SLIATE

SRI LANKA INSTITUTE OF ADVANCED TECHNOLOGICAL EDUCATION

(Established in the Ministry of Higher Education, vide in Act No. 29 of 1995)

Higher National Diploma in Information Technology
Second Year, Second Semester Examination – 2018
HNDIT2413 – Web Application Development

Instructions for Candidates:
Answer five (05) questions only.
All questions carry equal marks.

No. of questions: 06
No. of pages   : 07
Time   : Three (03) hours

Q1.

i. What is meant by Web Application? **[03 Marks]**

ii. Write down two (02) differences between static and dynamic web pages. **[04 Marks]**

iii. Write the output of the following HTML code.

```
<table border="1" width="30%">
    <caption><b>KNOWLEDGE POOL.</b></caption>
        <tr>
            <th colspan="2" align="center">Innovative Project</th>
        </tr>
        <tr>
            <th>Title</th>
            <td>Home based Dengue Monitoring System</td>
        </tr>
        <tr>
            <th>Developer</th>
            <td>KSNTG Experts Pvt.Ltd</td>
        </tr>
        <tr>
            <th rowspan="2">Contact Number</th>
            <td>021 226 3245</td>
        </tr>
        <tr>
            <td>071 5643443</td>
        </tr>
</table>
```

[05 Marks]

iv. Write HTML code to create the following output. [08 Marks]

Hint: You can use the table for the vertical arrangement.

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[Continue]

(Total 20 Marks)

Q2.

i. Write three reasons of using Style Sheets for our web page . [03 Marks]

ii. Mention three ways to insert styles into your webpage and explain one of them.
[04 Marks]

iii. Write down the complete HTML code to include the following external css file and all the styles apply to the relevant HTML elements.
[05 Marks]

```
mystyle.css
h1, h2 {
        color: red;
        }
p.mypara {
        color: blue;
        text-align: center;
        }
#border {
        border-bottom-width: thick;
        border-bottom-style: double;
        border-bottom-color: green;
        }
```

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Instructions:

- Your page should contain the following HTML Elements: headings, paragraph and image
- Image(sweng.jpg) has a green color bottom double line thick border and 25% of width and height

iv. Complete the following html page by filling the blanks based on the given instructions.

[08 Marks]

```
<html>
<head>
<1)...............="text/css">
body{
        2)...............................;//insert background picture banner.png
}
.para{
        3).................................//set font type arial
        4)...............................;//set the font size 14px
        5).................................//set the italic font style
}
th{
        6)..................................//set the heading background color green
        color:white;
        7)..............................;//set the underline
}
</style>
</head>
<body>
<p 8)....................>HIGHER NATIONAL DIPLOMA IN ENGINEERING -
(HNDE)</p>
<table border="1">
        <tr>
                <th colspan="2" align="center">SLIATE</th>
        </tr>
        <tr>
                <th>HNDE</th>
                <td>ATI GALLE</td>
        </tr>
        <tr>
                <th>HNDE</th>
                <td>ATI COLOMBO</td>
        </tr>
        <tr>
                <th>HNDE</th>
                <td>ATI JAFFNA</td>
        </tr></table> </body></html>
```

(Total 20 Marks)

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Q3.

i.   Mention two ways to include the JavaScript into a HTML document.   [03 Marks]

ii. What do you mean by HTML DOM?   [03 Marks]

iii. Write JavaScript functions to the following form.

Finding factorial value

Enter number [_____]

[Fac]

Result [_____]

[clear]

No	Element	Attribute Values(Name or Id)
1	Text Box	num
2	Text Box	result

a.) When you click the "Fac" button to find the factorial value of the entered number, the result should be displayed in the relevant text box.

[04 Marks]

b.) When you click the "clear" button, all the text boxes should be cleared.

[02 Marks]

iv. Consider the below HTML Code and write JavaScript function (validation ()) to validate the index number field and display alert messages to the user according to the given instructions.

[08 Marks]

Index number field should take the numbers only and value between 1 and 50(including 1, 50) => Valid Index Number

Otherwise: Invalid Index Number

If the user entered invalid index number, the alert message should appear and cursor point should focus the relevant text box.

HTML code:

```
<html>
<head></head><body>
<form method = "post">
<p>Check your results here!!!</p><br>
Index Number: <input type="text" id="index"/><br><br>
    <input          type="button"
onClick="validation()" value="Click Here To Go"/>
</form></body></html>
```

(Total 20 Marks)

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Q4.

i. Define the Server-side scripting and write two server-side web technologies.

[04 Marks]

ii. In order to develop and run PHP web pages, what are the three components needed to be installed on the computer system? [03 Marks]

iii. Write the output of the following PHP codes. [05 Marks]

a.
```php
<?php
    define("index",25);
    echo index++;
?>
```

b.
```php
<?php
    St = 8;
    St++;
    echo "Answer 1: ",St--,"<br>";
    $n = 5;
    ++$n;
    echo "Answer 2: ",$n,"<br>";
    St += 2;
    Sn -= 2;
    Sfinal = St.Sn;
    echo "Answer 3: ",Sfinal;
?>
```

iv. Write a php code segment to print the triangular number of 1 to 10 (sequence) in tabular form using for loop. [08 Marks]

Table headings: Sequence/Number (n) and Triangular Number
Finding triangular number using the equation $T(n) = n*(n+1)/2$

(Total 20 Marks)

Q5.

i. Define the term "session" and write how you inform the server that the session is going to start using PHP. [03 Marks]

ii. PHP is Object Oriented language. Define a class called " MyWorld" and create an instance of this class in PHP. [04 Marks]

iii. An associative array, each ID key is associated with a value. Define an associative array to hold the details- name , Address, TP and Email of a student and print those values with the relevant keys? [05 Marks]

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iv. Write a PHP function to display inserted data, by considering the following HTML form.

[08 Marks]

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Element	Attribute Properties	
	Id	Name
Full Name Text Box	Name	
Address Text Box	Addr	
Membership Type Radio Button	mtype	
I accept the terms and conditions checkbox	accept	

(Total 20 Marks)

Q6. Answer the below questions based on the given instructions

DBMS	: MySQL
Web Programming Language	: PHP
Database Server	: localhost
User Name	: root
Password	: galtri
Database Name	: HNDIT
Table Name	: researcher

Write PHP code fragment to do the following

i. Create a connection to MySQL Database and check the connection.

[03 Marks]

ii. Select the database HNDIT and create the table researcher.
[Hint: table structure-
researcher (Resid, Firstname, Lastname, Researcharea, Age)
Resid is a primary key]

[04 Marks]

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iii.   Insert the below data set into the researcher table.

[05 Marks]

Firstname: Dr.Roshz
Lastname: Ragel
Researcharea: Ontology
Age:30

iv.   Change the Age to 32 of the researcher whose Resid=1 and display the records of the updated researcher as follows.

[08 Marks]

ResID:1
First Name: Dr.Roshz
Last Name: Ragel
Research Interest: Ontology
Age:32

(Total 20 Marks)