

USN : 

**CMR Institute of Technology, Bangalore**  
**DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING**  
**I - INTERNAL ASSESSMENT**

Semester: 6-CBCS 2018  
 Subject: WEB TECHNOLOGY AND ITS APPLICATIONS (18CS63)  
 Faculty: Ms Priyadarshini A


Date: 23 May 2021  
 Time: 09:00 AM - 10:30 AM  
 Max Marks: 50

*Answer any 5 question(s)*

Q.No		Marks	CO	PO	BT/CL
1	<p>Design the given form in table layout and use appropriate styles as shown in figure.</p>	10	CO2	PO3	L3
2	What are the three cascade principles used by browsers when style rules conflicts? Briefly describe each.	10	CO1	PO1	L1
3	<p>Explain the role of the following semantic elements of HTML5 with syntax and script segments.</p> <p>i) &lt;nav&gt;            ii) &lt;figure&gt;            iii) &lt;aside&gt;</p>	6	CO1	PO1	L1
	b) Compare id selector and class selector in CSS with suitable example.	4	CO1	PO2	L2
4	a) Explain the role of <ul> and <ol> HTML tags with example.	4	CO1	PO2	L1
	b) What is CSS? Illustrate how it is added to HTML in different ways with suitable examples.	6	CO1	PO1	L2
5	<p>Observe the given figure and list out all the possible style statements with CSS snippets applied on it.</p>	10	CO1	PO2	L4

Develop a HTML document for your class timetable as given below.

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 <b>DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING</b>									
Class : 6 <sup>th</sup> Semester / 'A' Section Class Teacher : Prof. Binnet Kumar Jha					Room No. : LH - 204 Section : Apr 2021 - Jul 2021				
Day	08:00 - 09:00 AM	09:00 - 10:00 AM	10:00 - 11:20 AM	11:20 - 12:20 PM	01:00 - 02:00 PM	02:00 - 03:00 PM	03:00 - 04:00 PM		
Mon	FE	09:00AM - 09:20AM BREAK	ALMAD LAB, A2-ST LAB, A3-FS LAB (9:20AM - 12:00PM)	LUNCH BREAK (12:00PM - 1:00PM)	TYL - VA	FS	WEB		
Tue	OE	ST	SHORT BREAK (10:00 - 10:20 AM)	TYL - SS	ST	FS	WEB		
Wed	A1-ST LAB, A2-FS, A3-MAD (8:00AM - 10:40AM)		(10:40AM - 11:20AM BREAK)	FE	DEPARTMENTAL ACTIVITIES				
Thu	OE	FS	WEB	TYL - QA	INSTITUTIONAL ACTIVITIES				
Fri	FE	ST	OE	FS	WEB	TYL - LR	WEB (TC)		
Sat	OE	FE	SHORT BREAK (08:20 AM)	AL-FS LAB, A2-MAD LAB, A3-ST LAB (10:20AM - 1:00PM)	LUNCH BREAK (1:00PM - 2:00PM)	ST			

Sub Code	Subject	Faculty	Signature	A1	A2	A3
18E61	File Structures (FS)	Prof. Binnet Kumar Jha		LAB-01: Software Testing Laboratory (18E166)		
18E62	Software Testing (ST)	Dr. M Farida Begam		L11(GANESH, BIRANYA)	L11(GAYATHI, BIRANYA)	L11(GANESH, CHITRASEKHARAN)
18C563	Web Technology and its Applications (WEB)	Dr. Ganesh D R		LAB-02: File Structures Laboratory with mini project (18E167)		
18CS641*	Data Mining and Data Warehousing (PE)	Dr. M Farida Begam		L11(BINNET, SHELPA)	L11(SHELPA, ANAND)	L11(GWATHI, ANAND)
18CS643*	Cloud Computing and its Applications (PE)	Prof. Shipra Pande		LAB-03: Mobile Application Development (18CSMP08)		
18CS644*	Advanced JAVA and J2EE (PE)	Prof. Binnet Kumar Jha		L11(SUBHAKA, AKHILAA)	L11(GANESH, SUBHAKAR)	L11(SUBHAKA, PRAYAS)
18EE653**	OE - Renewable Energy Systems	Prof. Nishara F V, Prof. Pritinika P, Dr. Sallendra B		Mentors		
18EC652**	OE - Sensors and Signal Conditioning			Dr. Ganesh, Dr. Jeeha Sumel Rai, Prof. Ashwin Doko, Prof. Ann Jose, Prof. Vidya U, Prof. Prasad B S		
18CV652**	OE - Traffic Engineering			Class Representatives:		
18ME651**	OE - Non Conventional Energy Sources	Dr. Harish Babu / Prof. Naveeth				
	TYL - VASSQALR	Prof. Merin / Prof. Mouma / Prof. Sachin / Prof. Sumant				

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CO1

PO3

L3

**Scheme Of Evaluation**  
**Internal Assessment Test 1 – MAY 2021**

<b>Sub:</b>	Web Technology and its applications						<b>Code:</b>	18CS63	
<b>Date:</b>	23 / 05 / 2021	<b>Duration:</b>	90mins	<b>Max Marks:</b>	50	<b>Sem:</b>	VI	<b>Branch:</b>	ISE

**Note:** Answer Any FIVE Questions

Question #		Description	Marks Distribution		Max Marks
1		Write a HTML program which includes forms of different type of input type and place the entire forms inside the table and add some stylings		10 m	10 M
2		Write three cascade principles <ul style="list-style-type: none"> <li>• Inheritance</li> <li>• Specificity</li> <li>• Location</li> </ul> Explanation	4m 3m 3m	10M	10 M
3	a)	Explain in brief the following tags <ul style="list-style-type: none"> <li>• Nav</li> <li>• Figure</li> <li>• Aside</li> </ul> One example program	2M 2M 2M	6M	10 M
	b)	Compare id and class selectors in css Explanation with program	4M	4M	
4	a)	Explain OL and UL tags with one program	4M	4M	10 M
	b)	Cascading style sheets <ul style="list-style-type: none"> <li>• Inline</li> <li>• Embedded</li> <li>• External</li> </ul> Explanation with program	2M 2M 2M	6M	
5		Write a HTML program which illustrated the different css, styles , box model used in the figure		10M	10 M

6		Write a HTML program which uses the table concept and gives the output of a class time table		10M	10M
---	--	--	--	-----	-----

1. Design the given form in table layout and use appropriate styles as shown in figure.

## Form within Table

Name	<input type="text"/>
Password	<input type="password"/>
Email	<input type="text"/>
Contact no.	<input type="text"/>
Country	<input type="text" value="Choose a country"/>
Permant Address	<input type="text" value="enter address with pincode"/>
Gender	<input type="radio"/> Male <input type="radio"/> Female
Languages known	<input type="checkbox"/> C <input type="checkbox"/> Java <input type="checkbox"/> Python <input type="checkbox"/> C++
<input type="button" value="Submit"/> <input type="button" value="Reset"/>	

### Solution:

```
<html>
<head>
<style>
table,th{
border:solid 1pt black;
border-collapse: collapse;
padding: 15px;
}
td{
border:solid 1pt black;
padding:10px;
}

```

```
tr:nth-child(odd)
{
  background-color: cornsilk;
}
tr:nth-child(even)
{
  background-color:darksalmon
}
th{
  background-color: cyan;
}
.merged{
  text-align: center;
}
</style>
</head>
<body>
<h2>Form within Table</h2>
<form method="GET" action=" "></form>
<table border = "border">
  <tr>
    <td>
      Name
    </td>
    <td>
      <input type="text" name="name"/>
    </td>
  </tr>
  <tr>
    <td>
      Password
    </td>
    <td>
      <input type="password" name="password"/>
    </td>
  </tr>
</table>
```

```
</td>
</tr>
<tr>
  <td>
    Email
  </td>
  <td>
    <input type="email" name="email">
  </td>
</tr>
<tr>
  <td>
    Contact no.
  </td>
  <td>
    <input type="tel" name="contactno">
  </td>
</tr>
<tr>
  <td>
    Country
  </td>
  <td>
    <select name="where">
      <option>Choose a country</option>
      <option>India</option>
      <option>Australia</option>
      <option>United States</option>
    </select>
  </td>
</tr>
<tr>
  <td>
    Permant Address
```

```
</td>
<td>
  <textarea placeholder="enter address with pincode"></textarea>
</td>
</tr>
<tr>
<td>
  Gender
</td>
<td>
  <input type="radio" name="gender" value="male">Male
  <br>
  <input type="radio" name="gender" value="female">Female
</td>
</tr>
<tr>
<td>
  Languages known
</td>
<td>
  <input type="checkbox" name="C"/>
  <label>C</label> <br>
  <input type="checkbox" name="Java"/>
  <label>Java</label> <br>
  <input type="checkbox" name="Python"/>
  <label>Python</label> <br>
  <input type="checkbox" name="PHP"/>
  <label>C++</label>
</td>
</tr>
<tr>
<td class="merged" colspan="2">
  <input type="submit"/>

```



```
<input type="reset"/>
</td>
</tr>
</table>

</body>
</html>
```

**2. What are the three cascade principles used by browsers when style rules conflicts? Briefly describe each.**

**Solution :**

[The Cascade: How Styles Interact](#)

Multiple CSS rules can be defined for the same HTML element, at different locations – inline, embedded or external. The browser determines the style to be applied on an element, depending on the location and hierarchy of the html element.

