[සියලු ම හිමිකම් ඇවිරිණි/ All Rights Reserved]

තොරතුරු හා සන්නිවේදන තාක්ෂණය Information and Communication Technology තොරතුරු හා සන්නිවේදන තාක්ෂණය Information

අධෳයන පොදු සහතික පතු (සාමානෳ පෙළ) විභාගය, 2025

General Certificate of Education (Ordinary Level) Examination, 2025

තොරතුරු හා සන්නිවේදන තාක්ෂණය I Information & Communication Technology I

Unit Test

අමතර කියවීම් කාලය - මිනිත්තු 10 යි Additional Reading Time - 10 Minutes

Instructions:

- Answer all the questions.
- Write your **Index Number** in the space provided in the answer sheet.
- Instructions are also given on the back of the answer sheet. Follow those carefully.
- In each of the questions 1 to 40, pick one of the alternatives from (1), (2), (3), (4), which is correct or most appropriate and mark your response on the answer sheet with a cross (X) in accordance with the instructions given on the back of the answer sheet.
- Use of calculators is **not allowed**.
- 1. A school decides to replace its manual library record-keeping with a **computer-based library management system**. Which of the following is the **main advantage** of the new system compared to the manual one?
 - 1) It completely removes the need to check books before lending.
 - 2) It can automatically calculate fines for overdue books.
 - 3) It eliminates the need for librarians to work in the library.
 - 4) It allows students to borrow unlimited books without records.
- **2.** A system analyst visits a hospital to **watch how nurses record patient details** in order to design a new computerized system. Which method of gathering requirements is the analyst using?
 - 1) Ouestionnaires
 - 2) Document sample collection
 - 3) Observation
 - 4) Prototyping
- **3.** A bank introduces a new online banking system and runs it **together with the old system** for two months before completely switching over. Which type of deployment is this?
 - 1) Direct Deployment
 - 2) Parallel Deployment
 - 3) Pilot Deployment
 - 4) Phased Deployment
- **4.** Before building a new IT lab, a school checks whether it has **enough funds to buy computers and network equipment**. This is an example of which type of feasibility?
 - 1) Technical Feasibility
 - 2) Economic Feasibility
 - 3) Legal Feasibility
 - 4) Operational Feasibility



- **5.** During the development of an online shopping website, the developer tests the **payment module alone** to ensure it works correctly before linking it with other parts of the site.
 - Which type of testing is this?
 - 1) System Testing
 - 2) Acceptance Testing
 - 3) Unit Testing
 - 4) Integration Testing
- **6.** A student types https://www.cbsl.gov.lk in a browser to check the Central Bank of Sri Lanka's website. Which part of this URL ensures that data is securely encrypted during transmission?
 - 1) www.cbsl
 - 2) .gov.lk
 - 3) https
 - 4) Central Bank of Sri Lanka
- **7.** A company wants to avoid the cost of buying physical servers but needs virtual machines and storage space over the internet. Which type of **cloud computing service** is most suitable?
 - 1) SaaS
 - 2) PaaS
 - 3) IaaS
 - 4) DNS
- 8. When you send an email and include a person's address in the BCC field, which statement is correct?
 - 1) All recipients can see the BCC address.
 - 2) Only the sender can see the BCC address.
 - 3) The BCC recipient can see all other recipients.
 - 4) The email will be sent only to the BCC recipient.
- **9.** Which protocol reports network errors—such as when a requested service is not available?
 - 1) FTP
 - 2) ICMP
 - 3) TCP
 - 4) SMTP
- 10. An IT technician is troubleshooting a remote computer without visiting the location physically.
 - Which internet service is he most likely using?
 - 1) File Sharing
 - 2) Remote Access
 - 3) Streaming
 - 4) Search Engine
- **11.** A school logo is saved at **8 bits per pixel**. Approximately how many distinct colours can each pixel show?
 - 1) 8
 - 2) 16
 - 3) 128
 - 4) 256
- 12. You want to print a poster that looks sharp. Which setting is most appropriate?
 - 1) 72 dpi RGB
 - 2) 300 dpi CMYK
 - 3) 72 dpi CMYK
 - 4) 150 dpi RGB



