Grade 13 A/L ICT · Lesson 10

Lesson 10 A/L Exam Practice: Questions and Answers

This practice paper assesses **Lesson 10: Web Development** (syllabus competency 10). Paper I has 30 five-option MCQs. Paper II Part A has four structured questions; Part B has three essays. Marking points are shown in brackets. Every HTML example was validated and every PHP answer was checked by running it.

Paper I – Multiple choice questions (30)

1. The WWW is

A. a database
B. a service of linked pages on the Internet
C. the Internet itself
D. an e-mail protocol
E. a web browser

2. Pages are requested from a web server using

A. SQL
B. POP3
C. HTTP
D. DNS only
E. SMTP

3. gov.lk, one gateway to many services, is a

A. research site
B. personal site
C. blog
D. web portal
E. commercial shop

4. A school site with home → sections → pages uses

A. networked navigation
B. hierarchical navigation
C. a database
D. linear navigation
E. no navigation

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5. The text in the browser tab is set by

A. <head>
B. <caption>
C. <body>
D. <h1>
E. <title>

6. Which tag has no end tag?

A. <title>
B.
C. <p>
D. <b>
E. <h1>

7. The largest heading is

A. <h6>
B. <head>
C. <h3>
D. <h1>
E. <hr>

8. Text between <!-- and --> is

A. the title
B. bold
C. an error
D. a link
E. not displayed

9. <a href="#contact"> is a

A. image
B. bookmark
C. local link
D. style sheet
E. external link

10. <a href="https://www.nie.lk"> is

A. a list
B. a comment
C. a local link
D. an external link
E. a bookmark

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11. A numbered list uses

A.
B. <dl>
C.
D. <dt>
E. <dd>

12. In the timetable, the number of columns is

A. 6
B. 5
C. 4
D. 2
E. 3

13. Merging cells down two rows uses

A. span="row"
B. merge="2"
C. colspan="2"
D. rowspan="2"
E. cellspacing="2"

14. Text shown when an image cannot load comes from

A. alt
B. href
C. controls
D. title only
E. src

15. A class selector is written

A. tip()
B. #tip
C. .tip
D. @tip
E. *tip

16. In the CSS demo the paragraph with id="note" and class="tip" is

A. green
B. purple
C. black
D. navy
E. red

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17. Which CSS has the highest priority?

A. inline style
B. element selector
C. id selector
D. class selector
E. external file

18. One .css file used by many pages is

A. a bookmark
B. an inline style
C. an internal style sheet
D. a form
E. an external style sheet

19. WYSIWYG means

A. What You See Is What You Get
B. Write Your Site In Web Graphics
C. What You Save Is What You Generate
D. World Wide Site Index
E. Web Your Site In Your Grid

20. Which is a code editor?

A. Notepad++
B. Task Manager
C. Calculator
D. Media Player
E. Paint

21. PHP code runs on the

A. DNS server
B. web server
C. printer
D. browser
E. router

22. The PHP basics program prints Average

A. 211
B. 70.0
C. 70.33
D. 70.3
E. 71

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23. Choosing exactly one option of a group uses

A. a reset button
B. a password box
C. a fieldset
D. check boxes
E. radio buttons

24. Form data visible in the URL is sent with

A. GET
B. POST
C. PUT only
D. FTP
E. DNS

25. <fieldset> is used to

A. make a table
B. group related form fields
C. link a style sheet
D. send the form
E. clear the form

26. The first row printed by list.php is

A. Amali 0
B. Kamala 45
C. Sunil 88
D. Nimal 78
E. Nimal 88

27. edit.php with id=2 fills the Name box with

A. Kamala
B. Sunil
C. empty
D. Amali
E. Nimal

28. A site at http://localhost is published

A. by DNS
B. on a CDN
C. on the Internet
D. locally on your own computer
E. by e-mail

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29. Files are uploaded to a web host with

A. POP3
B. CSS
C. FTP
D. SMTP
E. DNS

30. A 2.5 MB page at 10 Mbps loads in about

A. 25 s
B. 4 s
C. 2.0 s
D. 0.25 s
E. 8 s

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Paper II Part A – Structured questions

1. The web and planning a website *(8 marks)*

(i) Distinguish the Internet and the WWW. *(2 marks)*
(ii) Name three types of websites with an example each. *(3 marks)*
(iii) Compare hierarchical and linear navigation. *(3 marks)*

