UNIVERSITY OF GHANA



SECOND SEM ESTER **UNIVERSITY EXAMINATION - 2007/2008**

COMPUTER SCIENCE

COMP402: SYSTEMS PROGRAMMING

EXAMINER: JACOB ARYEETEY

TIME ALLOWED: 3 HOURS

Answer ALL the questions in both SECTIONS A and B.

**SECTION A [50 marks]**

***Answer all the Questions in this section***

1. (a) Explain the term System Programming **[4 marks]**

* 1. Discuss whether Programming is an Art, a craft or Science discipline **[6 marks]**
  2. Describe five relevant properties of good quality programming. **[5 marks]**

1. Write briefly on the following Software life cycle models:

 Build and Fix **[5 marks]**

 Waterfall **[5 marks]**

3. With the aid of suitable examples describe the relationship between Hierarchical

chart and Venn diagram. ***[5* marks]**

1. The Computer Code of Ethics (1990) includes such principles as: "Avoid real or perceived conflicts of interest whenever possible" and "be honest and realistic in stating claims or estimates" for jobs undertaken for clients.

**(a)** What are Computer Ethics and Professionalism? **[10 marks]**

(b) DiscusS giving **five reasons** why Ethical issues on System Development are

essential in Developing Countries. **[10 marks]**

**SECTION B[50 marks]**

***Answer all the Questions in this section***

You have been hired by the ministry of Health to produce a conceptual design of a fully networked and integrated health Information System for medium size Hospital. Among other benefits, the new health Information System is to promote the idea of Paperless environment. The ministry can afford only $125,000 for the project

Your design methodology must be under the following headings:

1. **System Requirement**
2. **Constraints/Limitations**
3. **Hardware**
4. **Software**
5. **Output**
6. **Process**
7. **Input**
8. **Controls**

You are to produce the complete functional design specifications for implementation by the Ministry of health.