The “Cascade” in CSS refers to how conflicting rules are handled. CSS uses the following cascade principles to help it deal with conflicts: inheritance, specificity, and location.

**Inheritance**

**Inheritance** is the first of these cascading principles. Many (but not all) CSS properties affect not only themselves but their descendants as well. Font, color, list, and text properties are inheritable; layout, sizing, border, background, and spacing properties are not inheritable.

If suppose, this is a document,

```
<head>
<style>
```

```
body {
  font-family: Arial;
  color: red;
  border: 8pt solid green;
  margin: 100px;
}

div {
  font-weight: bold;
}
</style>
</head>
<body>
<div>Will be displayed in red, with arial font and bold</div>
</body>
```

The font settings are inherited from the parent tag, border and margin are not inheritable. However it is possible to tell elements to inherit properties that are normally not inheritable, by explicitly specifying as 'inherit'.

```
div {
  font-weight: bold;
  border: inherit;
  margin: inherit;
}
```

## Specificity

**Specificity** is how the browser determines which style rule takes precedence when more than one style rule could be applied to the same element. In CSS, the more specific the selector, the more it takes precedence (i.e., overrides the previous definition)

```
<head>
<style>
  body {
    font-family: Arial;
    color: red;
    border: 8pt solid green;
    margin: 100px;
  }

  div {
    font-weight: bold;
    color: blue;
  }
</style>
</head>
<body>
<div>Will be displayed in blue, with arial font and bold</div>
</body>
```

The content of <div> is displayed in blue, as the red color setting of <body> tag is overridden in the specification of <div> tag.

## Location

The principle of location is that when rules have the same specificity, then the latest are given more weight. I.e., an inline style will override one defined in an embedded style sheet and embedded style will override the external style sheet.

Styles defined in external style sheet X will override styles in external style sheet Y if X's <link> element is after Y's in the HTML document.

```
<link rel= "stylesheet" href= "Y">
```

```
<link rel= "stylesheet" href= "X">
```

When the same style property is defined multiple times within a single declaration block, the last one will take precedence.

## Specificity algorithm:

- First count 1 if the declaration is from a "style" attribute in the HTML, 0 otherwise (let that value = a).
- Count the number of ID attributes in the selector (let that value = b).
- Count the number of class selectors, attribute selectors, and pseudo-classes in the selector (let that value = c).
- Count the number of element names and pseudo-elements in the selector (let that value = d).
- Finally, concatenate the four numbers a+b+c+d together to calculate the selector's specificity.

3. Explain the role of the following semantic elements of HTML5 with syntax and script segments
  - i) <nav>
  - ii) <figure>
  - iii) <aside>

### Navigation

The <nav> element represents a section of a page that contains links to other pages or to other parts within the same page. Like the other new HTML5 semantic elements, the browser does not apply any special presentation to the <nav> element. The <nav> element was intended to be used for major navigation blocks. However, like all the new HTML5 semantic elements, from the browser's perspective, there is no definite right or wrong way to use the <nav> element. Its sole purpose is to make the document easier to understand.

```
<header>
  
  <h1>Fundamentals of Web Development</h1>
  <nav role="navigation">
    <ul>
      <li><a href="index.html">Home</a></li>
      <li><a href="about.html">About Us</a></li>
      <li><a href="browse.html">Browse</a></li>
    </ul>
  </nav>
</header>
```

### Figure and Figure Captions

Prior to HTML5, web authors typically wrapped images and their related captions within a nonsemantic <div> element. In HTML5 we can instead use the <figure> and <figcaption> elements. *The figure element represents some flow content, optionally with a caption, that is self-contained and is typically referenced as a single unit from the main flow of the document.*

```
<p>This photo was taken on October 22, 2011 with a Canon EOS 30D camera.</p>
<figure>
  <br/>
  <figcaption>Conservatory Pond in Central Park</figcaption>
</figure>
</p>
```

The above tags illustrate a sample usage of the <figure> and <figcaption> element.

