Dundalk Institute of Technology

Bachelor of Arts (Hons) in Accounting & Finance DK_BBAAF_B
Bachelor of Business (Hons) DK_BBUST_8
Bachelor of Business (Hons) in Marketing DK_BMRKT_8

Technology & Information Management 2 MIS H2010

Stage 2, Semester 4

Internal Examiner(s): Colin Cooney

External Examiner(s): Mr. Laurence Veale

Date: 12\textsuperscript{th} May 2016

Time: 9:15 – 11:15

No of Pages: 3

Venue: Faulkner Hall (MPC)

Instructions

Answer any three questions. All questions carry equal marks.

DO NOT TURN THIS PAGE UNTIL INSTRUCTED
Question 1

a)Describe the unique features of e-commerce, digital goods and digital markets. (40 Marks)

b)From a business and consumer point of view, explain how mobile technology is changing the way business is done and outline the benefits and challenges of ‘mobile’ currently and in the future. (60 Marks)

[Total 100 marks]

Question 2

a)Explain why information systems are vulnerable and describe four of the most common threats against contemporary information systems. (50 Marks)

b)Describe five important methods (policies, procedures or technologies) that could be implemented to improve the security of an organisation’s information resources. Prioritise these methods in order of importance. (50 Marks)

[Total 100 marks]

Question 3

a)Describe four types of structural organisational change that can be enabled by information technology Use a diagram to show the level of risk/return that this restructuring would cause to an organisation. (40 Marks)

b)Describe the main stages in the systems development process. Which stage do you think is most important in the process? (60 Marks)

[Total 100 marks]
Question 4

a) What are the problems with managing data resources in a traditional file environment and how are they solved by a database management system?

(30 Marks)

b) You have been commissioned by a North Eastern College to design a database to store specific information about their students, programmes and lecturers. The database needs to record which lecturer is assigned to each module, which modules are assigned to each programme and which students are assigned to each programme. Each student can only be registered on one programme and each module only runs on one programme. The college also need to store information about which department each lecturer works in and information about the pay scale for each of these lecturers.

Use this information to:

(i) Generate an E-R diagram for the North Eastern College.  
(ii) Design all tables needed to store the information. Identify the attributes necessary for each table and their data types, primary keys and foreign keys.

Use the following format in your answer book for each table. Use your answer book and NOT this sheet to write out your answer.  

Enter Table Name Here: _________________________________

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Data Type for field</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[Total 100 marks]

Question 5

a) Define the term Business Intelligence and using your knowledge of relevant case studies, explain how an organisation can benefit from business intelligence.

(50 Marks)

b) Define a Geographic Information System (GIS) and describe how it could provide value for an organisation.

(50 Marks)

[Total 100 marks]