JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS

UNIVERSITY EXAMINATIONS FOR THE DIPLOMA IN COMMUNITY HEALTH AND DEVELOPMENT

1ST YEAR, 2ND SEMESTER 2017/18 ACADEMIC YEAR

BUSIA L.CENTRE

COURSE CODE: SCS 2124

COURSE UNIT: IT.AND SOCIETY

TIME: 2HOURS

VENUE: BUSIA   **EXAM SESSION: APRIL 2017**

Instructions

1. Answer question one (compulsory) and any other two questions

2. Candidates are advised not to write on the question paper

3. Candidates must hand in their answer booklets to the invigilator while in the examinations room

QUESTION ONE – (30 MARKS)

a) Describe the following terms   (4 marks)

i. Clinical informatics

ii. Health informatics components

b) Briefly explain three tools used in health informatics   (6 marks)

c) Describe three risks arising from use of computers in a hospital   (6 marks)

d) Briefly explain three benefits of using computers in hospitals   (6 marks)

f) Describe two major components that make up a computer system.   (4 marks)

h) Other than the keyboard and mouse, describe two other input devices that are used in

computerized hospitals.   (2 marks)

QUESTION TWO – (20 MARKS)

a) Explain the four basic security issues in health informatics listed below.   (8 marks)

i. Confidentiality

ii. Non-repudiation

iii. Authenticity

iv. Availability

b) Briefly describe expert systems and state their role in health informatics   (4 marks)

c) Some computers in the hospital will be analog and others will be hybrid.

Required:

i. Differentiate between analog and digital computer   (2 marks)

ii. For each type in (i) above, give an example of its use in a hospital   (2 marks)

d) A computers memory is organized into a hierarchy. Explain why this is necessary.   (2 marks)

e) State the purpose of each of the following labeled font tools in Ms Word 2007.   (2 marks)

i)font type

ii) font size

QUESTION THREE – 20 MARKS

a) Use an example to illustrate the application of artificial intelligence in health informatics (4 marks)

b) Explain how application of health informatics aids in the following cases:

i. Effective management (2 marks)

ii. Patient recruitment and management (2 marks)

iii. Regulatory compliance (2 marks)

iv. Data storage, transfer, processing and analysis (2 marks)

c) Most organizations today are opting to buy an **ERP**.

Required:

i. Explain the term in bold (2 marks)

ii. State two reasons behind the trend (2 marks)

iii. Briefly explain two disadvantages of ERPs (4 marks)

QUESTION FOUR (20 MARKS)

a) Differentiate between open source and proprietary software. (2 marks)

b) Briefly explain three factors you would consider while acquiring hospital software. (6 marks)

c) By use of appropriate examples, differentiate between general purpose and special purpose software. (4 marks)

d) Describe each of the following information systems:

i. Transaction processing system (4 marks)

ii. Decision support system (4 marks)

QUESTION FIVE (20 MARKS)

a) Evaluate the importance of using a computer data base in a health facility (10 marks)

b) Explain how a computer network can facilitate health communication between different health facilities (6marks)

c) Discuss four types of threats in an information system environment (4marks)