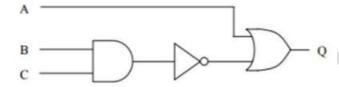
- **13.** A company needs its **logo** to appear on a business card and a large billboard **without losing quality**. Which file type is the **best choice**?
 - 1) JPG
 - 2) .PNG
 - 3) .SVG
 - 4) .BMP
- **14.** A photographer must email many photos but keep them **small in size**, accepting a slight quality drop. Which format is **most suitable**?
 - 1) GIF (lossless for photos)
 - 2) PNG (lossless)
 - 3) JPEG (lossy)
 - 4) BMP (uncompressed)
- **15.** You recorded a school announcement with background noise and want to **trim** the start and **fade out** the end. Which **software and tools** match the task best?
 - 1) GIMP using Brush and Eraser
 - 2) Vectorian Giotto using Timeline and Layers
 - 3) Audacity using Selection Tool and Envelope Tool
 - 4) A web browser using Play and Pause buttons
- **16.** Which category best fits www.nie.lk?
 - 1) e-Commerce
 - 2) Entertainment
 - 3) Information Communication
 - 4) Advertising
- **17.** Which attribute is **strongly recommended/treated as mandatory** in the tag to show alternate text if the image fails to load?
 - 1) Title
 - 2) Alt
 - 3) Border
 - 4) align
- **18.** Which snippet correctly **merges two columns** in the second row?
- 19. Which HTML correctly opens Google in a new tab/window?
 - 1) Google
 - 2) Google
 - 3) Google



- 4) Google
- **20.** What will be the **first marker** shown by this list?

```
  Item
  Item
```

- 1) 4
- 2) Iv
- 3) D
- 4) IV
- 21. Consider the logic circuit shown in the figure. The circuit consists of:

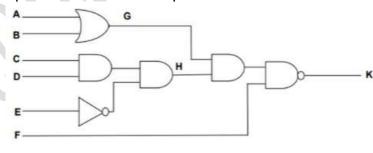


- An AND gate with inputs **B** and **C**,
- The output of the AND gate connected to a NOT gate,
- The output of the NOT gate and input A connected to an OR gate whose output is Q.

Which of the following Boolean expressions correctly represents the output **Q**?

- 1) Q = A + (B.C)'
- 2) Q = (A + B).C
- 3) Q = (A.B.C)'
- 4) Q = A' + (B.C)
- **22.** For the logic circuit shown, the output of the A–B block is an OR gate G=A+B. Inputs C and D pass through an AND, whose result is ANDed with E' to form $H=(C\cdot D)E'$. That output is ANDed with G, then the result is ANDed with F and finally inverted (i.e., a NAND).

What is the Boolean expression for the final output K?



- 1) K = [(A+B) (CD)E'F]'
- 2) K = (A+B) (C+D) E' + F
- 3) K = (A+B)'(CD)' + E + F'
- 4) K = (A+B')(CD) E'F'



23. The truth table below represents a logic gate with inputs A and B and a single Output.

Input A	Input B	Output	
0	0	0	
0	1	0	
1	0	0	
1	1	1	

Which of the following logic gates is represented by this truth table?

- 1) OR gate
- 2) NAND gate
- 3) AND gate
- 4) NOR gate

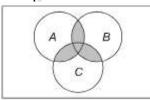
24. The truth table below represents a logic gate with inputs A and B and a single Output.

Input A	Input B	Output
0	0	1
0	1	0
1	0	0
1	1	0

Which of the following logic gates is represented by this truth table?

