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- 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**.

- $\sim 1 \sim$



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](https://www.cbsl.gov.lk)
 - 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?
- 1)

```
<tr>
  <td colspan="2">Row 2 merged</td>
</tr>
```
 - 2)

```
<tr>
  <td colspan="2">Row 2 merged</td>
<tr>
```
 - 3)

```
<tr merge="cols">
  <td>Row 2 merged</td>
</tr>
```
 - 4)

```
<tr>
  <td span="2">Row 2 merged</td>
</tr>
```
19. Which HTML correctly opens Google in a **new tab/window**?
- 1) `<a href="https://www.google.com" target="_self">Google</a>`
 - 2) `<a href="https://www.google.com" target="_blank">Google</a>`
 - 3) `<a link="https://www.google.com" open="new">Google</a>`

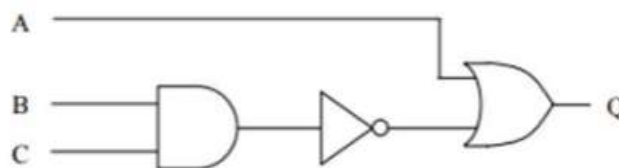
4) [Google](https://www.google.com)

20. What will be the **first marker** shown by this list?

```
<ol type="i" start="4">
  <li>Item</li>
  <li>Item</li>
</ol>
```

- 1) 4
- 2) Iv
- 3) D
- 4) IV

21. Consider the logic circuit shown in the figure. The circuit consists of:

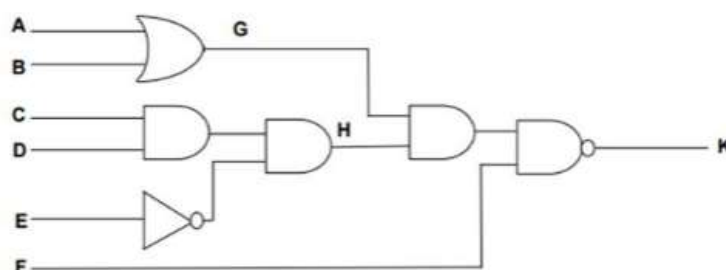


- An AND gate with inputs **B** and **C**,
- The output of the AND gate connected to a NOT gate,
- The output of the NOT gate and input **A** connected to an OR gate whose output is **Q**.

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 $H = (C.D)E'$. 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

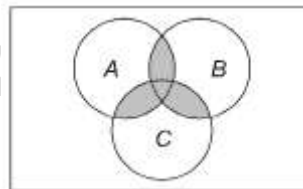
24. The truth table below represents a logic gate with inputs **A** and **B** and a single **Output**.

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) $AB + BC + AC$



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General Certificate of Education (Ordinary Level) Examination, 2025

Unit Test

* 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.

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F) Fill the missing HTML **tags** to make valid structure

```
<__a__>
<head>
  <title>My Page</title>
</head>
<__b__>
  <h1>Welcome</h1>
  <p>Hello world!</p>
</__c__>
</__d__>
```

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.

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

B) Choose the most appropriate answer.

- Number of colours per pixel = $2^{\text{_____}}$.
bpp, dpi, fps, RGB.
- “Logos that scale without losing quality are _____ graphics.”
raster, vector, bitmap, pixmap.
- For **printing**, pick the more appropriate value: _____ dpi.
72, 96, 300, 24.
- Match the format to the method:
A) Lossy B) Lossless

1) PNG _____ 2) JPEG _____ 3) GIF _____
- The option to combine all windows into one is **Windows** → _____ **Mode**.
Single-Window, Multi-Window, Preview, Docked.

C) Match tool → purpose:

A) **Eyedropper** B) **Paint Bucket** C) **Free Transform** D) **Selection**

- Pick colour from image _____
- Fill an area with colour _____
- Move/scale/rotate object _____
- 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.

Conducted by – Sanjula Nadeeshani

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[End of exam]

