



DUBLIN INSTITUTE OF TECHNOLOGY
KEVIN STREET, DUBLIN 8

**DT211C BSc. (Honours) Degree in Computer Science
(Infrastructure)**

Year 4

Semester 2 Examination 2015/2016

Enterprise Systems Infrastructure & Architecture [CMPU4025]

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Tuesday 10th May

9:30 a.m. to 11.30 a.m.

Attempt question ONE and any TWO from the remaining FOUR questions.

Question 1 is worth 40 marks.

The remaining questions are worth 30 marks each.

1 **Answer part a or part b or part c** **(40 Marks)**

- (a) Discuss, using suitable examples how an online analytical processing application can utilise its capabilities to help organisations determine and implement strategies to provide them with a competitive advantage.

or

- (b) In an every evolving business environment organisations need to utilise the full potential of I.T. systems to help provide valuable information that can be used for the formulation and implementation of organisational strategies. Discuss, using suitable examples, how *data mining* can help provide such information.

or

- (c) Discuss, using suitable examples how to design a data warehouse so that it is aligned with the process of developing and implementing organisational strategies.

2

- a. The SWOT analysis is an useful model that for the development of strategies explain, using suitable examples, how to carry out a SWOT analysis **(8 marks)**
- b. The Boston matrix (BCG)/Internal External matrix (IE) are models used to help with the formulation of strategies. Explain, using suitable examples how either *one* of these matrices can be used to derive a set of strategies. **(12 marks)**
- c. Discuss the main issues associated with applying the BCG matrix to large organisation with multiple strategic business units. **(10 marks)**

3

- a. Distinguish between a Transaction Processing System (T.P.S.) and a Management Information System (MIS). **(6 marks)**
- b. Using a suitable example, briefly describe the three elements of management decision making problems **(3 marks)**
- c. Briefly explain, using a suitable example, the difference between a structured, and a semi-structure decision. **(6 marks)**
- d. Explain, using suitable examples, how transaction processing system (T.P.S.) and Management information system (M.I.S.) help to solve *semi-structured* organisational problems. **(15 marks)**

4

- a. Explain, using a suitable example, a business process that comprises a number of different business functional areas both within and outside the organisation. **(8 marks)**
- b. Organisations traditionally have developed their I.T. infrastructure in an ad-hoc fashion leading to systems that are essentially isolated from one another often referred to as “islands of computing”. What are the limitations of this I.T. infrastructure? **(4 marks)**
- c. Enterprise Applications Integration (EAI) is a way to overcome these limitations. Explain *four* of the steps involved in implementing enterprise application integration. **(8 marks)**
- d. A more comprehensive approach is to utilise an Enterprise Resource planning system.:
 - i. What is an Enterprise Resource Planning system (ERP)? **(2 marks)**
 - ii. How can ERP systems overcome the limitations of the traditional “island of computing” architecture? **(8 marks)**

5

- a. What are the *three* phases involved in Customer Relationship Management (CRM)? **(6 marks)**
- b. Describe any *two* of the functions of the operation software of a Customer Relationship Management system **(4 marks)**
- c. Discuss how the analytical technologies of C.R.M. systems, such OLAP or Data Mining, can improve the efficiency and effectiveness of *three* phases of C.R.M. **(14 marks)**
- d. Explain *two* of the main technical challenges to the development of Customer Relationship Management Information Systems **(6 marks)**