



SCHOOL OF SCIENCE AND TECHNOLOGY

Semester 1, 2026

FINAL EXAMINATION PAPER

ITC314: WEB DESIGN AND PROGRAMMING

Important Instructions to Students:

1. Read the questions, instructions carefully and answer the questions.
2. You are allowed an **extra 10 minutes reading time** (during this time, you are not allowed to write with pen) and **180 minutes (3 Hours) to complete this paper**.
3. Silent, non-programmable calculators are allowed, but not supplied.
4. Write all your answers in the answer booklet provided. If you need extra sheets, please ask from the supervisor. Write your name, course code and student identification number in the answer booklet and in the attendance sheet.
5. This paper contains three (3) sections A, B, and C. All questions are compulsory.
6. Write all your answers legibly. The marker has the right to award zero for answers that are not legible.
7. This is a **Closed Book Examination**. The University views plagiarism, cheating and dishonest practice as serious offences and if found, offenders are penalized.

Examination Paper Content (Format):

<u>Section</u>	<u>Question</u>	<u>Content</u>	<u>Marks</u>	<u>Suggested Time</u>
A	1-20	Multiple Choice	20	18 minutes
B	1-10	Short Answer Questions	30	60 minutes
C	1-7	HTML, CSS, JavaScript, and PHP	50	102 minutes
		TOTAL	100	180 Minutes

Section A

Multiple Choice (20 Marks)

1. Which protocol is used by web browsers to communicate with web servers?
 - A. FTP
 - B. SMTP
 - C. HTTP
 - D. DNS
2. Which model does the browser use to reconstruct a webpage in an orderly sequence?
 - A. CSSOM
 - B. SQL
 - C. DOM
 - D. XML
3. Which HTML tag is used to create a hyperlink?
 - A. <p>
 - B.
 - C. <a>
 - D. <link>
4. Which of the following is an example of a Content Management System (CMS)?
 - A. Apache
 - B. MySQL
 - C. WordPress
 - D. PHP
5. Which HTML element is commonly used to create a navigation menu?
 - A. <footer>
 - B. <section>
 - C. <nav>
 - D. <header>
6. Which HTML tag is used to create a table row?
 - A. <td>
 - B. <table>
 - C. <th>
 - D. <tr>
7. Which request is created when a user submits a web form?
 - A. GET request
 - B. SQL request
 - C. POST request
 - D. DNS request

8. HTML tables are arranged in _____.
 - A. Frames and sections
 - B. Rows and columns
 - C. Headers and footers
 - D. Menus and forms
9. Which design approach starts with smaller screens first?
 - A. Desktop first
 - B. Mobile first
 - C. Tablet first
 - D. Fixed width
10. Which tool helps test webpages on different screen sizes?
 - A. Compiler
 - B. Emulator
 - C. Database
 - D. Interpreter
11. JavaScript is mainly used for _____.
 - A. Server-side processing only
 - B. Client-side programming
 - C. Database storage
 - D. Operating systems
12. What is a function in programming?
 - A. A CSS style
 - B. A database query
 - C. A unit of code that performs a task
 - D. A webpage layout
13. Which event occurs when a button is clicked?
 - A. onhover
 - B. onclick
 - C. onload
 - D. onsubmit
14. Which type of error allows code to run but gives incorrect output?
 - A. Syntax error
 - B. Runtime error
 - C. Logical error
 - D. Compile error

15. What does PHP stand for?
- A. Personal Home Processor
 - B. Hypertext Preprocessor
 - C. Hyper Transfer Processor
 - D. Hightext Programming Page
16. Which symbol is used at the beginning of PHP variables?
- A. #
 - B. @
 - C. \$
 - D. %
17. Which function is used to connect PHP to MySQL?
- A. mysql_open()
 - B. mysqli_connect()
 - C. sql_connect()
 - D. db_open()
18. Which tag is used to start PHP code?
- A. <script>
 - B. <php>
 - C. <?php
 - D. <code>
19. Which PHP statement is used to display output on the screen?
- A. write
 - B. printline
 - C. echo
 - D. show
20. Which superglobal is used to collect form data sent using the POST method?
- A. \$_GET
 - B. \$_POST
 - C. \$_FORM
 - D. \$_DATA

Section B

Short Answer Questions (30 Marks)

