VIT
UNIVERSITY
(Estd. u/s 3 of UGC Act 1956)

SCHOOL OF INFORMATION TECHNOLOGY AND ENGINEERING
CAT II –Programme- B.Tech
Fall Semester - 2018-19

Course Name: Web Technologies
Course Code: ITE1002
Slot   : B2

Duration: 1 ½ Hrs
Max. Marks : 50 marks

Faculty : Prof. A. Mary Mekala, Prof.V. Mareeswari, Prof. J. Karthikeyan

Answer all the questions (5 * 10 = 50 marks)

1. Design a form as given below using different form elements and perform validation on the different fields as given in the web page below.

Sign-up Form

The following errors have occurred

- The real name must be at least 3 characters
- The email format is invalid
- The age must be at least 18
- The password must be between 4 - 8 characters
- The password confirmation does not match
- The password confirmation must be between 4 - 8 characters

Real Name (*)
Bo

E-mail (*)
bad-email

Password (*)
••

Password (*)
•

Age
3

Fields denoted with an asterisk (*) are mandatory.

Sign-up

2. A lottery is a type of game where people buy tickets and then win if their numbers get chosen. Use Javascript code that generates a set of 50 random numbers in the range of 1-50. Display the first 6 values from the generated set every time the user clicks the "Get Lottery Numbers" button. Allow the user to enter 6 Lottery numbers from the

ticket owned by them. Display the number of winning numbers by comparing the user inputted values against the 6 selected values.

Winning Lottery Numbers

```
x - 1    31
x - 2    11
x - 3    41
x - 4    2
x - 5    10
x - 6    1         31
x - 7    32        11
x - 8    35        41
x - 9    37        2
x - 10   19        10
```

[Get Lottery Numbers]

My Lottery Numbers

| 8 | 9 | 10 | 11 | 12 | 13 |

Number of winning numbers was : 2

Number of draws : 1

3. Develop an E-greeting card application with _Jquery_. When a user clicks on a message "open with smile" it should display the greeting card with CSS effects embedded within it. When the card is opened, it should make a transition from one effect to another by embedding animation effect within it and also change the content of the greeting card.

4. Design a web page that displays three links namely Appear, Disappear and Change.

   a. Implement a jquery code that will display a green box when the user clicks the "Appear" link.

   b. Implement a jquery code that will make the green box to disappear when the user clicks the "Disappear" link.

   c. Implement a jquery code that will change the shape and position of the green box when the "Change" link is clicked.

5. The Management has announced the September month bonus for their employees. The finance department is in the process of calculating the salary by satisfying the following criteria:

Experience	Bonus
>=15 years	Rs.10000
<15 years	Rs.5000

The employee data such as employee id, employee name, Date of joining, Organization are retrieved as response from the server in the JSON format. The finance officer fetches those information and calculates the salary with respect to the year of experience. Write the code for the above scenario.

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Final Assessment Test – November 2018

Course: ITE1002 - Web Technologies

Class NBR(s):4331/4340/6284

Slot: B2

Time: Three Hours

Max. Marks: 100

Answer any <u>TEN</u> Questions

(10 X 10 = 100 Marks)

1. Design the following page using HTML and CSS. Apply a background color for contents below Hot items and New items. Create an external style sheet named as "external.css" and provide some styles for h2 and div tags. Create an html file named as "welcome.html" and link the external style sheet. Include internal style sheet for body tags. Include a <p> tags with inline style sheet.

   [Note: Longer text and repeated tags may be written as ....]

2. a) Illustrate the importance of XHTML and explain how an HTML code can be converted into a XHTML code. [6]

   b) Compare class and id selectors in CSS with an example. [4]

3. Design the following personal details form and validate the form which satisfies the following conditions using JavaScript and regular expression:

- Contact number should be exactly 10 digits.
- Password can be a combination of alphabet and numbers. It should have atleast one uppercase character.
- Email validation.
- Check whether all the fields are entered. Otherwise display an alert message to the user.

4. Develop an E-greeting card application with Jquery. Only when a user clicks on a message "open with smile" it should display the greeting card with CSS effects embedded within it. When the card is opened, it should make a transition from one effect to another by embedding animation effect within it and also change the content of the greeting card.

5. The Student details such as student id, name, Year of joining, Organization, Marks (Mark1, Mark2, Mark3) are retrieved as response from the server in the JSON format. The faculty retrieves those students information and calculates the average marks of each student and display the result in the following format. Write the appropriate code for the above scenario.

