



COMSATS UNIVERSITY ISLAMABAD
DEPARTMENT OF COMPUTER SCIENCE
Mid Term Examination, Spring 2022

Class: - BS CS/SE
Subject: - Mobile Application Development
Instructor: - Mr. Junaid Ali Khan / Mr. Waseem Abbas

Marks: - 25
Time: - 90 minutes
Dated: - May 12, 2022

Instructions

- Attempt all questions on answer sheet and return the question paper along with it.
- Avoid giving unnecessary details.
- Q#1(d, e) is mapped to CLO1, Q#1(a, b, c) and Q#2 are mapped to CLO2. Question 03 is mapped to CLO3.

Q# 01: - Answer the following questions briefly. (Marks 4+2=6)

- Differentiate between 'undefined' and 'null' in JavaScript.
- What is the use of 'argument' object in JavaScript functions? Explain with a short example.
- Which type of JavaScript are pass by value?
- Write the names of any four technologies used for hybrid mobile application development.
- What are the advantages and disadvantages of using hybrid and native mobile application technologies? (2)

Q# 02: - What is the output of the following programs? In case of Error, specify. (Marks 5)

(a) <pre>var arr = Array(10).fill(null) arr = arr.map(e => e == undefined ? 0 : -1) console.log(arr)</pre>	(b) <pre>var arr = [5, 'Ten', 15] arr.length = 10 arr.push(30) arr.forEach(e=>console.log(e))</pre>
(c) <pre>const fun = (a, b) => {a * b} console.log(fun(5, 5))</pre>	(d) <pre>var arr = [1, 2, 3, 111, 222] arr.sort() console.log(arr)</pre>
(e) <pre>var x = [1, 2] var y = x x[0] = 0 console.log(y)</pre>	(f) <pre>var arr = [5, 'Ten', 15] arr[4] = 25 console.log(arr.length)</pre>
(g) <pre>var obj = { order: 'Dell PC', qty: 2 } const process = (data) => { data.order = 'HP' data.qty -= 1 } process(obj) console.log(obj)</pre>	(h) <pre>const mat = ['Hydrogen', 'Helium', 'Lithium', 'Beryllium'] var arr = mat.map(m => m.length) console.log(arr.filter(a=>a<8))</pre>
(i) <pre>const factorial = function fac(n) { return n < 2 ? 1 : n * fac(n - 1) } console.log(fac(3))</pre>	(j) <pre>function S1(a, b,...args) { return args.length } function S1(a, b) { return arguments.length } console.log(S1(3, 5, 3, 4, 2))</pre>

Q# 03: - Develop a mobile application (12 Marks).

Design the below screens with the following requirements. No need to write import statements.

- 1- Design of Login Screen [6 Marks]
- 2- On pressing the "Log in" button, [6 Marks]
 - a. Show pop up "**Success Login**", if the Email is "*example@gmail.com*" and Password is "*Default*".
 - b. Otherwise, change the color of Button to "**Red**".

