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 MAY 2012 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. Discuss different information systems building blocks   [10 marks]

1.2. Information systems are prone to failures. Discuss the possible reasons for information systems failure in the library environment and how these failures may be minimised.
                                                                      [15 marks]

2. Give a detailed analysis of the phases of the systems development life cycle clearly stating deliverables at each phase   [25 marks]

Activity	Predecessor	Optimistic time(a)	Most probable time(m)	Pessimistic time(b)	Expected time(t)	ES	LS	EF	LF	SLACK
A	----	4	5	6						
B	----	3	5	7						
C	----	6	7	8						
D	A	4	5	6						
E	D	3	4	5						
F	B,E,G	6	8	9						
G	C	4	5	6						
H	C	7	9	10						
I	C	7	8	9						
J	D	7	8	9						
K	D	6	8	10						
L	F,H,K	4	5	6						
M	J,L,I	8	10	11						

3.   Given the table above calculate the following and complete the table:
3.1.1 Expected time for each activity (t)   [4 marks]
3.1.2 Earliest start time for each activity (ES)   [4 marks]
3.1.3 Latest start time for each activity (LS)   [4 marks]
3.1.4 Earliest finish time for each project (EF)   [4 marks]
3.1.5 Latest finish for each activity (LF)   [4 marks]

3.2 Draw the corresponding network diagram for the table above.   [5 marks]

4. A new library information system could be developed at a cost of $125000.The estimated net operating costs and estimated net benefits over five years of operation would be as below:

Year	Estimated net operating costs($)	Estimated net benefits($)
0	125000	0
1	3500	26000
2	4700	34000
3	5500	41000
4	6300	55000
5	7000	66000

4.1 Assuming a 15% discount rate:

4.1.1 What would be the payback period for this investment? Would this be a good investment or a bad investment? Why? [8 marks]

4.1.2 What is the return on investment? [3 marks]

4.1.3 What is the net present value? [5 marks]

4.2.1 What are some of the advantages and disadvantages of the payback period method, net present value and the return on investment cost benefit techniques? [6 marks]

4.2. Justify the need for the cost-benefit analysis on projects [3 marks]

5. Discuss five different types of information systems and explain how the information systems may be used to improve operations in the library environment [25 marks]

6. An information centre wishes to develop an information system to support its activities. You have been requested to make recommendations on the suitable system development methodology for developing such a system. Write a report on strengths and weaknesses of each of the methodologies and recommend the suitable one clearly stating your reasons.
[25 marks]

END OF PAPER