NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF THE BUILT ENVIRONMENT

DEPARTMENT OF QUANTITY SURVEYING

BACHELOR OF QUANTITY SURVEYING (HONOURS) DEGREE

PART IV SECOND SEMESTER EXAMINATIONS – JUNE 2010

MEASUREMENT IV-AQS4204

SECTION A

Question 1

a) Briefly explain factors that are considered when selecting a cable (5 marks)

b) What is diversity factor (2marks)

c) State the reasons why the load in an installation is divided into sub circuits (3marks)

Question 2

Three light points in a room uniformly spaced, each controlled by one way switch are to be wired. All switches are to be placed on one position

Draw the following

a) Schematic diagram(5marks)
b) Wiring diagram in multiline representation(5marks)

SECTION B

Question 3

Figure (1) shows the floor layout plan of a residential house. The house is to be provided with electrical connections and the position of the lights, switches, power socket outlets and distribution board (D/DB) are as shown in the diagram.
Assuming the following;

a) Height of batten above the floor level =2.5m
b) Height of switches above the floor level=1.3m
c) Height of distribution board above the floor=1.5m
d) 100 watts load for each light point
e) 1000 watts load for each power socket outlet
f) Power socket outlets installed 300mm above the floor.

Stating any additional assumptions made:

1) Decide the number of sub circuits required and illustrate these on the floor layout plan (15marks)
2) Prepare a bill of quantities for major materials (wires, breakers and conduits) required for the wiring system (15marks).