

091906T4HRI

HEALTH RECORDS AND INFORMATION TECHNOLOGY LEVEL 6

AITC/HRIT/01/6/A

HOSPITAL ADMINISTRATIVE STATISTICS

July/August Series



AMREF INTERNATIONAL TRAINING CENTER

WRITTEN ASSESSMENT

DATE: 7TH AUGUST 2026

TIME: 2 HOURS START: 2 PM FINISH: 4 PM

INSTRUCTIONS TO CANDIDATE

1. You have **THREE** hours to answer all the questions.
2. Marks for each question are indicated in the brackets.
3. The paper consists of **TWO** sections: A and B.
4. Do not write on the question paper.
5. A separate answer booklet will be provided.

This paper consists of FIVE (5) printed pages

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing

SECTION A: (40 MARKS)

Answer ALL the questions in this section

1. Define the following terms:
 - a) Health statistics (2marks)
 - b) Live birth (2marks)
2. A Health Records Officer is preparing a report for hospital management and needs to classify the different branches of statistics used in analyzing health data. State the FOUR types of statistics (4marks)
3. Medical statistics are required to support hospital processes. Recall **FOUR** reasons why hospital administration needs medical statistics (4marks)
4. Distinguish between primary data and secondary data as used in statistics (4marks)
5. At Sunrise County Hospital, every patient is required to register at the records department before receiving medical services. List FOUR types of data collected in the hospital during patient visits (4marks)
6. Hospital X is made up of two theatre departments; each theatre performs five surgical cases in a day, in a certain week they managed to have cases every day and happened to get post-operative sepsis of 15 patients who did surgery. Calculate the rates of infections for the week (4marks)
7. The health statistics process begins with the data collection phase.
 - a) Identify TWO methods of data collection (2marks)
 - b) State TWO factors that determine the data collection method to be applied when collecting data. (2marks)
8. The ratio of male patients to female patients who attend an eye clinic in Hospital X is 4:7 per week. In a certain week, the hospital attended to a total of 121 patients. Out of this number, 20 were male. Calculate the number of female patients who attended the clinic in that particular week. (4marks)

9. During November, a hospital performed 275 operations, and 269 patients were operated on. 2 deaths occurred within 10 days of surgery, and 1 occurred after 10 days. Calculate the postoperative death rate. (4marks)

10. Read the paragraph below and use it to answer the questions that follows;

The AMREF International University interviewed its students to understand their level of satisfaction in various areas. Of the 150 samples interviewed, the following satisfactory levels were noted: 27 rated the library as very good, 25 rated the food offered as very good, 20 rated the teaching staff as excellent, and 17 rated student leadership as good.

- a) Identify the type of data presentation is highlighted above? (1 mark)
b) Apart from the data presentation named in (a) above, list other THREE types of data presentation (3marks)

SECTION B:

Answer any THREE questions from this section.

11. The heights of 60 patients during BMI data collection in Awasi Hospital on a clinic day were recorded as shown in the table below.

Height, cm	Frequency
25 -29	5
30 – 34	12
35- 39	25
40 – 44	x

45 -49	7
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- a) Construct a frequency distribution table to represent the above information. (6 marks)
- b) Calculate the mean height of the patients (4marks)
- c) Calculate the median height, correct to 1 decimal place, of the athletes (5marks)
- d) Calculate the mode (5marks)

12. A county referral hospital intends to assess patient satisfaction with the services offered in the outpatient department. The Health Records and Information Department has been tasked with collecting patient data through questionnaires and interviews.

- a) Describe FIVE principles of a good questionnaire and interview schedule design. (10 Marks)
- b) Explain FIVE uses of health statistics (10 Marks)

13. A hospital unit has 50 beds available during the year 2003 had 24500 occupied bed days. The hospital discharged 720 patients during the year. Use the above information to calculate:

- a) Percentage occupancy (5marks)
- b) Average length of stay (5marks)
- c) Daily average occupancy (5marks)
- d) The number of beds required to accommodate all the patients (5marks)

14. Using appropriate formulas, calculate the following rates based on the information provided:

- a) In a given year, a county recorded 4,200 live births and had a mid-year population of 150,000 people. Calculate the crude birth rate per 1,000 population. (5 marks)

- b) During the same year, there were 3,900 live births in the county and 120 deaths of infants under one year of age. Calculate the infant mortality rate per 1,000 live births. (5 marks)
- c) In 2024, a hospital recorded 1,050 deaths and the total mid-year population of the catchment area was 80,000 people. Calculate the crude death rate per 1,000 population. (5 marks)
- d) In a sub-county, there were 2,100 live births in a year, and the number of women aged 15–49 years was 42,000. Calculate the fertility rate per 1,000 women of reproductive age. (5 marks)

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