DUBLIN INSTITUTE OF TECHNOLOGY

DT228 BSc. (Honours) Degree in Computer Science

Year 4

DT8900/1 International Pre Masters for MSc in Computing

WINTER EXAMINATIONS 2015/2016

RICH WEB APPLICATION TECHNOLOGY [CMPU4043]

DR. CATHY ENNIS
DR. DEIRDRE LILLIS
MR. KEVIN FOLEY

TUESDAY 5TH JANUARY 9.30 A.M. – 11.30 A.M.

TWO HOURS

INSTRUCTIONS TO CANDIDATES

ANSWER **QUESTION 1** AND ANY **2 OTHER QUESTIONS**
QUESTION 1 IS WORTH 40 MARKS. ALL OTHER QUESTIONS ARE WORTH 30 MARKS EACH.

1. (a) Describe the features of a Rich Internet Application that differ from traditional Web applications and outline some design considerations when developing for richness.

(15 marks)

(b) Give an overview of the advantages and drawbacks of using JavaScript as a resource in an application.

(15 marks)

(c) jQuery implementation:

   (i) Why is it best practice to prevent running JavaScript/jQuery before the page loads? How would you implement this?

(3 marks)

   (ii) What method is used to add style on an element using jQuery?

(2 marks)

(d) What are the steps to integrate AngularJS with HTML?

(5 marks)

2. (a) Describe the advantages of HTML and its limitations for developing web applications.

(10 marks)

(b) Figure 1 below shows a form created in HTML. Write the appropriate JavaScript for validating user entries in this form, including a check for whether a valid email has been entered.

(15 marks)

(c) What is the purpose of the 'aside' tag in HTML5?

(5 marks)

Name	
EMail	
Zip Code	
Country	[choose yours] ▾
	Submit

Figure 1- HTML form for validation check - Question 2(b)

3. (a) What is the float property in CSS and how is it implemented? Use an example to illustrate your answer.

(10 marks)

(b) Name any 5 core features supported by the jQuery library.

(10 marks)

(c) Give an overview of the Twitter Bootstrap Grid System and describe the basic structure of Bootstrap grid in HTML.

(10 marks)

4. (a) Compare and contrast JSON and XML as web service formats, including advantages and disadvantages for each in your answer.

(15 marks)

(b) What is the Same Origin Policy? Briefly describe 3 ways to circumvent Same Origin Policy Security restrictions.

(15 marks)