



- False data about peoples permanent residence e.g some have winter & summer homes
- Difficult for country to plan e.g some places look as if they are underpopulated like sailors of to sea

Dejure Adv

- Real representation of peoples residence
- Easy for planning purposes since the government knows where people really are

Dejure Dis

- Needs longer time to facilitate people go back to their homes
- Needs a lot of planning

Biosi 10. List any 3 advantages of sampling a population?

- ✓ Takes a shorter time when compared to a census
- ✓ Is relatively much cheaper than a census
- ✓ Less labor is used during a sample

M 11. List the tasks of an Enrolled Community nurse in an Integrated Maternal and child health

clinic

- ✓ Health education
- ✓ Family planning services
- ✓ Triage
- ✓ Child welfare

insure & Promote immunisation of children
Promotion of breastfeeding & nutritional status
Promote BfHI
Promote institutional deliveries
Promote & implement good maternal care

12. Describe the concept of "coverage" of health care?

The concept of coverage pertains to how many people in the population have received potentially preventable or curative interventions from available health care centres e.g ITN coverage or Contraceptive use

P 13. List any 3 purposes for which a sample survey would be carried out?

- ✓ To determine the distribution of a certain disease in the community
- ✓ To assess a program/ intervention in a certain community
- ✓ To study the health determinants in a population

To determine magnitude of association btw outcome & exposure

14. A survey to determine the prevalence of diarrhea disease among 300 under 5 in your community is to be carried out. Briefly describe how you would select a simple random sample of size 50 from this population.

- In a simple random sample all 300 under 5s in the community will have an equal chance of participating in the study. I would use a random sampling table like- Table AG Random sampling numbers to randomly select 50 numbers.

LNV 15. Outline 5 major principles of adequate housing?

- ✓ Fundamental physiological needs
- ✓ Fundamental psychological needs
- ✓ Protection against contagion
- ✓ Protection against accidents
- ✓ Residential neighbourhood

Strong structure of the shelter
Adequate provision of lbo waste
Effective provision for disposal & mgmt of solid waste
Absence of indoor pollution
Avoidance of overcrowding
Absence of vectors & pests
of doc
Adequate Ventilation

Eriv 16. Outline the factors that hinder effective food hygiene practices in Kenya?

- ✓ Low level of sanitation & poor and unsanitary practices
- ✓ Lack of proper storage facilities and transport facilities
- ✓ Use of untreated water





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- Large sample / use census to ↓ sampling errors.
- Well trained personnel do ↓ bias & error in data entry
- Avoid leading questions, use short simple questions with simple answer options. to reduce response bias.

Minimizing errors

- Offer incentives to respond
- The Govt. can encourage the public to stay at home e.g Public holiday so that all are found in their homes so that no one is missed or counted twice
- They can facilitate clerks going to inaccessible areas by having e.g Vehicles, Helicopters
- They can have state of the art Software to reduce incidence of human error
- Deadlines should be drawn for release of census results so as not to have obsolete data which cannot be used

6. Epidemiology is an important discipline in public health. List any 5 purpose for which epidemiological studies are carried out?

- To decrease the rate of morbidity & mortality in the population
- To improve the health status of the community/population
- To study the distribution & determinants of health problems in a population
- To identify health problems & seek measures to control or prevent the occurrence of illness in the human population
- For teaching purposes and research
- Is used in the organization & administration of programs- control/preventive measures

To provide a foundation for developing public health & regulatory decisions.

7. Give not less than 4 prime messages for promoting immunization to a group of pregnant mothers at a community social hall?

- Immunization is **effective** in preventing diseases that have high mortality and morbidity such as measles, polio e.t.c
- Immunization is completely **FREE**
- During Immunization there are a host of other services offered including weight monitoring and Vit. A supplementation
- Immunization is **safe** and ensures that children grow to be strong and health

It is cost effective as prevents future spending in health care for individuals.

8. Before choosing a health education method, It is important to consider 6 points. Itemize these and give reasons?

- Age group being given education e.g young or old
- Gender e.g male or female
- Language e.g can they understand English, Kiswahili, kikuyu
- Social/ cultural/economic/religion e.g some methods are unacceptable like using condoms as a demonstration of safe sex
- Level of education e.g do not use difficult medical terms unless addressing doctors
- Human relations e.g in the community with you the chief and other stakeholders

available resources: Some methods are more economical. Time available. Characteristics of target group.

