GMIT EXAMINATIONS
SESSION: WINTER 2013/2014

PROGRAMME: BACHELOR OF SCIENCE IN BUSINESS COMPUTING AND DIGITAL MEDIA   **YEAR/STAGE: 2**

BACHELOR OF SCIENCE IN COMPUTING IN SOFTWARE DEVELOPMENT

MODULE: SYSTEMS ANALYSIS METHODS   **TIME:**

DATE:

INTERNAL EXAMINERS: Ms. N. Hurley

EXTERNAL EXAMINERS: DR. MICHAEL SCHUKAT
MR. TOM DAVIS

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TIME ALLOWED: **2 HOURS**
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INSTRUCTIONS TO CANDIDATES:

ATTEMPT ANY 4 QUESTIONS

Attachments:	**Yes**	☐	**No**	☐	**If yes, please list details:**
Special Requirements:	**Yes**	☐	**No**	☐	**If yes, please list details:**
Calculators Permitted:	**Yes**	☐	**No**	☐	Not Applicable

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1.(a) Who are the stakeholders of an information systems project? (4 Marks)
Identify **five** groups of stakeholders in your college course registration

System. (4 Marks)

(b) *"The Systems Analyst is a modern business problem solver"*.
Discuss fully the skill set required by the systems Analyst to fulfill this
role. (10 Marks)
In your discussion, point out what you consider to be the single biggest
factor in career success or failure for the Systems Analyst. (2 Marks)

(c) Which of the following environments would you prefer to work in and why:
An information services unit or business? An outsourcer? A consulting firm?
A software vendor? (5 Marks)

2.(a) What is an Information System? (4 Marks)
Describe the different categories of Information Systems. (6 Marks)

(b) Identify the type of Information System application described for
three of the following: (6 Marks)

- A customer presents a deposit slip and cash to a bank clerk.
- An employee is e-mailing a the minutes of a meeting to all
attendees.
- A Finance Director is using his computer to obtain access to
the latest stock market trends
- A doctor keys in data describing the symptoms of a patient.
He receives a report giving a diagnosis of the patient.
- The system prints a report of all deposits and withdrawals for
a given day.

(c) AerGalway are going to start an airline business which offers flights from
Galway to the capital cities of Europe. You are employed as the consultant
Systems Analyst. You are required to draw an Entity Relationship Diagram,
which contains the following entities: AIRCRAFT, FLIGHT, and
PASSENGER.
Include attributes, keys, relationships and cardinality in your diagram. (9 Marks)

3.(a) What are the driving forces that are moving many companies to adopt more

adaptive approaches to system development? (3 Marks)

What are the Major Agile/Lean methods used currently? (3 Marks)

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(b) What is a user story? (5 Marks)

BigMoneyJobs is a website used by both candidates looking for work and
recruiters seeking to hire people. Provide three user stories for this website. (6 Marks)

(c) List the practices used in XP . (8 Marks)

4.(a) Explain the following terms in relation to project management and system development
- Creeping commitment approach
- Scope Creep
- Entropy (6 Marks)

How can scope creep be managed? (4 Marks)

(b) The systems analyst must conduct a Feasibility Study and Feasibility tests to
assess a proposed project.
For each of the following, classify the type of feasibility: (8 Marks)

- Is the system flexible and expandable?
- How will the working environment of the users change?
- Will our current printer be able to handle the new reports and forms required of
a new system?
- What are the fixed and variable costs of operating the system?
- Does the system provide adequate throughput and response time?
- What are the tangible and intangible benefits of the system?
- Is the project deadline mandatory or desirable?
- Do we have the expertise to implement the solution?

(c) Create a list of potential risks that could affect the outcome of a project. (7 Marks)

5.(a) What is process decomposition and what role does it play in process
modeling? (6 Marks)

(b) Explain the following terms in relation to process modelling: (9 Marks)

- Event
- Miracle
- Grey Hole

(c) Given the following narrative description, draw a context DFD for the
portion of the activities described. (10 Marks)

- Telecomms Inc. has implemented the following BUDGET MONITORING
SYSTEM inline with company wide measures to reduce costs. A cost reduction
group is set up as part of this system
- MANAGEMENT supply the BUDGET ALLOCATION for the year to the group.

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- DEPARTMENTS must submit a SPENDING REQUEST. The cost reduction group review the requests and determine whether the request is a SPECIAL APPROVAL REQUEST. All SPECIAL APPROVAL REQUESTS are sent to MANAGEMENT.

- A RESPONSE TO SPECIAL APPROVAL is sent back from MANAGEMENT.

- REJECTED REQUESTS are given back to the DEPARTMENTS.

- A PART ORDER for parts in the approved spending requests is placed with SUPPLIERS. In response to this the SUPPLIERS submit a SUPPLIER DELIVERY ADVICE to the system.

- This DELIVERY ADVICE is then forwarded internally in the company to the DEPARTMENTS.

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