TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:
BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY

BIT 2215: PROJECT MANAGEMENT

END OF SEMESTER EXAMINATION
SERIES: AUGUST 2013
TIME: 2 HOURS

Instructions to Candidates:
You should have the following for this examination
- *Answer Booklet*

This paper consists of **FIVE** questions. Attempt question **ONE** and any other **TWO** questions
Maximum marks for each part of a question are as shown
This paper consists of **FOUR** printed pages

Question One (Compulsory)

a) Describe any **THREE** techniques for obtaining project requirements **(6 marks)**

b) Once the user requirements are known for you have a choice between buying a package solution and building a new system. Describe **FOUR** factors you would consider when deciding which option to take. **(8 marks)**

c) Describe **THREE** methods of quality control that can be used at different stages of a project which implements an off-the-shelf package. Describe how they are similar or dissimilar to the quality control methods used on a project that builds an application.

d) You company has decided that it needs a new stock control system and an off-the-shelf package is the best solution. The main tasks have been identified and durations assessed as follows:

A	Draw up a functional requirements specification	4 weeks

B	Consider various relevant software packages and select one	3 weeks
C	Identify and specify the necessary hardware and communications equipment	2 weeks
D	Order the hardware and equipment	1 week
E	Identify the key package modification needed to meet the functionality required	2 weeks
F	Modify the software package as necessary	8 weeks
G	Accept delivery and install all hardware and equipment needed for the package	10 weeks
H	Design a training plan	2 weeks
I	Set up a testing plan	3 weeks
J	Unit test all the amended package modules	3 weeks
K	Train the users	2 weeks
L	Full integration and acceptance testing	3 weeks
M	Implement the new system	1 week

B cannot start until A is completed
C, E, H and I cannot start until B is completed
D cannot start until C is completed
F cannot start until E is completed
G cannot start until D is completed
J cannot start until F, G and I are completed
K cannot start until H is completed
L cannot start until J and K are completed
M cannot start until L is completed

Draw an active on-node diagram for these 13 project tasks (A to M). Calculate and display on the diagram, with a mode layout key, the earliest and latest start and finish times and float of each task.
(10 marks)

Question Two

The activity network for the development of a small IT system, which comprises three main software components is shown below:

4 weeks

A lead software architect always undertakes the software architecture design.

Software developers only carryout the designing, building and unit testing of software components. As system tester only carries out the integration test. The weekly rates for these staff are:

Staff Type	Weekly Rate
Lead software architect	£1200
Software developer 1	£800
Software developer 2	£600
System tester	£500

a) Explain the process by which staff resources are allocated to the activities identified as needed for a project. **(10 marks)**

b) Illustrate the approach described in (a) above by applying it to the project above to produce a Gantt chart or histogram showing the staff allocated to each activity and the planned timing of the activity. Note that only two software developers are available **(7 marks)**

c) Calculate the staff cost of the project **(3 marks)**

Question Three

a) Explain what in project management is meant by "quality" identify **THREE** differences between quality assurance and quality control **(6 marks)**

b) Describe **TWO** techniques for carrying out quality control on a software system during EACH of the following stages of a project: **(4 marks)**

(i) Design
(ii) Build
(iii) System integration
(iv) System acceptance

Bear in mind that it is possible that some specific techniques can be carried out during more than one of these stages. **(8 marks)**

c) In addition to software what else can be tested on an IT project. **(2 marks)**

Question Four

You are nearing the end of year long software development project and are now planning for the implementation of the new applications into line operations. The project sponsor is very anxious about this project and has asked you to plan for the following

a) The company has five sites and the project sponsor wants one to Go Live on each of the four days after the applications at main site have been implemented.
b) The project sponsor wants to make the decision to Go Live for the first site and then wait one month after Go Live before agreeing to close the project.

(i) Crate a checklist of key activities that must be done BEFORE project executive can give make the decision for the first site to Go Live **(6 marks)**

(ii) List the activities that can be done AFTER Go Live and BFORE project closure. **(6 marks)**

(iii) After Go Live you notice that the Helpdesk is getting an increasing number of calls about problems with the new system. Based on the scenario, provide **TWO** possible explanations for this. **(8 marks)**

Question Five

a) The first step in managing risk is to identify the risks. Describe **THREE** methods you could use for identifying/uncovering/revealing risks. **(6 marks)**

b) In all cases you can choose to accept a risk rather than take any action. Describe **THREE** situations when accepting a risk might be the best option. **(6 marks)**

c) Describe **FOUR** risk responses designed to deal with a risk when it happens and four that take preemptive actions. **(8 marks)**