9. List 2 advantages and 2 disadvantages of using defacto and de jure enumeration methods during census

Defacto Adv

- Easy to carry out
- Easy to understand

Defacto Dis

Defacto → virtue of where the enumerator finds the subject based on physical location. (all people present in a defined area) eg hospital.
De-jure → usual residence of subject taken into account.

for young need more fun & expression games like playgroup. Skill - demonstrate correct method. Need feedback. Know.





Census
 Social, economic, political, or administrative purposes
 to count all people in a country or enumeration
 - complete enumeration of all persons in a given geographical area within a particular time line

For fulfilling the need of proteins, adequate milk and milk products are necessary as this helps a lot in the prevention of kwashiorkor in children and in infants. Whole milk is also not tolerated so, skimmed milk or milk treated with lactose is given to prevent diarrhea. The protein diet that supplies 20% of the calorie is usually favored.

The administration of protein rich foods like skimmed milk products and Bengal gram proved to be a lot valuable. Fats should be given in usual amount to ensure necessary calorie intake. Multivitamin preparations can help a lot and can be administered orally. In kwashiorkor, minerals like potassium can also be low so, in order to compensate the mineral loss, minerals are administered orally to ensure the normal level of potassium.

The food stuffs that are allowed for a high protein diet are milk and milk products, bread made of wheat or rice, butter, sugar, fruits, ghee, wheat flour, bananas and vegetable protein mixture. The daily nutritional requirement for a child with kwashiorkor is 90-100 kcal per kg of the standard body weight at that stage

4. Discuss factors that influence health seeking behavior?

- **Acceptability**- Does the culture or community allow the health care intervention e.g. Handing out condoms may not be a welcome strategy to reduce HIV transmission.
- **Availability**- Does the health centre have the required services e.g. Do they have a maternity
- **Accessibility**- Can the community access the healthcare facility e.g. via ambulance, public means or walking
- **Affordability**- the physical cost of treatment e.g. expensive drugs & treatment can cause people to use TBA for delivery or Traditional Medicine practitioners instead of Docs
- **Quality of care**- If the community feels that the health centre has poor staff or poor services or are mistreated will tend to go for services elsewhere e.g. because of mean nurses at maternity settle for TBAs who treat them better

5. Briefly distinguish btw a census & a sample survey: list the main errors that are likely to occur in collecting, analyzing and publishing data from both source and suggest how these errors could be minimized?

Census - An official enumeration of an entire population usually with details as to age, sex, occupation e.t.c. - *Individuality*
 - set time of accuracy in Kenya/particular time

Sample survey - Is when a sample of elements from a target population is studied to measure the characteristics & attitudes of the people. - Driven by need e.g. market/social/economic

Main errors

- ✓ Some people will be missed *undercounting* eg. due to logistics, infrastructure.
- ✓ Some people are counted twice eg. nomads.
- ✓ **Coverage**- unable to access *geography*
- ✓ People lie about age
- ✓ **Digit preference**- avoidance of certain digits e.g. 13
- ✓ There are errors due to human mistakes in data entry -
- ✓ Some characteristics of the population e.g. age can lead to misclassification due to **(illiteracy)**

✓ If the results take long to be released/become obsolete

- Errors in cleaning, coding & data entry.
- Errors in presentation & printing of data.
- Errors due to self interest.
- Non response bias/leaves
- Bias due to interviewer

Census every 10 years
 Periodicity
 If heterogeneous pop census suitable
 in simple few hrs/dk
 census survey bigger than sample
 if homogeneous sampling suitable
 if data has more time & money, however, less error

Coverage Error
 - including people who
 are not in the sample
 - omission of people who
 are in the sample

These are bias





SECTION II: SHORT ANSWER QUESTIONS

1. Why would the private health sector not be able to provide adequate health services for the population of Kenya despite being said to be more efficient than public sector?

- ① Cost
- ② Profit oriented
- ③ Exploit people
- ④ Access
- ⑤ Regulation
- ⑥ Employee only relevant curative cases
- ⑦ Quality
- ⑧ They are trained in public

Using the five steps of behavior change and taking a 15 year old youth experiencing effects of alcoholism as an example, enumerate each step and give expected outcome.

- Precontemplation - aware - Action
- contemplation - aware - maintenance
- Preparation - intense

Describe two ways of monitoring occupational health status at a workplace.

- ① - work place inspection
- ② - regular check ups
- ③ - protective equipments
- x-ray clips
- scanner

Outline five provisions of the baby friendly hospital initiative.

5. List five components of the maternal Health Benefit Package in the Presidential Initiative on free maternal deliveries and primary health care services.

- ANC 9 post NC
- Deliveries (normal & ca)
- Referral services
- Mx of complicat related Pg
- FP

Compare with examples the following demographic concepts:

- (i) Perinatal mortality rate and post neonatal mortality rate
- (ii) Standard life table and multiple decrement life table

From the public health and economic perspective, discuss briefly why use of water guard treatment of drinking water is more preferred than boiling of the same.

- Boiling is not 100% safe
- Fuel
- large scale & time saving
- Residual effect of chlorine

8. Briefly explain what you understand by the terms:

- (a) Variable - sth varying from subject/subject, time/line.
- (b) Measure of location - where observations lies on a scale of observation.
- (c) Measure of dispersion - how far observations lie on a scale of observation.
- (d) Parameter - summary of indices for describing the entire population
- (e) Statistic - " " " " " data obtained from sample.

List four barriers to health care seeking for cervical cancer.

- 1. * Accessibility
- 2. Education
- 3. culture
- 4. Socioeconomic status
- 5. cost

Briefly discuss 5 key issues in the element of maternal and child health as per the Community Health Strategy.

- 1. * ANC
- 2. PNC
- 3. Delivery
- 4. FP
- 5. Child care: immunization, Nutrition

Next
Occupational health
Nut

Demo

Environmental

Artificial
- culture
- Education
- SES

MCH
Physical barrier
access - Infrastructure
Cost
Quality
Trained personnel





Describe five main factors that have influenced fertility levels and differentials over the past four decades

- 1. Level of education
- 2. Contraception
- 3. Economic status
- 4. Age at marriage
- 5. Desired family size

Two reasons why it is necessary to have a policy that states that norms and standards for service delivery in Kenya

- 1. Monitoring & evaluation
- 2. Appropriate service delivery & approval

Industrial demonstration in the United States of America in 1980's "Can't Take No More" about poor working conditions. Outline two health problems mentioned by the demonstrators

- 1. Histories
- 2. Lung cancer
- 3. Asthma

Five areas addressed by the WHO preconception care intervention package

- 1. Nutrition
- 2. Mental health
- 3. HIV
- 4. STIs
- 5. Infection

Why does Social Health Insurance appear to be more promising for financing health care than private insurance in poor countries like Kenya?

- 1. Community based health programmes
- 2. Private health insurance
- 3. Health planning

Four features of a successful community based health programme

- 1. Target group
- 2. Resources
- 3. Sustainability
- 4. Outcome

Give examples, describe the synergistic relationship between malnutrition and infectious disease

Outline the major points in a communicable disease process and measures of control that can be undertaken at each point

Section III: LONG ANSWER QUESTIONS (Answer BOTH questions in this section)

1. Describe the key elements of a logical framework tool, explaining how it can be used to evaluate interventions to reduce maternal mortality

2. Screening tests are often used for screening populations. List any five requirements for a test suitable for screening

3. With examples, give any five activities of epidemiology

4. The table below presents the results of a case control study conducted to determine if there is an association between a certain environmental exposure and development of asthma

	Cases	Control
Had been exposed +	112	176
Had not been exposed -	88	224

(c) Calculate and interpret the appropriate measure for strength of association between exposure to the environmental factor and development of asthma.

$OR = \frac{ad}{bc} = \frac{112 \times 224}{88 \times 176} = 1.62$

Handwritten notes:

- Screening tests: cheap, acceptable, easy, valid, reliable
- Epidemiology: surveillance, descriptive, analytic, experimental
- Case control study: association between exposure and development of asthma



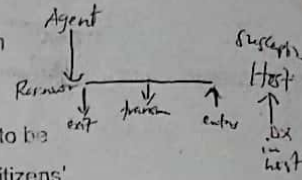


Env. health
CDU

Differentiate between global warming and ozone depletion.

Greenhouse gases - CFCs

Define a communicable disease and outline the areas at which measures can be taken to control a communicable disease.



10. List 5 key issues within the County Health System that need to be addressed to meet Kenya Constitution 2010 requirement on citizens' right to achieve highest attainable standard of health, and health care services.

Explain

11. Plan a health education session for a patient suffering from diverticulosis who is experiencing mild abdominal pain, diarrhoea alternating with constipation.

- Assess learning needs
- Setting objectives
- plan and implement teaching
- Evaluate
- document

- CHUs
- Role model
 - Liaise → other sectors
 - Assess progress
 - normalize activities
 - ORS
 - Leadership
 - Conduct of the water for the water for
 - hygiene
 - Active projects surveillance

PHC

12. Community health workers are important vehicles for disease control. Itemize their specific role in a given location experiencing cholera outbreak.

- Education
- Treatment
- Link to health facility
- Surveillance
- Health education, VAC, Chama
- Hydration & Antibiotics
- link to health facilities
- Rehabilitation, physiotherapy

PHC

13. With examples, briefly describe the three levels of disease prevention. Briefly explain the main differences in use of mid-upper arm circumference (MUAC) in assessing nutritional status of children and adults in terms of:

- 1^o - Health education, VAC, Chama
 - 2^o - Screening, treatment
 - 3^o - rehabilitation, physiotherapy
- a) Measurement technique children
- b) Cut-off point measurements for defining severe under-nutrition LLIN, severe children

Nut

- CO₂
- NO₂
- O₂
- NO₂
- NO₂

Demo

15. Briefly describe five main errors that are likely to occur before, during and after conducting a national population and housing census in Kenya.

- Before
 - Lack of trained personnel
 - Inadequate personnel
 - Inappropriate mapping
 - Inappropriate mapping
- During
 - Under enumeration
 - Double enumeration
 - Coverage errors
 - Missed persons
 - Misclassification
- After
 - Loss of data
 - Incomplete processing
 - Delay in releasing results

Demo

16. Describe the main strengths of demographic transition theory when applied to developing countries such as Kenya.

- Explain historical events, time frame
- Dynamic → changes
- can be used for explanation

17

17. Explain the concept of consumer ignorance in the use of health services.

Economic

18. Illustrate diagrammatically when a market surplus or commodity glut occurs in a market.





Part of Exam

$x = \text{Midpoint}$

Section I: SHORT ANSWER QUESTIONS

The data below describes the distribution of plasma volumes for patients seen at a clinic in Nairobi.

Mean = 3.0025
 $SD = \frac{\sum(x - \bar{x})^2}{n-1} = 0.3112$ 2.75, 2.86, 3.37, 2.76, 2.62, 3.49, 3.05, 3.12
 $CV = \frac{SD}{\bar{x}} = 9.648$

a) Calculate the mean and standard deviation (SD) of the data
 $SD = \sqrt{\text{Variance}}$
 $\text{Variance} = \frac{\sum fx^2 - \frac{(\sum fx)^2}{n}}{n-1}$

b) Calculate the coefficient of variation

2) Describe the phenomenon of biological transmission of communicable diseases and how it may influence prevalence of certain communicable diseases

Biological transmission occurs when an essential part of a life cycle of a parasite takes place in a vector or intermediate host. Eg Mosquito - vector of malarial parasite to human. In the presence of the parasite in the vector due to favorable conditions, etc.

Measuring disease occurrence in populations is one of the activities of epidemiology.

a) Differentiate the two measures of disease occurrence.
 Prevalence - Probability of occurrence of disease in a specific population at a specified time.
 Incidence - Probability of occurrence of disease in a specific population over a specified time.

b) Give any three uses of the measures mentioned in (a) above.
 - Incidence: to determine the risk of disease.
 - Prevalence: to determine the burden of disease.

a) Enumerate 3 specific types of indoor air pollutants household members are exposed to in a community setting.
 1. Aerosols 2. Insect repellants 3. Cigarette smoking
 4. Paints 5. Lead 6. Asbestos

b) When in the course of the day are the highest indoor exposures experienced and why?
 Disease

Briefly explain the immediate and underlying determinants of under-nutrition in children.
 - Education of mother
 - Socioeconomic
 - Inadequate food intake
 - Inadequate weaning
 - Poor hygiene and sanitation
 - Malnutrition
 - Infection

Outline Any Five significance of demography for health professionals
 1. Health planning includes resource allocation
 2. Migration patterns have an implication on disease transmission
 3. Mortality rate is important in knowing effectiveness of an intervention

Outline Any Five benefits of investing in school health as a strategy for reducing many of today's causes of death
 1. Children are vital importance to the community
 2. They constitute a sizeable segment of the population
 3. They are undergoing the stress & strains of growth & development
 4. They come from diverse socioeconomic strata, geographically
 5. Study of disease patterns, distribution in a population

Briefly describe Any five ways through which Epidemiology and Medical Anthropology interlink
 - Study of disease patterns, distribution in a population
 - Cultural practices
 - Health beliefs
 - Health care utilization

In the theory of economics why is the slope of the demand negative (downward slope) and supply curve a positive slope (slopes upward slope).
 - Consumers maximize utility
 - Producers maximize production

10. Describe Five ways of reducing occupational risks to workers at the work
 - Awareness
 - Drills & training
 - Signs & hazards
 - Supervision
 - Temperature dependence
 - Mosquitoes thrive in hot & wet env. influence prevalence in altitude - low prevalence in high altitudes and latitude - more in tropics.