2. HTML pages *(8 marks)*

(i) Write the basic structure of an HTML page with a title. *(3 marks)*
(ii) Write HTML for an ordered list of two steps and a bookmark link. *(2 marks)*
(iii) Write HTML for a table with a caption, a header cell that spans two columns and a cell that spans two rows. *(3 marks)*

3. CSS *(8 marks)*

(i) Explain the parts of the rule h1 { color: navy; }. *(2 marks)*
(ii) Compare inline, internal and external CSS. *(3 marks)*
(iii) State the colour of each paragraph in the CSS demo and give the reason. *(3 marks)*

4. PHP and forms *(8 marks)*

(i) Distinguish static and dynamic web pages. *(2 marks)*
(ii) Write a form that sends a name and a password to login.php by POST. *(3 marks)*
(iii) Write PHP that reads the name from the form and greets the user. *(3 marks)*

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Paper II Part B – Essay questions

1. Designing a school website *(10 marks)*

(i) Explain how you would analyse user requirements for a school website. *(3 marks)*
(ii) Write the HTML of a home page with a heading, a menu of local links, an image and a news list. *(4 marks)*
(iii) Write an external style sheet for the site and show how it is linked. *(3 marks)*

2. A web-based student information system *(10 marks)*

(i) Create the data source: write SQL to create a student table and insert two rows. *(3 marks)*
(ii) Write an HTML form and save.php that stores a new student in MySQL. *(4 marks)*
(iii) Write PHP that lists the Tech students in a table ordered by mark and give the output for the sample data. *(3 marks)*

3. Publishing and performance *(11 marks)*

(i) Describe local, intranet and Internet publishing. *(3 marks)*
(ii) List the steps to publish a site through a free web hosting site. *(4 marks)*
(iii) A page is 2.5 MB and the user has 10 Mbps. Calculate the load time, then the time after a 1.8 MB image is compressed to 0.5 MB, and give two other factors. *(4 marks)*

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Exam tips

- Internet = network; WWW = service on it.
- Plan objectives, users, contents, pages and navigation first.
- html → head (title) → body.
- br is an empty tag; comments are not shown.
- #id bookmark, file.html local, https:// external.
- Count columns after colspan and rowspan.
- Selector { property: value; } – . class, # id.
- Inline > id > class > element.
- PHP runs on the server and echoes HTML.
- GET in URL, POST in body; name attribute = key.
- MB × 8 ÷ Mbps = seconds.
- Beyond boxes (PWAs, Flexbox, Laravel, CDNs) are interest only.

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Answers and explanations

Paper I

1. **B** – Service.
2. **C** – HTTP.
3. **D** – Portal.
4. **B** – Tree.
5. **E** – Title.
6. **B** – Empty.
7. **D** – h1.
8. **E** – Comment.
9. **B** – Same page.
10. **D** – Other site.
11. **C** – ol.
12. **E** – colspan 2 + 1.
13. **D** – rowspan.
14. **A** – alt.
15. **C** – Dot.
16. **E** – Id beats class.
17. **A** – Inline.
18. **E** – External.
19. **A** – WYSIWYG.
20. **A** – Notepad++.
21. **B** – Server-side.
22. **D** – 211 ÷ 3.
23. **E** – Radio.
24. **A** – GET.
25. **B** – Group.
26. **C** – ORDER BY mark DESC.
27. **A** – Row 2.
28. **D** – Local.
29. **C** – FTP.
30. **C** – 20 Mbit ÷ 10.

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Paper II Part A – model answers and marking points

1. *(8 marks)*

(i) (2 marks)

Network of networks (1); service of linked pages (1).

The World Wide Web: client and server



URL example: https://www.nie.lk/index.html → protocol · domain name · file

Client and server.