Reg No	Name	Average
19BIT0100	Rekha	72
19BIT0101	Srini	86
19BIT0210	Shruthi	88

6. Develop an application using angular JS that displays the following Shopping cart. It should calculate the amount based on the quantity given by the user. When the user clicks the remove button, the particular item should get removed from the cart.

Shopping Cart

Quantity	Item	Order Code	Unit Price	Total	Remove
2	My Product (HSO-KSE)	HSO-KSE	$9.99	$19.98	Remove
1	My Product (KLS-EN)	KLS-EN	$9.99	$9.99	Remove
4	My Product (ELS-OWK)	ELS-OWK	$9.99	$39.96	Remove
3	My Product (KWL-JFE)	KWL-JFE	$9.99	$29.97	Remove

a) Discuss in detail about the HTTP Request and Response protocols. [5]

b) Explain the method used for exchanging the data asynchronously between browser and server to avoid full page reloads with a suitable example. [5]

Assume that the following online pizza ordering form is created. Create a table with fields: Order no (should be unique and incremented automatically), Date, Quantity and Bill Amount using MongoDB. When the user clicks the calculate button on the form, the price is calculated and displayed as shown. The calculation is performed by using the formula (total= (cost of pizza type * no. of pizzas) + extra toppings). For each extra toppings Rs.50 is added. The cost of different pizza type are as follows:

Hawaiian - Rs.150   BBQ Chicken - Rs.250

Margarita - Rs.200   Vegetarian- Rs.100

The ordered details and the total amount should be stored in the database.

Lucky Pizza Ordering System

Lucky Pizza

Pizza Type
- Hawaiian
- BBQ Chicken
- Margarita
- Vegetarian

Extra Toppings
- Extra Cheese
- Anchovies
- Olives
- Mushrooms

No. of Pizzas
)

Price
$24.60

[Calculate]

[Clear]

9. Discuss in detail about the tools and technologies used in Symbiotic and Intelligent web.

10. a) Elucidate the importance of publish and subscribe methods in Meteor JS.

   b) With an example explain the different types of templates in Meteor JS.

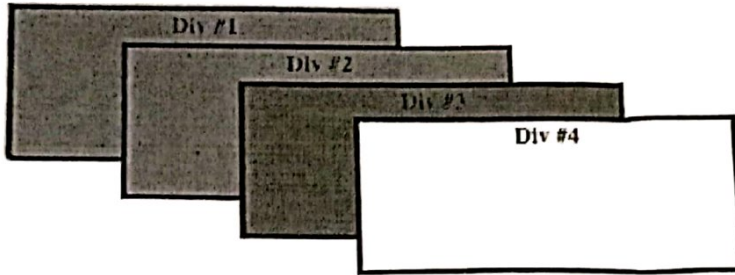11. How will you assign event handlers to your own events using node. JS?

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Final Assessment Test – November 2018
Course: ITE1002 . Web Technologies
Class NBR(s): 4328/4337/6281
Time: Three Hours

Slot: B1
Max. Marks: 100

Answer any TEN Questions
(10 X 10 = 100 Marks)

1. A tree has different parts where each part has hyperlink to describe the parts of tree by its benefits. Write an HTML code using image. Map with minumum of 4 different dimessions to select the region.

2. Design the web page with four divisions as below using HTML and CSS positioning. Set different background colors for all divisons like red, green, blue and yellow. But the same black color border for all. A one line text enough to identify each division and it should be aligned in top center.

```
Div #1
  Div #2
    Div #3
      Div #4
```

3. a) Write a Javascript function to implement below: [5]
   - Initialize "FRUITS" array with some fruits name.
   - Use the Array method to add "Grapes" to the "FRUITS" array.
   - Sort an array.

   b) Find the Javascript string method to return the word "bananas" from input string "I can eat bananas all   [5]
   day". Use dialog boxes for getting input and display output. Write a complete HTML code for the same.

