3) A and D only |
| (4) A ,B and C only | (5) All Above    |                  |
- 11) When registering students' online to technical colleges, it is mandatory to input their academic and personal information. In this case, what is the most suitable type of data verification method?
- |                 |                  |                    |
|-----------------|------------------|--------------------|
| (1) Range check | (2) Format check | (3) Presence Check |
| (4) Type check  | (5) Value check  |                    |
- 12) Define by the "Golden Rule of Information" is..
- (1) That the value of data increases over time.
  - (2) At the moment information is created, its value is very low.
  - (3) The value of information relative to data is presented graphically.
  - (4) At once information is created, its value does not change.
  - (5) That the value of information decreases over time.
- 13) The Binary number which is equal to decimal 23.75 is..
- |               |              |              |
|---------------|--------------|--------------|
| (1) 10111. 01 | (2) 10101.11 | (3) 10111.11 |
| (4) 10111.01  | (5) 10111.10 |              |
- 14) Output of bit wise operation 24 XOR 13 is ...
- |        |        |        |        |        |
|--------|--------|--------|--------|--------|
| (1) 20 | (2) 21 | (3) 22 | (4) 23 | (5) 24 |
|--------|--------|--------|--------|--------|

- 15) 11101111 is a 2's complement number with eight bits. What is the decimal equivalent of this?  
 (1) -17 (2) 17 (3) 239 (4) -239 (5) 16
- 16) Decimal equality of  $BA5_{16}$  is..  
 (1) 2891 (2) 2980 (3) 2981 (4) 341 (5) 3253
- 17) Which is the equal answer to  $132_8 + AC_{16}$ .  
 A -  $100000110_{(2)}$  B - 162 C -  $406_{(8)}$  D -  $106_{(16)}$   
 (1) A only (2) A & B only (3) A & D only  
 (4) A,B & C only (5) A, C & D only
- 18) Which is the -25's 8bits representation of Two's and One's complements accordingly  
 (1) 11100110, 11100111 (2) 11101010, 11101011 (3) 11100010, 11100111  
 (4) 10011001, 11100111 (5) 11100110, 11100111
- 19) Select the correct statement/ s from followings.  
 A. A full adder can be constructed using two half adders.  
 B. A half adder adds three bits at a time.  
 C. The overflow of a half adder can be an input to a full adder.  
 (1) A only (2) B only (3) A & C only  
 (4) A & B only (5) A, B & C All
- 20) When a truth table has inputs A, B, and C, and the Sum of Products (SOP) are 1, 2, 3, and 7 respectively, the output when this SOP equation is simplified using a **Karnaugh map** will be..  
 (1)  $AB + AC' + BC$  (2)  $A'B + A'C + BC$  (3)  $AB + BC + AC$   
 (4)  $AB' + AC' + B'C$  (5)  $A'B' + C + B$
- 21) Consider the following Boolean expressions named P, Q, and R.  
 $P \Rightarrow A'B'C' + ABC' + ABC$   $Q \Rightarrow B(A + C')$   $R \Rightarrow AB + A'BC'$   
 (1)  $P = Q$  (2)  $P = R$  (3)  $Q = R$  (4)  $P=Q=R$  (5) None of the above
- Consider the following Logic Circuit to answer the questions (22) & (23).



A	B	Q
0	0	
0	1	
1	0	
1	1	

- 22) According to the A and B inputs, the output Q is equal to..  
 (1) 1, 0, 0, 0 (2) 1, 1, 0, 0 (3) 0, 1, 1, 0 (4) 0, 1, 1, 1 (5) 1, 1, 1, 0
- 23) According to the A and B inputs, which logic gate is equal to the output Q?  
 (1) AND (2) NOR (3) OR (4) NAND (5) XNOR
- 24) In fetch-execute cycle, instructions are decoded by the:  
 (1) ALU (Arithmetic Logic Unit) (2) Program Counter (3) Control Unit  
 (4) Memory Registers (5) Main Memory

25) Select the incorrect statement from the following.

- (1) Flip-flops can be used to create temporary memories.
- (2) Among the types of flip-flops, there are also flip-flops that function like a computer's power switch.
- (3) Flip-flops are constructed using NAND and NOR gates.
- (4) The simplest form of Random Access Memory (RAM) is a flip-flop.
- (5) The output of flip-flops depends only on the current input.

