NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF COMMUNICATION AND INFORMATION SCIENCE

DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE

BACHELOR OF SCIENCE (HONOURS) DEGREE IN LIBRARY AND INFORMATION SCIENCE

PART II SECOND SEMESTER JULY 2012 SUPPLEMENTARY EXAMINATIONS

ILI 2204: ARCHIVAL AND LIBRARY INFORMATION SYSTEMS MANAGEMENT

TIME: 3 HOURS

Instructions to candidates
1. Answer <u>four</u> (4) questions.
2. Each question carries 25 marks.
3. Give equal time to all the questions you choose.
4. Importance is attached to accuracy, clarity and legibility of handwriting.

1.1 Information systems development controls include standard procedures for planning, development and implementation of systems. Briefly discuss information systems development controls in a library environment [15 marks]

1.2 Give a detailed explanation of the project planning phase of the systems development life cycle. [10 marks]

2.1 Using the general systems theory as a basis of your approach, identify and describe the main functional elements which must be identified within the library information system, together with their related information requirements. [15 marks]

2.2 Give an analysis of five different types of information systems. [10 marks]

3. Your library is considering the use of a computer-based financial model to enable it evaluate financial consequences of different course of action. You are required to prepare a presentation to the librarian, a report which briefly answers the following questions:

3.1.1 What is a model? [5 marks]

3.1.2 What procedures are involved in constructing a model? [5 marks]

3.1.3 What advantages are there in using a computer-based model in comparison with existing manual budget procedure? [5 marks]

3.1 Discuss the problem solving approach in information systems [10 marks]

4.1 Discuss the following investment appraisal techniques indicating their strengths and
   weaknesses:

3.1.4   Net present value   [4 marks]
3.1.5   Payback period   [4 marks]
3.1.6   Return on investment   [4 marks]

4.2 Discuss the following types of feasibility tests:

4.2.1   Economic feasibility   [3 marks]
4.2.2   Technical feasibility   [3 marks]
4.2.3   Operational feasibility   [3 marks]
4.2.4   Schedule feasibility   [3 marks]

4.3 What is the purpose of the feasibility study?   [1 mark]

5.   Analyse in detail the following systems development methodologies:

5.1.1 Spiral model   [5 marks]
5.1.2 Waterfall model   [5 marks]
5.1.3 Incremental model   [5 marks]

5.2   Give a detailed description of the information systems building blocks.
                                                                       [10 marks]
6.1   ABC library fines library patrons using the following criteria:

   If the patron is an academic staff member, fine is charged at 30 cents for the first seven
   days and for over seven days fine is charged at 50 cents per day. For non-academic
   members of staff, fine is charged at 40 cents per day for the first seven days, thereafter
   fine is charged at 60 cents per day. For conventional students, fine is charged at 10 cents
   for the first seven days there after it is charged at 20 cents per day. For parallel students
   fine is charged at 20 cents for the first seven days thereafter it is charged at 30 cents per
   day .For all short loan books an additional $2.00 penalty is added.

6.1.1   Draw a decision table for the above scenario.   [10 marks]

6.1.2   Draw a decision table for the scenario.   [5 marks]

6.2   Briefly explain the roles and responsibilities of a systems analyst.   [10 marks]

END OF PAPER