ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)
ORGANISATION OF ISLAMIC COOPERATION (OIC)
Department of Computer Science and Engineering (CSE)

MID SEMESTER EXAMINATION   **WINTER SEMESTER, 2021-2022**
DURATION: 1 HOUR 30 MINUTES   **FULL MARKS: 75**

CSE 4539: Web Programming

Programmable calculators are not allowed. Do not write anything on the question paper.
Answer **all 3 (three)** questions. Marks of each question and corresponding CO and PO are written in the right margin with brackets.

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1. Consider the following two modules given in Figure-1 and answer the subsequent questions.
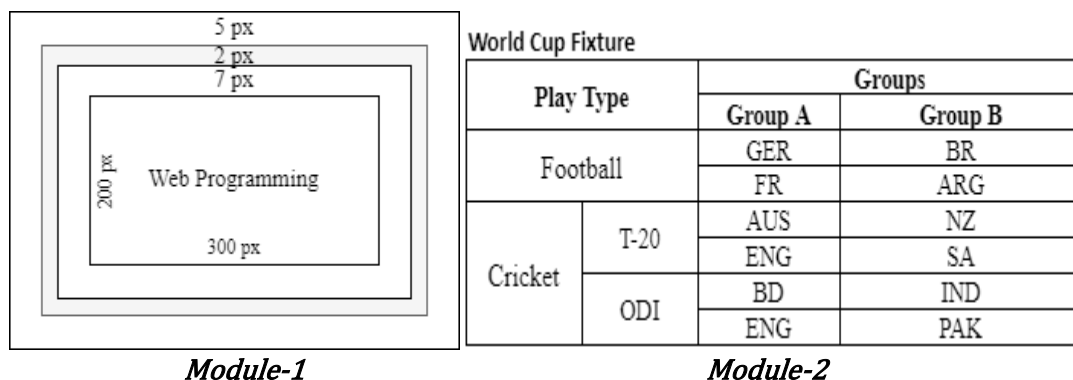

Module-1   *Module-2*

Figure-1: Modules for question-1

a) What are **tag** and **attribute** in HTML? Give an example.   5
(CO1)
(PO1)

b) Explain *Module-1* in details and write the corresponding CSS code. If the border is changed to 4px, what will be the total area (in px2) of *Module-1* excluding the padding portion?   10
(CO2)
(PO1)

c) Analyze *Module-2* and write the corresponding HTML code. Also, if we want to present it to a multilevel list, what will be the structure of the HTML code?   10
(CO2)
(PO2)

2. Consider the following HTML form shown in Figure-2 and answer the subsequent questions.

Figure-2: Student form for question 2

a) In form submission, we use either GET or POST request. Differentiate between a GET and POST request? Explain with examples.   5
(CO1)
(PO1)

b) Design the form using HTML having the following requirements and show the proper messages if an error occurs.

    i.   Name: required field.
    ii.   Email: must be a valid email address. Required field.
    iii.   Gender: Either Male or Female. Required field.
    iv.   Program: give select options (CSE, SWE, BTM). By default, program: CSE.
    v.   Submit and reset button: When a user clicks the reset button, value of every field will be erased.

10
(CO2)
(PO1)

c) Add a single action listener for the submit button with the following functions and implement the following JavaScript functions. If all the functions return true, the form will be submitted, otherwise it will be returned to the user with proper error messages (use JavaScript).

    i.   FetchUserData(): Collect user data from the form.
    ii.   isValidName(): The length of the name will be between 5 and 10. It contains only letters (A-Z, a-z) and numbers(0-9).
    iii.   isValidEmail(): Valid email address.
    iv.   isFilledGender(): Check whether two combo box (male and female) are checked or not.
    v.   isValidProgram(): Check whether the program is valid or not. It should only support CSE, SWE and BTM.

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(CO2)
(PO1)

3.   Rokomari (https://www.rokomari.com) is one of the online book stores where different types of books are available. Suppose, a book has three unique properties such as name, author and genre. Two users visit this site and buy a set of books which are stored in two different object arrays such as cart1 and cart2.

a) When the user typed "https://www.rokomari.com" into a web browser, how does the Domain Name System (DNS) resolve the request?

5
(CO1)
(PO1)

b) In JavaScript, an object can be defined in different ways. Define the Book object in different ways with their pros and cons. Also, implement a function *getDetails()* inside that object that returns all the information related to the book.

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(CO1)
(PO1)

c) Write a function *isAnagram(cart1, cart2)* that takes two inputs and checks whether the given two carts are Anagram or not. Note: An Anagram is a word or phrase formed by rearranging the letters of a different word or phrase, typically using all the original letters exactly once.

10
(CO2)
(PO1)