



DUBLIN INSTITUTE OF TECHNOLOGY

BSc. (Honours) Degree in Computer Science

Year 4

SUMMER EXAMINATIONS 2014/2015

ENTERPRISE SYSTEMS AND ARCHITECTURE [SENG4350]

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FRIDAY 15TH MAY 4pm – 6pm.

TWO HOURS

ANSWER **THREE** QUESTIONS OUT OF **FOUR**.

ALL QUESTIONS CARRY EQUAL MARKS.
ONE COMPLIMENTARY MARK SHALL BE AWARDED.

1. (a) One of the two main areas in *Supply Chain Management (SCM)* is the management of the network of facilities utilised within the supply chain. Considering a structure where there are *upstream*, *internal* and *downstream* facilities, describe using a suitable example and diagram, the flow of materials and data between these facilities. In your answer, identify the parties/stakeholders that relate to the various facilities. [12 marks]
- (b) Discuss how an SCM system might support the capture and flow of data in the supply chain described above. [11 marks]
- (c) Discuss how the data captured within the SCM could be used to help decision making by executive management. [10 marks]
2. (a) Within the context of a business enterprise, explain what is meant by a *decentralised system*. [9 marks]
- (b) Using an appropriate business process example, discuss, in detail, three problems that could be encountered by the use of a *decentralised system*. [12 marks]
- (c) Discuss how a *centralised system* would address the issues outlined in your answer to part (b). [12 marks]
3. (a) *Customer Relationship Management (CRM)* is an enterprise wide effort to acquire and retain customers. In terms of integration and consolidation, describe the basic architecture employed by CRM systems. [12 marks]
- (b) Discuss three functional modules that you would expect to have in any CRM system. In your answer discuss the goals that each module is striving to achieve and how it achieves it. [21 Marks]

4. (a) *XML*, *XSD* and *XSL* have been commonly used together as a solution to data exchange challenges both within an organisation and between organisations.

(i) Explain, in detail, what each acronym means.

[12 marks]

(ii) Provide an example scenario where all three could be utilised to provide a solution to a business requirement.

[7 marks]

(b) Within the context of *Message Oriented Middleware (MOM)*, explain, in detail, the following terms. In each case give an example of how it might be used in an *Enterprise Application Integration* context.

(i) Point-to-Point

(ii) Publish-Subscribe

[14 marks]