(26) The degree and cardinality respectively for the table given below is:

RegNo	Name	DOB
A001	Amal	2000/01/01
A002	Kamal	

- (1) 2, 2                      (2) 3, 2                      (3) 2, 3                      (4) 3, 3                      (5) 3, 5

(27) Which of the following statements are true regarding a database?

A – A primary key can have a null value.

B – A candidate key can uniquely identify a row in a table.

C – The candidate keys which are not used as the primary key are referred to as alternate keys.

- (1) A only                                      (2) B only                                      (3) C only  
(4) A and B only                                      (5) B and C only

(28) The following is a dataset related to a student enrolling in a university. Based on this, which of the following statements is incorrect?

A – Registration\_No: Is unique to each student.

B – UIC: Each student is uniquely identified at the national level.

C – Bank\_Account\_No: Each student may have one or multiple bank account numbers.

D – Name: The name of the student.

- (1) Bank\_Account\_No is an alternate key                      (2) Registration\_No is the primary key  
(3) Name is not a primary key                      (4) Bank\_Account\_No is a multivalued attribute  
(5) UIC is a candidate key

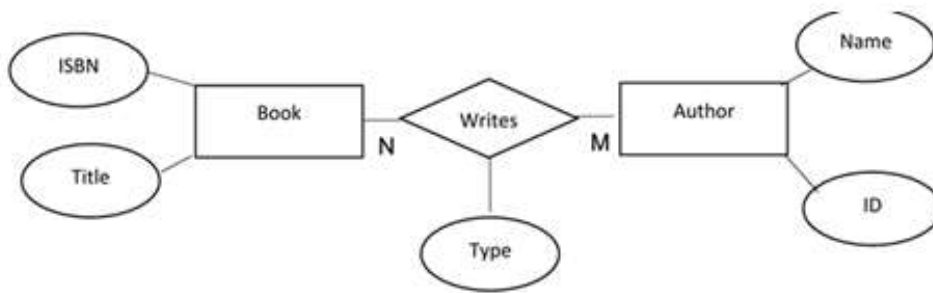
(29) Among the statements below, which statement represents one-to-many relationship?

- (1) Several teachers teach in one class.
- (2) One teacher has only one class.
- (3) Many teachers can have many classes.
- (4) Many classes can have one or several teachers.
- (5) One class has several teachers, and one teacher has one class.

(30) Consider the following statements regarding an Extended Entity-Relationship (EER) model. Which of them is an incorrect statement?

- (1) Includes the concept of specialization.
- (2) Includes the concept of generalization.
- (3) Always used to represent weak entities.
- (4) Can have multi-valued attributes.
- (5) Can have composite attributes.

- Conceder the following ER diagram to answer the questions 31 and 32



(31) How many tables are created from the above ER diagram?

- (1) 1                      (2) 2                      (3) 3                      (4) 4                      (5) 5

(32) If ISBN and ID are unique attributes, consider the relationship schemas given below. Which of them correctly represents a relationship schema?

- (1) Book(ISBN, Title, Type)                      (2) Author(ID, Name, Type)  
 (3) Author (ID, Name, ISBN)                      (4) Book (ISBN, Title, Write, ID)  
 (5) Write(ISBN,ID, Type)

(33) Conceder the following relationship

Student( STNO, Name, DOB, Class, GameID)  
 Game(GameID, Title, Time)

According to the above relationship what is the cardinality among Student and Game tables?

- (1) 1 : 1                      (2) 1 : M                      (3) M:M                      (4) N : N                      (5) M : N

(34) Who is the creator of the World Wide Web (WWW)?

- (1) Mark Zuckerberg                      (2) Tim Berners-Lee  
 (3) Bill Gates                      (4) Elon Musk                      (5) Charles Babbage

(35) In HTML, which coding is the correct way to write a comment

- (1) <!--This is a comment -->                      (2) // This is a comment                      (3) # This is a comment  
 (4) /\* This is a comments \*/                      (5) @ This is a comments

(36) In HTML, the <br> tag is used for:

- (1) Creating a link to a web page                      (2) Adding a heading  
 (3) Breaking a line                      (4) Inserting an image                      (5) Inserting a table

(37) In the HTML code ``, what is the purpose of using alt?

- (1) To provide a description of the image
- (2) To provide an alternative image in place of the inserted image
- (3) To provide more details about the image
- (4) To display a description when the image cannot be shown through the web browser
- (5) To add a title to the image

(38) Which HTML tag is used to add a heading to a table?

- (1) `<title>`
- (2) `<head>`
- (3) `<th>`
- (4) `<heading>`
- (5) `<caption>`

(39) Which HTML tags are used to display the text AL ICT with correct formatting

- (1) `<br> <b> <u>`
- (2) `<b> <u> <i>`
- (3) `<u> <i> <t>`
- (4) `<sup> <i> <b>`
- (5) `<p> <b> <u>`

(40) What will be the output when the HTML code `<a href="http://www.w3schools.com"> HTML Tutorial </a>` is executed

- (1) HTML Tutorial
- (2) HTML Tutorial
- (3) HTML Tutorial
- (4) *HTML Tutorial*
- (5) *HTML Tutorial*

(41) Find the correct HTML coding to get the following list

System Software  
    Operating System  
    Utility Software  
Application Software  
    Word Processing Software  
    Web Browser

- (1) `<ul>, <li>`
- (2) `<dl>, <li>`
- (3) `<ul>, <dl>, <li>`
- (4) `<dl>, <dt>, <dd>`
- (5) `<ol>, <dt>, <li>`

(42) An advantage of using CSS within an HTML document is:

- (1) To improve the functionality of the web page
- (2) To improve the content of the web page
- (3) To improve the appearance of the web page
- (4) To improve the efficiency of the web page
- (5) To insert images into the web page

(43) Which statement is correct according to the CSS rules?

- (1) H2 {color: red; text-align: center;}
- (2) H2 {color: red; font-family: "Times New Roman";}
- (3) H2 { text-align: center; font-size: 15px;}
- (4) H2 {colour:red; font-size: 15px;}
- (5) H2 {color=red; font-size: 15px;}

- Consider the following coding for question number (44) and (45)

```
<head>
  <style>      h1,h2,h3 {color: red;}
               #a{color: green;}
  </style>
</head>
<body>
<h1 style="color: blue"> My School </h1>
<h1> St. Mary's College </h1>
<h2> Veyangoda </h2>
<h3 id= "a"> AL ICT </h3>
</body>
```

(44) Which of the following statements is **false**?

- (1) External style sheets (External CSS) have been used.
- (2) Internal style sheets (Internal CSS) have been used.
- (3) Inline style sheets (inline CSS) have been used.
- (4) Selectors have been used.
- (5) An ID has been used.

(45) When the HTML code is executed, the correct output will be:

- (1) The color of "My School" is red.
- (2) The color of "St. Mary's College" is green.
- (3) The color of "AL ICT" is green.
- (4) The color of "Veyangoda" is green.
- (5) The color of "Veyangoda" is blue.

(46) Which of the following is the correct CSS code to make the background color of a web page green?

- (1) body{color="green"}
- (2) <body color="green">
- (3) body{color:"green";}
- (4) body{bgcolor:"green";}
- (5) body{background-color:green;}

(47) Created an ID named "intro" and used it to underline a paragraph. What is the correct CSS code for this?

- (1) .intro {text : underline;}
- (2) #intro {text : underline;}
- (3) #intro {text-decoration : underline;}
- (4) .intro {text-decoration : underline;}
- (5) p#intro {text-type: underline;}

(48) Which of the following is NOT an advantage of using External CSS?

- (1) It can be used across multiple web pages.
- (2) It is easy to update.
- (3) It improves the performance of the web page.
- (4) It allows every page of the website to be styled in the same manner.
- (5) It allows using a smaller amount of code.

(49) Which code can be used to link an external CSS file to a web page?

- (1) link {url = "mystyle" = css"}
- (2) <link rel = "stylesheet" type="text/css" href="mystyle.css">
- (3) <a rel = "stylesheet" type="text/css" href="mystyle=css">
- (4) link {rel= "stylesheet" type== "text/css" href="mystyle.css">
- (5) <form action= "mystyle.css" method= "Get">

(50) Consider the following HTML code segment.

```
<html> <head>
```

```
<style> p{color: red;}
```

```
    H1{color: blue;}
```

```
    * {color:green;} </style> </head>
```

```
<body> <p> AL Technology Section</p>
```

```
    <h3> 2026 AL batch </h3> </body></html>
```

What is the font colour of "**2026 AL batch**"?

- (1) Red
- (2) Green
- (3) Yellow
- (4) Blue
- (5) Black