### Aside

The <aside> element is similar to the <figure> element, the <aside> element “represents a section of a page that consists of content that is indirectly related to the content around the aside element”. The <aside> element is used for sidebars, pull quotes, groups of advertising images, or any other grouping of non-essential elements.

(b) Compare id selector and class selector in CSS with suitable example.

### **Solution: Class Selectors**

A **class selector** allows to simultaneously target different HTML elements. The HTML elements with the same class attribute value, can be styled by using a class selector.

Syntax: period (.)classname { styles }

Eg:

```
<head>
  <title>Student details </title>
  <style>
    .first {
      Font-style: italic;
      Color:red;
    }
  </style>
</head>
<body>
  <h1 class="first">Student Info</h1>
  <div>
    <p class="first">Amith</p>

    <p>Easy to learn.</p>
  </div>
  <hr/>
  <div>
    <p class="first">Bhushan</p>
    <p>Very much special.</p>
  </div>
  <hr/>
</body>
```

### **Id Selectors**

An **id selector** allows to assign style to a specific element by its id attribute.

Syntax: hash (#)id name

Eg:

```
<head>
  <title>Student details </title>
  <style>
    #first{
      Font-style: italic;
      Color:red;
    }
  </style>
</head>
<body>
  <h1 id="first">Student Info</h1>
  <div>
```

```

<p id="first">Amith</p>
<p>Easy to learn.</p>
</div>
<hr/>
<div>
<p >Bhushan</p>
<p>Very much special.</p>
</div>
<hr/>
</body>

```

4. (a) Explain the role of <ul> and <ol> HTML tags with example.

**Solution:**

### Lists

HTML provides simple and effective ways to specify lists in documents.

There are three types of lists:

■ **Unordered lists.** Collections of items in no particular order; these are by default rendered by the browser as a bulleted list. However, it is common in CSS to style unordered lists without the bullets. Unordered lists have become the conventional way to markup navigational menus.

■ **Ordered lists.** Collections of items that have a set order; these are by default rendered by the browser as a numbered list.

Notice that the list item element can contain other HTML elements.

```

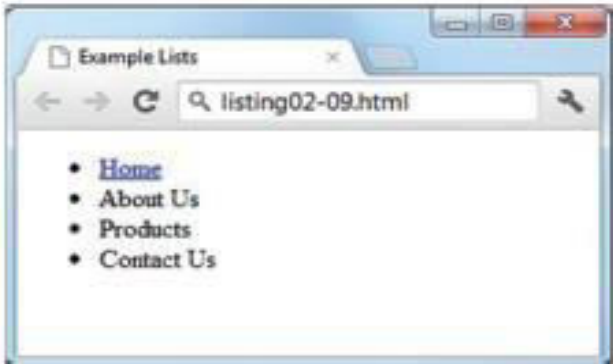
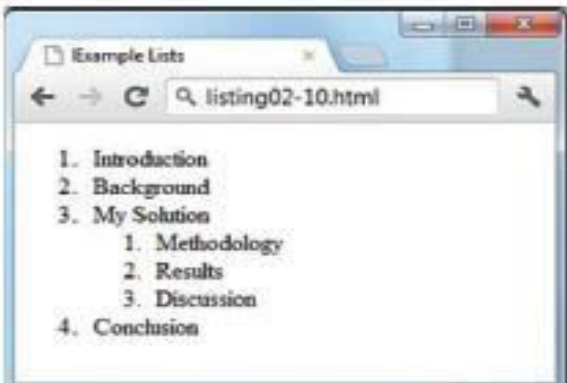
<ul>
  <li><a href="index.html">Home</a></li>
  <li>About Us</li>
  <li>Products</li>
  <li>Contact Us</li>
</ul>

```

```

<ol>
  <li>Introduction</li>
  <li>Background</li>
  <li>My Solution</li>
  <li>
    <ol>
      <li>Methodology</li>
      <li>Results</li>
      <li>Discussion</li>
    </ol>
  </li>
  <li>Conclusion</li>
</ol>