1. What is the purpose of a web browser? Name two popular web browsers.

(3 Marks)

2. What is the role of Googlebot's?

(3 Marks)

3. Differentiate between absolute and relative links.

(3 Marks)

4. Explain DOM. Give Examples.

(3 Marks)

5. What is responsive web design? What is meant by a mobile-first design?

(3 Marks)

6. Why are mobile emulators used in web development?

(3 Marks)

7. What is a logical error in JavaScript? Explain with example.

(3 Marks)

8. What does PHP stand for? Why is PHP called a server-side scripting language?

(3 Marks)

9. Explain the purpose of \$_POST in PHP.

(3 Marks)

10. What is the purpose of a Content Management System (CMS)?

(3 Marks)

Section C

HTML, CSS, JavaScript, and PHP (50 Marks)

Note:

In order to answer the questions, complete the code snippets given below.

Question 1

Create a simple webpage add a heading titled “Welcome to My Webpage” and include a short paragraph introducing the webpage. Below the paragraph, create a relative link that directs the user to the about.html page.

Complete the code given below.

```
<!DOCTYPE html>
<html>
...
</html>
```

(5 Marks)

Question 2

Refer to Question 1 above and update the webpage to include internal CSS, which changes the text color of the heading “Welcome to My Webpage” to blue and the font size to 12px.

Complete the code given below.

```
<!DOCTYPE html>
<html>
<body>
<style>
...
</style>

</body>
</html>
```

(5 Marks)

Question 3

Create a simple HTML page that displays a table containing student information as shown below.

Student ID	Name	Course
2026001	John Smith	ITC314
2026002	Mary Kumar	ITC215
2026003	Peter Ali	ITC101

Complete the code given below.

```
<!DOCTYPE html>
<html>
<body>
...
</body>
</html>
```

(5 Marks)

Question 4

Create a webpage that contains a paragraph “Welcome to my Page” and a button. When the button is clicked, the text inside the paragraph should change to a new message “My First Web Page”.

Requirements:

- Use HTML to create the paragraph and button
- Use JavaScript and `getElementById()` to access the paragraph
- Use a function that is triggered when the button is clicked
- Replace the original paragraph text with a different message

Complete the code given below.

```
<!DOCTYPE html>
<html>
<body>
...
<script>
...

</script>
```

```
</body>
</html>
```

(10 Marks)

Question 5

Create a simple HTML form as shown below.

- Full Name
- Email
- Submit button

Use appropriate HTML form controls for each field and include a post method to send data to `process.php` page.

Complete the code given below.

```
<!DOCTYPE html>
<html>
<body>
...
</body>
</html>
```

(5 Marks)

Refer to the form above and create a PHP page named `process.php` to **receive** and **display** the submitted form data.

The PHP page should display:

- Full Name
- Email
- Password

Use the POST method to transfer data from the HTML form to the PHP page.

```
<!DOCTYPE html>
<html>

<?php
...
?>
```

```
</body>
</html>
```

(5 Marks)

Question 6

Create a simple login system using HTML and PHP.

Create an HTML file named `login.html` that contains:

- Username field
- Password field
- Login button

The form should send data to a PHP page named `loginprocess.php` using the POST method.

```
<!DOCTYPE html>
<html>
...
</body>
</html>
```

Create a PHP file named `loginprocess.php` that:

Receives the username and password entered in the form

Checks whether:

Username = admin

Password = 123

Displays “Login Successful” if both are correct

Otherwise displays “Wrong Username or Password”

```
<!DOCTYPE html>
<html>
<head>

<?php

...
?>

</body>
</html>
```

(10 Marks)

Question 7

A student registration form sends the following data to a PHP file named `save.php` using the POST method:

- Full Name
- Email
- Course

The data should be stored in a MySQL database named `studentdb` inside a table named `students`.

The table contains the following fields:

- Id
- Fullname
- Email
- Course

Write a PHP program to:

- Connect to the MySQL database
- Receive the submitted form data
- Insert the data into the `students` table
- Display the message **“Record Added Successfully”** after the data is inserted successfully.

```
<!DOCTYPE html>
```

```
<?php
```

```
...
```

```
?>
```

```
</body>
```

```
</html>
```

(10 Marks)

!! THE END !!