SOUTH EASTERN KENYA UNIVERSITY

UNIVERSITY EXAMINATIONS 2017/2018

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN COMPUTER SCIENCE AND BACHELOR OF INFORMATION TECHNOLOGY

SCI 306: ICT PROJECT MANAGEMENT

DATE: 5TH DECEMBER, 2017   **TIME: 4.00 -6.00 PM**

INSTRUCTIONS TO CANDIDATES

- **Section A(Compulsory)**

- **Answer <u>ANY TWO</u> questions from section B**

Question One

a. Define the following terms as used in project management.
   i. Project
   ii. Risk
   iii. Hazard   **(3 Marks)**

b. List any five key elements of a project plan.   **(5 Marks)**

c. Describe the structured evolutionary prototyping model.   **(5 Marks)**

d. Identify and describe roles of **five** ICT project team members.**(5 Marks)**

e. The SEKU project manager with his team have identified the activities in table 1

   for an ICT project

Table: 1

ACTIVITY	ACTIVITY DESCRIPTION	DURATION	PRECEDENCE
A	Define requirement	2	
B	Evaluate, select and modify best package	4	1
C	Identify site for prototype	1	1
D	Define unit, integration, system and acceptance test	1	2
E	Design user training programme	2	3,4
F	Complete unit, integration, system testing	4	4
G	Complete training programmes	7	5
H	Complete acceptance testing	4	4,7
I	Roll out to all sites	3	6,8

    i.   Prepare an AOA network diagram with the earliest and latest start time and the floats. **(8 Mark)**

    ii.   Calculate the shortest time it will take to complete the project. **(2 Marks)**

    iii. Specify the critical path. **(2 Marks)**

SECTION B (40 marks)- Answer any Two Questions

Question Two

    a. Justify the need for using formal methods in system development. **(2 Marks)**

    b. Explain four characteristics of a software project**. (4 Marks)**

    c. Describe Capability Maturity Model (CMM) and explain how its use leads to increased software quality **(5 Marks)**

    d. Explain three importance of tracking and monitoring of a project**. (3 Marks)**

    e. SEKU management wishes to carry of a project to automate human resource management. They have contracted you has the project manager.Identify six resources that would be needed to accomplish this project. **(6 Marks)**

Question Three
a. Highlight four risks that can affect an ICT project**.**   **(5 Marks)**

b. The table 1 below shows the costs and benefits of developing and implementing an ICT project in an Maxtechcollege . Study it and answer the questions that follow. The discounting rate is 10%.

Table:1

s/no	Cash flow description	Year0	Year1	Year2	Year3	Year4	Year5
1	Development cost	600000					
2	Operation and maintainance		14000	16000	18000	20000	22000
5	Benefits derived from the system	0	130000	150000	170000	200000	220000

Required:

    i.   Determine the payback period   **(8Marks)**
    ii. Is this information system a good or bad investment.   **(2 Marks)**
    iii. Determine the return on investment   **(2 Marks)**

c. Explain the triple constraints of an ICT.   **(3 Marks)**

Question Four
a. Explain five skills a project manager should have.   **(5 Marks)**
b. In allocating resources to project activities the project team may adopt Burman's priority list for competing activities. Outline Burman's priority list.   **(5 Marks)**
c. Explain five ICT project risk reduction strategies.   **(10 Marks)**