```

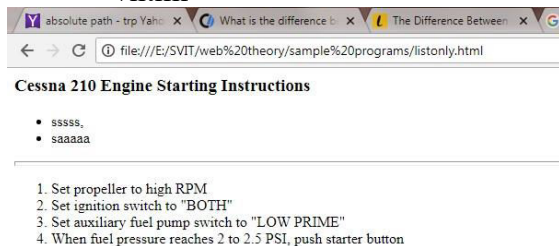



<html >

```

<head> <title> list </title>
</head>
<body>
  <h3> Cessna 210 Engine Starting Instructions </h3>
  <ul >
    <li>sssss,</li>
    <li>saaaaa</li>
  </ul>
  <hr size="5" />
  <ol >
    <li> Set propeller to high RPM </li>
    <li> Set ignition switch to "BOTH" </li>
    <li> Set auxiliary fuel pump switch to "LOW PRIME" </li>
    <li> When fuel pressure reaches 2 to 2.5 PSI, push starter button </li>
  </ol>
</body>
</html>

```



**4 (b)** What is CSS? Illustrate how it is added to HTML in different ways with suitable examples.

Solution : Cascading style sheets

### Inline Styles

**Inline styles** are style rules placed within an HTML element using the style attribute, as shown below. An inline style only affects the element it is defined within and overrides any other style definitions. Selector is not necessary with inline styles and that semicolons are only required for separating multiple rules.

Disadvantages of using inline style-

Style is applied to an element only

Maintaining the inline style is difficult

The advantage of using inline style is that it can be quickly tested for a style change.

Eg: <h2 style = "font-size:24pt;"> Description</h2>

<h2 style = "font-size:24pt; font-weight:bold;"> Reviews </h2>

## **Embedded Style Sheet (Document Level/Internal )**

**Embedded style sheets** (also called **internal styles** or **document level styles**) are style rules placed within the <style> element (inside the <head> element of an HTML document) and apply to the whole body of the document.

The disadvantage of using embedded styles is that it is difficult to consistently style multiple documents when using embedded styles. But it is helpful when quickly testing out a style that is used in multiple places within a single HTML document. Spaces are ignored in <style> element.

```
<head>
<title>Student Data</title>
<style>
h1 { font-size: 24pt; }
h2 {
font-size: 18pt;
font-weight: bold;
}
</style>
</head>
<body>
<h1>Student count</h1>
<h2>CSE/ISE Department</h2>
.....
</body>
```

## **External Style Sheet**

**External style sheets** are style rules placed within an external text file with the .css extension. This style provides the best maintainability. When you make a change to an external style sheet, all HTML documents that reference that style sheet will automatically use the updated version.

To reference an external style sheet, you must use a <link> element (within the <head> element). Several style sheets can be linked at a same time. Each linked style sheet will require its own <link> element.

```
<head >
<title>Share Your Travels -- New York - Central Park</title>
<link rel="stylesheet" href="styles.css" />
</head>
```

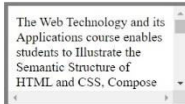


5. Observe the given figure and list out all the possible style statements with CSS snippets applied on it.

Solution :

The Web Technology and its Applications course enables students to Illustrate the Semantic Structure of HTML and CSS, Compose forms and tables using HTML and CSS, Design Client-Side programs using JavaScript and Server-Side programs using PHP, Infer Object Oriented Programming capabilities of PHP, Examine JavaScript frameworks such as jQuery and Backbone.

The learning outcomes are as follows: Adapt HTML and CSS syntax and semantics to build web pages, Construct and visually format tables and forms using HTML and CSS, Develop Client-Side Scripts using JavaScript and Server-Side Scripts using PHP to generate and display the contents dynamically, Appraise the principles of object oriented development using PHP, Inspect JavaScript frameworks like jQuery and Backbone which facilitates developer to focus on core features



```
<!DOCTYPE html>
<html>
<head>
<style>
div {
width: 200px;
height: 100px;
padding: 10px;
overflow: scroll;
border: 5px solid gray;
margin: 30px;
}
p{
border:solid 1pt red;
margin:30px;
padding:30px;
background-color: silver;
}
.new {
border:solid 5pt;
border-color: red blue orange green;
margin:30px;
padding:30px;
background-color:violet;
font-size:1.5em;
}
</style>
</head>
<body>
```

```
<p>The Web Technology and its Applications course enables students to
Illustrate the Semantic Structure of HTML and CSS,
Compose forms and tables using HTML and CSS,
Design Client-Side programs using JavaScript and Server-Side programs using
```

PHP,

Infer Object Oriented Programming capabilities of PHP,  
Examine JavaScript frameworks such as jQuery and Backbone.

