



MACHAKOS UNIVERSITY

University Examinations for 2021/2022 Academic Year

SCHOOL OF AGRICULTURE, ENVIRONMENT AND HEALTH SCIENCES

DEPARTMENT OF HEALTH SCIENCES

FOURTH YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE (PUBLIC HEALTH)

HPH 400: HEALTH INFORMATION SYSTEMS

DATE: 26/8/2022

TIME: 8.30-10.30 AM

INSTRUCTIONS:

This paper consists of two sections A and B

SECTION A

Specific Instructions

- This section has one question
- The question is compulsory
- The question is 30 marks

QUESTION ONE (30 MARKS)

- a) Highlight the challenges in generation of health information at County level in Kenya. (3 marks)
- b) State four (4) emerging roles of information technology in support of healthcare. (3 marks)
- c) Outline the dimensions of quality health data. (3 marks)
- d) Highlight the benefits of community involvement in health information needs assessment. (3 marks)
- e) Outline the elements of a health management information system (3 marks)
- f) Differentiate between data and information. (3 marks)

- g) State how you would apply principles of patient record documentation in Kiambu District Hospital. (3 marks)
- h) State the legislative and regulatory instruments of management of health information systems in Kenya. (3 marks)
- i) Outline the development of health information systems based on Nolan's Model. (3 marks)
- j) Highlight the challenges in use of databases for decision making in healthcare.(3 marks)

SECTION B:

Specific Instructions

- **This section has four (4) questions**
- **Answer any two (2) questions**
- **Each question is 20 marks**

QUESTION TWO (20 MARKS)

- a) You are part of a team that has been awarded consultancy to develop a health information system for Hospital X in Machakos County. Describe the challenges you are likely to face. (10 marks)
- b) Discuss the significance of utilization of databases in health environment. (10 marks)

QUESTION THREE (20 MARKS)

- a) The Ministry of Health, Kenya is in the process of setting up a health facility in County X that is known to have limited resources. To inform this process you have been asked to assess the health needs of the people residing in the County. Explain the steps you would take. (10 marks)
- b) Discuss the challenges of health information system sustainability in Kenya and suggest possible solutions of addressing them. (10 marks)

QUESTION FOUR (20 MARKS)

- a) Classify and describe the various types of health information systems used in the Kenya health care sector. (10 marks)
- b) Company X dealing with health-related information has lost crucial data due to cyber-attack. Explain some computer security techniques that they would explore to avoid such attacks in the future. (10 marks)

QUESTION FIVE (20 MARKS)

- a) You have been charged with the responsibility of educating the staff of Meru Hospital on the e-health code of ethics. Outline the issues you would cover in your education seminar. (10 marks)
- b) Describe the use of networking in health care practices. (10 marks)