



GRETSA UNIVERSITY - THIKA

UNIVERSITY EXAMINATIONS
January-April 2025 SEMESTER

DIPLOMA IN HEALTH RECORDS AND IT

COURSE CODE: DIHR 053

COURSE TITLE: MEDICAL STATISTICS III

DATE:

TIME:

INSTRUCTIONS TO CANDIDATES

1. SECTION A IS **COMPULSORY**.
2. SECTION B: ANSWER ANY OTHER **THREE** QUESTIONS.
3. **DO NOT** WRITE ANYTHING ON THIS QUESTION PAPER AS IT WILL BE AN EXAM IRREGULARITY.
4. ALL ROUGH WORK SHOULD BE AT THE BACK OF YOUR ANSWER BOOKLET AND CROSSED OUT.

CAUTION: All exam rooms are under CCTV surveillance during the examination period.

SECTION A: COMPULSORY

PART I: MULTIPLE CHOICES QUESTIONS

[ONE MARK EACH]

1. A hospital with 50 beds in the year 2015 rendered 21500 inpatient days. What was the percentage occupancy
 - A. 114.8%
 - B. 71.8%
 - C. 117.8%
 - D. 171.8%
2. The movement of a patient from one medical care unit to another within the same hospital
 - A. Discharge
 - B. Parole
 - C. Abscondees
 - D. Transfer
3. Daily bed return carries all of the following data except.
 - A. Discharge status
 - B. Length of stay
 - C. Admission date
 - D. Hospital number
4. The unit of measure used to indicate the services received by one inpatient in a 24-hour period.
 - A. Inpatient service day
 - B. Volume of service
 - C. Average occupancy charges
 - D. Daily patient census.
5. Who among the following is not a hospital administrative statistics user?
 - A. Doctors
 - B. Hospital administrators.
 - C. Ministry of health officials
 - D. Hospital support staff.

PART II: SHORT ANSWER QUESTIONS: ANSWER ALL QUESTIONS IN THIS SECTION

1. Describe the difference between occupied bed days and percentage occupancy [2 marks]
2. Explain any five ways in which you can use statistical data in a health facility [5marks]
3. State any five advantages of computers application in statistics [5 marks]
4. A total of 220 deliveries are recorded by the obstetrical unit of a hospital. Out of these 220 deliveries, 50 were performed by Caesarean section (C-section). Calculate the caesarean section rate. [5 marks]
5. State any two ways in which discharge days are important in health care facility set up. [2 marks]
6. During the month of November a hospital performed 275 operations, and 269 patients were operated on. There were 2 deaths that occurred within 10 days of surgery, and 1 that occurred after 10 days. Calculate the postoperative death rate [4 marks]
7. State any roles and responsibilities of a health records and information officer in health care data management. [2 marks]

SECTION B: ANSWER ANY TWO QUESTIONS [40 MARKS]

Question one

The following data was obtained from a certain hospital ward which had a bed capacity of 50 beds on 30th May, 2020 where 32 patients remained in the ward on 29th May.

Admissions - 13 patients

Discharges – 15 patients

Transfer in – 6 patients

Deaths – 3 patient

Transfer out – 4 patients.

- i. Using the data provided above, come up with a well balance daily bed return for the ward. [8 marks]
- ii. Using the daily bed return state whether the ward was fully utilized or not and give reasons for your answer [2marks]
- iii. In a 150 bedded hospital, the overall bed occupancy in a year was 86% with variation between individual specialties. General Medicine, with 70 beds had 90% occupancy and General Surgery, with 80 beds had 95% occupancy. State the number of occupied beds for the remaining specialties and what percentage occupancy this represents. [10 marks]

Question two

The following daily summary sheet was obtained from Isiolo County referral hospital in a ward with 35 staffed beds for 10 days in the month of May in the year 2019. 31 patients remained in the ward the previous month. Use the data to answer the questions that follows.

Name of hospital: MURANG'A COUNTY REFERRAL HOSPITAL							
Ward: MALE MEDICAL WARD							
Month: JUNE							
Year: 2023							
Date	Admission	Transfer in	Transfer out	Discharges	Death	Well people	Total
1	4	0	1	3	0	0	
2	3	0	1	7	0	0	
3	0	0	0	6	0	0	
4	5	0	0	4	0	0	
5	3	1	0	6	0	0	
6	5	0	0	3	0	0	
7	6	0	0	2	0	0	
8	2	0	0	5	0	0	
9	5	0	0	4	0	0	
10	3	0	1	7	0	0	
Total							

- Calculate all the required totals. [6 marks]
- Calculate the ward's percentage occupancy for the 10 days. [4 marks]
- Find the average length of stay or the discharged patients during the 10 days period. [3 marks]
- Calculate the vacant/ excess patient days in the given period of time. [3 marks]
- Interpret your answer in question d above. [1 mark]
- Calculate the turn over interval per bed in the 10 days period of time. [3 marks]

Question three

The following data was collected from kilifi general hospital for the year 2011.

Months	Beds	Admission	Discharges	Deaths	Transfer in	Transfer out	Ip. days
January	315	1848	1630	63	26	47	12776
February	315	1654	1463	74	42	49	11740
March	315	1981	1797	88	12	37	12789
April	315	1821	1695	104	28	74	11243
May	315	1918	1736	89	31	70	11963
June	315	2017	1808	92	32	32	12343
July	315	2079	2042	80	33	43	11997
August	315	1892	1385	80	24	393	11441
September	315	1966	1864	58	36	40	10888
October	315	1835	1724	63	40	30	12780
November	315	1956	1727	59	37	38	12372
December	315	1999	1749	74	17	20	11548
Total	315	20620	924	194	358	873	143880

Calculate for the whole year to one decimal place

- The average daily number of occupied beds [4 marks]
- The percentage occupancy [4 marks]
- Mean duration of stay [4 marks]
- The extra number of beds needed [4 marks]
- Give the meaning of the indicators computed in D and C above. [4 marks]

Question three

- As a health records and information officer in charge of a hospital, you have been informed that the data being collected and sent to the ministry of health does not meet the quality requirement. Discuss any five measures which you can put in place to improve the data. [10 marks]
- Explain why it is important to ensure high quality data is collected and maintained in health care facilities. [10 marks]