- 1) NOR gate
- 2) AND gate
- 3) NAND gate
- 4) XNOR gate

25. For the given Venn diagram, minimize the expression for the shaded area represented.



- 1) A'B + BC + AC'
- 2) A'B + B'C + AC
- 3) A'B + B'C + A'C
- 4) AB + BC + AC

[සියලු ම හිමිකම් ඇවිරිණි/ All Rights Reserved]			
තොරතුරු හා සන්නිවේදන තාක්ෂණය Information and Communication Technology තොරතුරු හා සන්නිවේදන තාක්ෂණය Information			
Final - Prep Revision 2025			
අධනයන පොදු සහතික පතු (සාමානන පෙළ) විභාගය, 2025			
General Certificate of Education (Ordinary Level) Examination, 2025			
නොරතුරු හා සන්නිවේදන තාක්ෂණය 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. A) Match each example to Input (A), Process (B), or Output (C). a) ATM: PIN entry and amount selection b) Restaurant: cooking the meal c) School: issued exam results d) Bank: printed transaction receipt e) Library: scanning a book barcode 			
B) Choose the most suitable fact-finding method (Observation / Interview / Questionnaire / Document Sample / Prototyping). Write one word only.			
 a) You want to see the <i>actual</i> book-issuing steps and bottlenecks: b) You need <i>quantitative</i> error trends from last year's overdue reports: c) Many teachers across schools must give feedback <i>quickly</i> online: d) You must capture a <i>librarian's frustrations</i> with the current system: 			
C) Write the correct term.			
 a) Model where phases are linear and sequential: b) Deployment where old and new run together for a period: c) Testing where modules are tested together for interface issues: d) Technique that iteratively refines a mock system with user feedback: e) Feasibility type that checks laws/regulations compliance: 			
D) Write the correct term.			
a) Place to add people who receive a copy but aren't expected to reply:b) The polite sign-off before your name (e.g., "Sincerely"):			
E) Match the HTML element → purpose (write the letter)			
A) < pre > B) < ul > C) < ol > D) < hr > E) < a >			
 a) Numbered steps in a recipe b) Preserves spaces and line breaks c) Horizontal divider between sections d) Bullet points for features e) Clickable link to another page 			

F)	Fill the	missing	HTMI.	tags to	make	valid	structure
1 /	i i iii uic	mussing		iago io	marc	vanu	suuctuic

2. A) Your school has energy-saving walkway lights controlled by sensors:

- **Night sensor (N):** outputs 1 at night, 0 in daylight.
- Motion sensor (M): outputs 1 when someone is walking past, 0 otherwise.
- Maintenance/Test switch (T): set by the technician; when 1, the light must turn on for testing, regardless of time or motion.

The light should turn on automatically at **night when motion is detected**, **or** any time the **test switch** is ON.

- a) Draw the logic circuit for the above system.
- b) Referring to the logic circuit in a), draw the truth table.

B) Choose the most appropriate answer.

- a) Number of colours per pixel = 2^____.

 bpp, dpi, fps, RGB.
- b) "Logos that scale without losing quality are _____ graphics." raster, vector, bitmap, pixmap.
- c) For **printing**, pick the more appropriate value: ____ **dpi**.

- d) Match the format to the method:
 - A) Lossy B) Lossless
 - 1) PNG ___ 2) JPEG ___ 3) GIF ___
- e) The option to combine all windows into one is **Windows** → _____ **Mode**Single-Window, Multi-Window, Preview, Docked.
- C) Match tool \rightarrow purpose:
 - A) Eyedropper B) Paint Bucket C) Free Transform D) Selection
 - a) Pick colour from image ____
 - b) Fill an area with colour ____
 - c) Move/scale/rotate object ____
 - d) Choose/move objects ____
- D) Fill in the blanks choosing the most appropriate answer.



a)	Key frames are set by the user; tween frames are	_ by software to create smooth motion.
	generated, erased, compressed, exported.	
b)	A common frame rate for smooth animation is fps . 12, 24, 48, 60.	
c)		
	A standout feature of Giotto is no coding required, command-line only, requires	scripting in Java, 3D ray
	tracing.	
d)	The tool used to control fade-in/fade-out is the	Tool.
	Envelope, Draw, Zoom, Timeshift.	\ \
		A
		10110.
a 6	CC Control No decadant	[True of our sur]
Conducted	Tby – Sanjula Nadeeshani www.itpanthiya.lk	[End of exam]

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