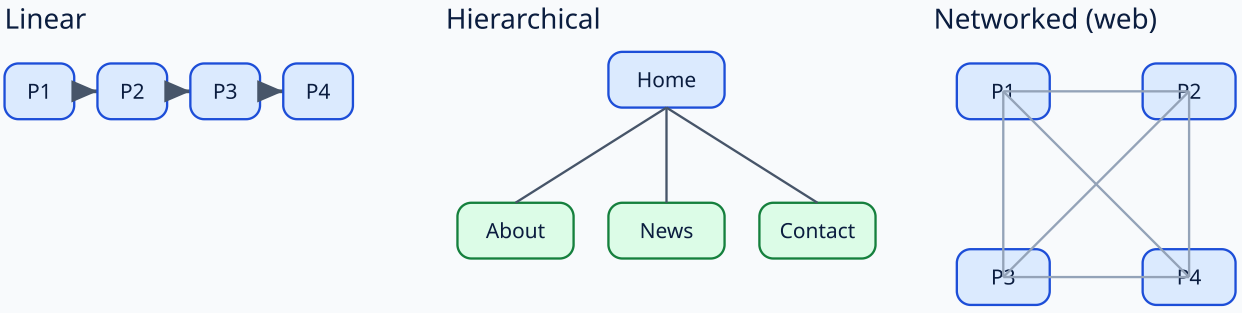
(ii) (3 marks)

Any three types (2); examples (1).

(iii) (3 marks)

Tree from home (1); one after another (1); suitable uses (1).

Navigation structures



Most school sites are hierarchical: a home page links to section pages.

Navigation.

🎯 Examiner tip: give a Sri Lankan example.

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2. *(8 marks)*

(i) (3 marks)
html (1); head with title (1); body with content (1).

(ii) (2 marks)
ol with li (1); a href="#id" and matching id (1).

(iii) (3 marks)
table and caption (1); th colspan="2" (1); td rowspan="2" with correct cell counts (1).

colspan and rowspan

Time	Subjects (colspan=2)	
Morning (rowspan=2)	ICT	Maths
	Physics	Chemistry

Grid: 3 rows × 3 columns. A merged cell uses the space of the cells it covers.

Merged cells.

🎯 Examiner tip: close every tag you open.

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3. *(8 marks)*

(i) (2 marks)
Selector h1 (1); property color and value navy (1).

Anatomy of a CSS rule

```
h1 { color : navy ; }
```

selector | property | value | declaration ends ;

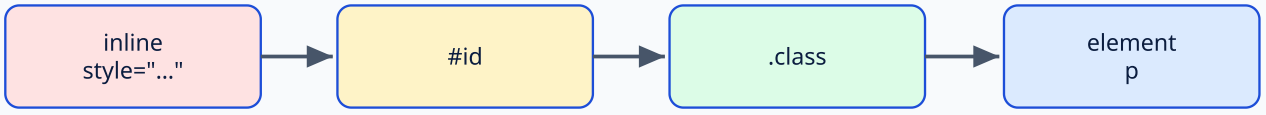
Comments: /* like this */ · several declarations go inside one { }

CSS rule.

(ii) (3 marks)
style attribute (1); style tag in head (1); linked .css file (1).

(iii) (3 marks)
black and green (1); red – id beats class (1); purple – inline wins (1).

Which style wins? (highest first)



Same priority: the rule written later wins. External, internal and inline styles all join the cascade.

Cascade.

🎯 Examiner tip: write the selector symbol (. or #) clearly.

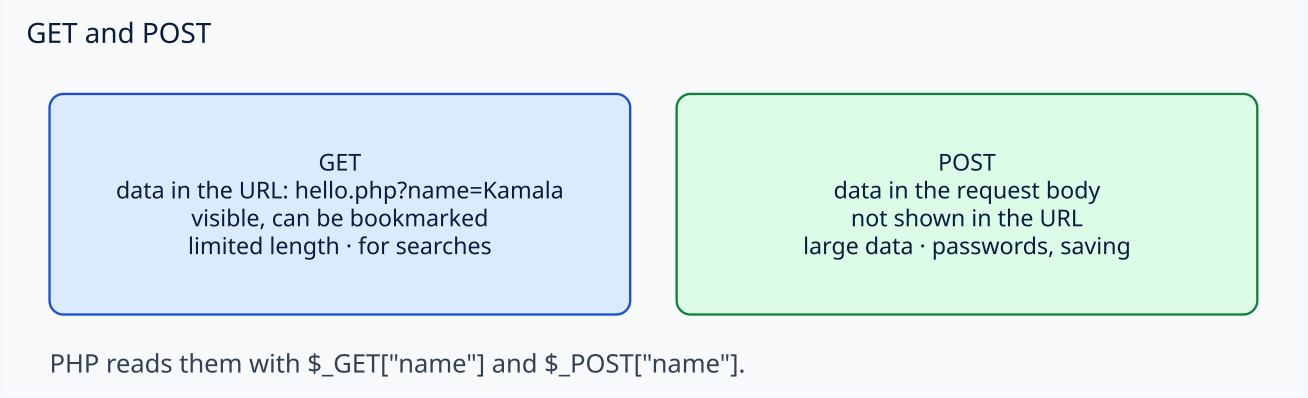
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4. *(8 marks)*

(i) (2 marks)
Same HTML for all (1); built on the server per request (1).

