NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
FACULTY OF APPLIED SCIENCE
COMPUTER SCIENCE DEPARTMENT
MAY EXAMINATIONS 2002

SUBJECT: SOFTWARE DESIGN METHODOLOGY
CODE: SCS 2201

INSTRUCTION TO CANDIDATES

Answer any five (5) questions.
Each question carries 20 marks

Time: 3 hours

QUESTION ONE

a) What are the skills required to collect and record software requirements?

[5]

b) given below is a specification for a small information system. Identify the functional and data components of the system. Identify problems with the specification such as ambiguities, inconsistencies and vagueness.

i) Software is required to maintain information about books held in a small departmental library.

ii) The software must run on a standard IBM PC XT with a 20Mb hard disk.

iii) For each book, the following information is held in the computer: title; author; ISBN; year; borrower (if no loan); date of issue (if on loan).

iv) The computer should be able to store information on up to 1 million books.

v) With suitable security precautions, the system will initialize the library information so that is contains zero books.   [15]

QUESTION TWO

a) What are the most important attributes a specification should have for a programmer who has to implement it?   [10]

b) Convert the following into a structured program: