Reg. No.

MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
(A constituent unit of MAHE, Manipal)

VII SEMESTER B.TECH. (COMPUTER SCIENCE AND ENGINEERING)
END SEMESTER EXAMINATIONS, NOV 2019
SUBJECT: INTERNET TECHNOLOGIES [CSE 4101]
REVISED CREDIT SYSTEM
(15/11/2019)

Time: 3 Hours   MAX. MARKS: 50

Instructions to Candidates:

❖ Answer **ALL** the questions.
❖ Missing data may be suitably assumed.

1A. Create an ASP.NET website for a user who is a seller on Amazon. The website contains one webpage and a database called "CloudTail" with one table, "Product". The fields of the "Product" table are id (primary key), name and price. The web page contains a button. On click of the button, the data from the "Products" table should be read using direct data access and written to an XML file (Sample shown in Fig. Q.1A.1). Write only the code behind file. Assume missing data suitably.

```xml
<?xml version="1.0" encoding="utf-8"?>
<products>
  <product id="1">
    <name>IPhone XS</name>
    <price>100000</price>
  </product>
  <product id="2">
    <name>S10</name>
    <price>60000</price>
  </product>
</products>
```

Fig.Q.1A.1   **5M**

1B. With code snippet, explain how the values entered to a GridView column during update can be validated using any validation control.   **3M**

1C. Explain how dictionary collection can be bound to a ListBox using repeated-value data binding?   **2M**

2A. Design a Website with a Master Page(Manipal Institute of Technology) and single Content Page(Department of CSE) as shown in the Fig.Q2A.1. The Master Page must accept the semester in a TextBox. On click of the Button "Show My Subjects", appropriate message should be shown in Content Page using a Label based on the semester entered in Master Page. The content of the Label should also be saved in the file called "subjects.txt" under D drive. [Note: Write only the code behind files of both pages. Do not use findControl method or any state management technique to transfer information between Master Page and Content Page]

Manipal Institute of Technology
Enter your Semester:(6 or 7) :6
Department of CSE:
Show My Subjects
Welcome to the 6th semester
Your Core Subjects are
Compilers and Parallel Programming

Fig.Q2A.1   **5M**

2B. Develop a webpage to display the brand names of camping tents using RadioButton controls and quantity using TextBox control for the user. Based on the brand selected, calculate and display the cost of purchase to the user. [Note: Write the necessary tags in .aspx file and code behind file]
Data :
a. Camping Tent Brands : Coleman, ALPS, North Face, and Quechua
b. Cost/Tent : Coleman – Rs 18000, ALPS – Rs. 23000, North Face – Rs 30000, and Quechua : 3000   **3M**

2C. Explain benefits of AJAX.   **2M**

3A. Develop a website with two pages. Page1 must accept the name as well as age of the user (Fig.Q.3A.1). Use RangeValidator to check the valid age. When the user hits "Submit", add the name and age into the Session and send the user to Page2. This Page2 must have a Label and an Image control (Fig.Q.3A.2). Create two themes namely "Modern" and "Retro". Both the themes must change the forecolor of the Label and the url of the Image accordingly. In Page2, a message should be displayed showing the name of the user. Also in Page2, apply the "Modern" theme if the age is between 20-35 else use the "Retro" theme. [Write the necessary tags in .aspx file and code behind files for both pages along with the skin files]

Fig.Q.3A.1   Fig.Q.3A.2   **5M**

3B. Tabulate the differences between ViewState, QueryString and Custom Cookies with respect to the parameters: Storage Location, Lifetime and Scope.   **3M**

3C. Write only the complete Validation tags for the following scenarios with proper error messages.
i. Regular Expression Validator to allow input that matches any word that starts with a letter from 'a' to 'f', contains one or more letters, and ends with 'ing'- possible matches include acting and developing.
ii. Range Validator to allow input of Integer value between 18 to 60   **2M**

4A. Create a class named Trekking. This class contains five automatic properties named CompanyName, Code, Discount, Fees, and Pax. Among these properties, the property Fees is a shared, while other properties are instance properties. Create simple C# console application to take input from user and display the total amount per person for the expedition. (Amount per person = 1.2 * Discount + (Fees/Pax)). [Assume data types suitably]   **4M**

4B. Explain the language compilation in .NET with labeled diagram and how CLS helps in the generating intermediate file.   **3M**

4C. What is the use of delegates in C# programming and explain with example how it can be used while adding an event to the application.   **3M**

5A. Create a webpage with two TextBoxes, GridView and a Button. Populate the GridView using SQLDataSource Control from the Student table which has fields such as student roll-number, name, and CGPA. Whenever a company wishes to find the number of eligible students to sit for placements, it will enter the CGPA of the student in first TextBox. On click of the button, the number of eligible students will be displayed in the second TextBox (The computation takes place by iterating through the values in GridView). Ensure that GridView does not reload when the button is clicked using AJAX concept. [Note: write the web.config file (for connection string), necessary tags in .aspx and .aspx.cs code]   **5M**

5B. Give three reasons, how the cache object is different from application object?   **3M**

5C. How to modify the config file to allow the web site access to all the users except 'raj' and 'ram' using form authentication?   **2M**