4. Design a web page like below and validate all the fields at client-side. If it is not valid, give proper message displayed in red color text like below. If all the information is valid then redirect to next the page.

```
UserName :
[                    ] Required!
URL :
[dgg                 ] Not valid url!
EmailId :
[dgdgdd              ] Invalid Email!
Phone No. :
[575                 ] Please match pattern
[+91-036-78658 or 91-036-78658 ]
[Submit]
```
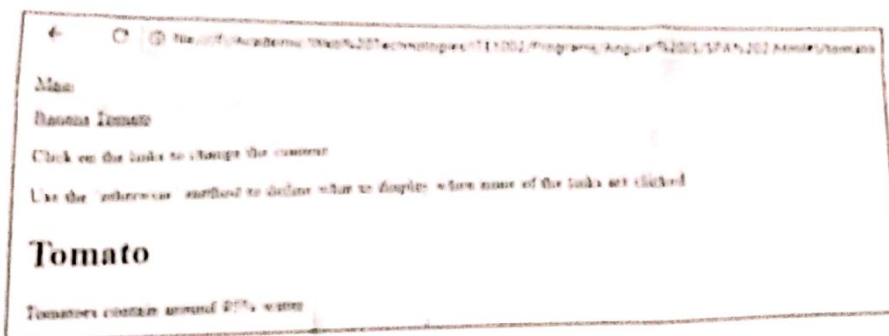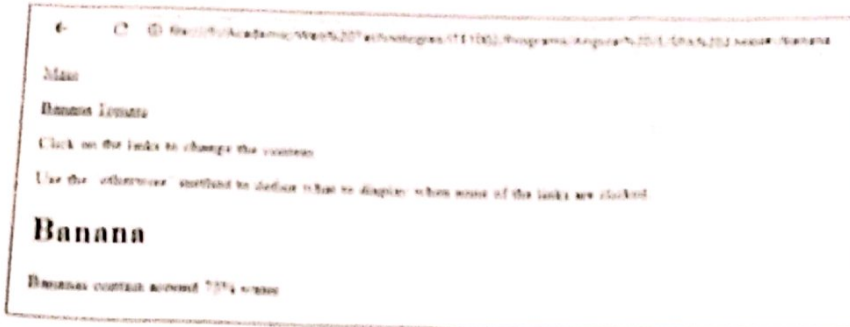
5. a) Write a JQuery program to toggle between hiding and showing the <p> element when a "Toggle" button is clicked.

   b) Design a HTML form with two text boxes for getting "First Name" and "Last Name". While clicking the "Show Name" button, the full name should be displayed in alert box. Use JQuery methods to retrieve the values from the text box and generate the output message.

   Sample Inputs: First Name:John and Last Name: Peter

   Output Message: Welcome John Peter

6. Generate a JSON file to store at least 3 Movies details with below information. Also write the JSON schema for the corresponding JSON data.

- Movie
  - Movie ID
  - Title
  - Date of release
  - Rating (between 1 and 10)

7. How AJAX works? Demonstrate with an example. Compare classic web application model and AJAX web application model.

8. Develop a single page web application using Angular JS. Consider a web page contains 3 hyperlinks Main, Banana and Tomato. While clicking the link the corresponding information should be displayed in same place.

Sample Output:

Develop a Book Catalogue web application using Node JS and Mongo DB. It gets book details like BookID, Title, Author and Edition. It will check the availability of Book by BookID, if it does not exist, and then inserts all the details in to database.

). Discuss the Express and Meteor JS framework and explain how to handle cookie information using any one of the given framework?

a) What is REST architecture and REST API? Explain in detail.

b) Discuss in detail about Intelligent Web technologies with an example and how MVC framework used in Intelligent Web.

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Duration: 1 ½ Hrs
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1. a. Explain in detail about the three tier web architecture (5)
   b. Compare absolute and relative CSS positioning with an example. (5)

2. Write a HTML and internal CSS code to design the below table with following constraints:
   - The thickness of the table border is 5px wide.
   - Apply different background colors for heading and the content.
   - The space between the content and cell border is 3px.
   - The width of the table is 500.
   - All text should be aligned in the center.
   - When the link(eg:Data Structures) is clicked the corresponding page should be opened in the new page. (10)

Unit No	Unit Name	Marks	
		Practical	Theory
1	Web Page Development	25	75
2	Data Structures	20	80
3	Image Processing	40	60
Total			215

3. Reproduce the following using HTML and CSS without using <table> tag. The background color of the numbered list cell is set to 'blue' and unnumbered list is set to 'green'. The cells B and C has the background as 'yellow' and 'red' in color. (10)

Column 1	Column 2	Column 3
A numbered list:	B	C
1. Able 2. Baker 3. Charlie 4. Delta 5. Echo	An unnumbered list: • Pounds • Dollars • Euro • Yen • Roubles	

4. Design the following form using HTML and CSS. The Menu column contains a list of links in the left side and some contents in the middle section and place the Last posts contents inside the border as shown below. Apply a background color for last post. (10)

5. Design the following form using HTML. (10)