</p>

<p class="new">

The learning outcomes are as follows: Adapt HTML and CSS syntax and semantics to build web pages, Construct and visually format tables and forms using HTML and CSS, Develop Client-Side Scripts using JavaScript and Server-Side Scripts using PHP to generate and display the contents dynamically, Appraise the principles of object oriented development using PHP, Inspect JavaScript frameworks like jQuery and

Backbone which facilitates developer to focus on core features

</p>

<div>The Web Technology and its Applications course enables students to

Illustrate the Semantic Structure of HTML and CSS,

Compose forms and tables using HTML and CSS,

Design Client-Side programs using JavaScript and Server-Side programs using

PHP,

Infer Object Oriented Programming capabilities of PHP,

Examine JavaScript frameworks such as jQuery and Backbone.

The learning outcomes are as follows: Adapt HTML and CSS syntax and semantics to build web pages, Construct and visually format tables and forms using HTML and CSS, Develop Client-Side Scripts using JavaScript and Server-Side Scripts using PHP to generate and display the contents dynamically, Appraise the principles of object oriented development using PHP, Inspect JavaScript frameworks like jQuery and

Backbone which facilitates developer to focus on core features

</div>

</body>

</html>

6. Develop a HTML document for your class\_me table as given below



**DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING**

Class : 6 <sup>th</sup> Semester / 'C' Section	Room No. : LH - 206
Class Teacher : Dr. Ganesh D R	Session : Apr 2021 – Jul 2021

Time	08:00 - 09:00 AM	09:00 - 10:00 AM	10:20 - 11:20 AM	11:20 - 12:20 PM	01:00 - 02:00 PM	02:00 - 03:00 PM	03:00 - 04:00 PM
Day	PE	WEB	SHORT BREAK (10:00-10:20 AM)	FS	WEB	C1-ST LAB, C2-FS LAB, C3-MAD LAB (1:00PM - 3:40PM)	
Mon	OE	(9:00AM - 9:20AM BREAK)	C1-FS LAB, C2-MAD LAB, C3-ST LAB (9:20AM - 12:00PM)	LUNCH BREAK (12:00PM-1:00PM)	TYL - SS	ST	
Tue	ST	TYL - VA	SHORT BREAK (10:00-10:20 AM)	ST	DEPARTMENTAL ACTIVITIES		
Wed	OE	FS	TYL-QA	WEB	INSTITUTIONAL ACTIVITIES		
Thu	PE	FS	OE	WEB	TYL-LR	WEB (TC)	
Fri	OE	FE	ST	FS	C1-MAD LAB, C1-ST LAB, C3-FS LAB (1:30PM - 4:00PM)		
Sat							

Sub Code	Subject	Faculty	C1	C2	C3
18IS61	File Structures (FS)	Prof. Prasad B S	LAB-01 : Software Testing Laboratory (18ISL66)		
18IS62	Software Testing (ST)	Dr. Farida M Begam	L111 (GANESH, CHITHAMBARATHANU)	L113 (GANESH, SWATHI)	L111 (GANESH, CHITHAMBARATHANU)
18CS63	Web Technology and its Applications (WEB)	Dr. Ganesh D R	LAB-02 : File Structures Laboratory with mini project (18ISL67)		
18CS641	Data Mining and Data Warehousing (PE)	Dr. M Farida Begam	L110 (SWATHI, BINEET)	L110 (PRASAD, VIDYA)	L110 (PRASAD, VIDYA)
18CS643*	Cloud Computing and its Applications (PE)	Prof. Shilpa Pande	LAB-03 : Mobile Application Development (18CSMP68)		
18CS644*	Advanced JAVA and J2EE (PE)	Prof. Bineet Kumar Jha	L111 (PRIYA, SUDHAKAR)	L111 (AKHILAA, PRIYA)	L111 (AKHILAA, SUDHAKAR)
18EE653**	OE - Renewable Energy Systems	Prof. Niharika P V / Prof. Priyanka P / Dr. Sathendra B	Mentors		
18EC652**	OE - Sensors and Signal Conditioning		Dr. Ganesh, Prof. Swathi Y, Dr. Savitha Hiremath, Prof. Bineet Kumar Jha, Prof. Akhila, Dr. Shreekanth Prabhu		
18CV652**	OE - Traffic Engineering		Class Representatives:		
18ME651**	OE - Non Conventional Energy Sources	Dr. Harish Babu / Prof. Nayaneezh			
	TYL - VA/SS/QA/LR	Prof. Merin / Prof. Mouna / Prof. Sachin / Prof. Simant			