(ii) (3 marks)
form action method="post" (1); text and password inputs with name (1); submit (1).

(iii) (3 marks)
$_POST["name"] (1); htmlspecialchars (1); echo (1).



GET and POST.

🎯 Examiner tip: the name attribute is the key PHP reads.

Paper II Part B – model answers and marking points

1. *(10 marks)*

(i) (3 marks)
Objectives and users (1); contents per page (1); pages and navigation (1).

(ii) (4 marks)
structure (1); links (1); img with alt (1); list (1).

(iii) (3 marks)
rules with selectors (2); link tag in head (1).

🎯 Examiner tip: keep the menu the same on every page.

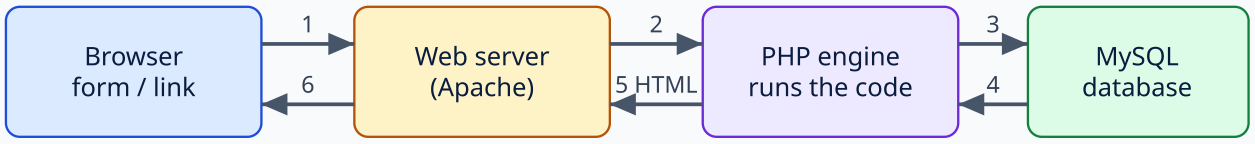
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2. *(10 marks)*

(i) (3 marks)
CREATE TABLE with key (2); INSERT (1).

(ii) (4 marks)
form with fields and method post (1); connect (1); $_POST (1); prepared INSERT (1).

How a dynamic PHP page is built



1 request (GET/POST) · 2 run .php file · 3 SQL query · 4 rows back · 5 HTML · 6 page shown

The browser never sees PHP code – only the HTML that PHP prints with echo.

PHP and MySQL.

(iii) (3 marks)
SELECT … WHERE … ORDER BY mark DESC (1); loop echo rows (1); Sunil 88 then Nimal 78 (1).

🎯 Examiner tip: show the HTML your PHP prints.

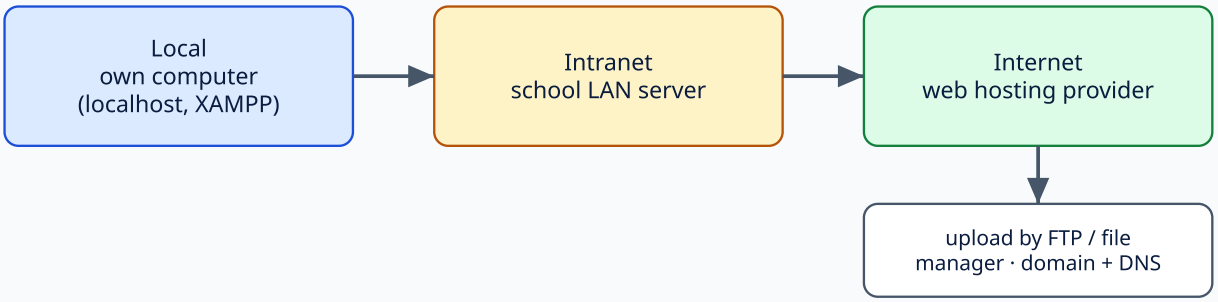
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3. *(11 marks)*

(i) (3 marks)

localhost (1); LAN server (1); hosting provider (1).

Publishing a website



Load time ≈ page size (bits) ÷ bandwidth: 2.5 MB = 20 Mbit; at 10 Mbps ≈ 2 s.

Publishing.

(ii) (4 marks)

test locally (1); register with host (1); upload with FTP (1); check links/domain (1).

(iii) (4 marks)

20 Mbit ÷ 10 = 2.0 s (1); 1.2 MB → 0.96 s (1); two other factors (2).

🎯 Examiner tip: multiply MB by 8 to get Mbit.

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