Page 2 of 3





TKX
paper

Kedera™

COMMUNITY HEALTH

9/2/2014

1. Differentiate between measures of prevalence and measures of incidence in epidemiology. (2 marks)
2. Write down the balancing equation of demographic measures. (2 marks)
3. Expound on the EMIC and ETIC perspectives in social anthropology. (3 marks)
$$P_{t+1} = P_t + B - D + I - O + C$$
4. Health education focuses on 3 main components. Outline them. (6 marks)
 1. Health promotion
 2. Prevention of disease
 3. Rehabilitation
5. Draw the following curves:
 - ✓ Unity Elasticity (1 mark)
 - ✓ Perfect Elasticity (1 mark)
 - ✓ Supply & Demand Curve, with mention of the significance of the equilibrium point. (3 marks)





Saadia 10

IRYDY
papers Kedera™

RANDOM COMM. HEALTH TAKE HOME EVENT

1. Differentiate between fertility and fecundity.
2. Outline 2 methods of conducting a census. *- day survey*
3. Differentiate between descriptive and analytical epidemiology.
4. List 4 measures of mortality and outline the various formulae used to attain them.
5. Outline the natural history of a disease.
6. Create a policy document on the management of malaria in Homa Bay County.
7. What is a Giffen good? Draw the demand curve for this good. *L*
8. List the methods one would take to avoid or reduce iodine deficiency disorders in their locality.
9. List the formula used to obtain a patient's Body Mass Index.
10. Define entitlement as per Sen(1981) and outline its importance in nutrition.



SIRMA

3

UNIVERSITY OF NAIROBI
SCHOOL OF PUBLIC HEALTH
4TH YEAR BACHELOR OF MEDICINE AND BACHELOR OF SURGERY
COMMUNITY HEALTH
CONTINUOUS ASSESSMENT TEST (CAT)

DATE: Thursday, 30th May 2013

TIME: 2.00 + 5.00PM

INSTRUCTIONS

Read and follow the instructions. There are three (3) sections to this paper.

Section I: SHORT ANSWER QUESTIONS

QUESTION 1 AND 2 are compulsory. Each question carries 10 marks

Section II: SHORT ANSWER QUESTIONS

Answer any other eight (8) questions. Each question carries 10 marks

Section III: LONG ANSWER QUESTIONS

Answer BOTH questions in this section. Each question carries 20 marks

The Total time allocated to this Paper is 3 hours

Write your student registration number on EACH answer paper

ANSWER EACH QUESTION ON A SEPARATE SHEET OF PAPER

Section I: SHORT ANSWER QUESTIONS (Questions 1 and 2 are compulsory)

1. List five evidence-based interventions for addressing the top three direct causes of maternal deaths globally.
① Hemorrhage - 1st 3rd stage labour
② Infections = AFX, Tetanus Vaccines, Clean delivery
③ Unsafe abortions = Post abortive care, FP
④ Obstructed labour = partogram
⑤ Hypertensive dx (Eclampsia) → MgSO₄

2. Using a systems approach, outline how you would monitor ante-natal care in a health centre.
Av. of supplies → Continuity → Impaired care → Structure → Effectiveness & Efficiency
→ Integrated Service delivery → Indicators → Actual task / A/c
→ Analogy of Service → Outcome → Impact

Section II: SHORT ANSWER QUESTIONS (Answer any eight [8] questions)

3. What are the measures of disease occurrence? What are their uses in public health?
Incidence → Magnitude of a h/r/e in a pop
Prevalence (point & period) → Assess trends or patterns of events
→ planning & allocation of resources
→ Control measures

4. Briefly explain the significance of upper arm circumference (MUAC) indicator in assessment of nutritional status of children at health facility and community levels.

5. Briefly describe five main errors that are likely to occur before, during and after conducting a population and housing census in Kenya.

6. Application of the so called '3 R's' is crucial in implementation of occupational health and safety at work places. Briefly describe what they mean citing an example for each

Worker R: Rights & Responsibilities
Supervisor Resp.
Employer Resp.
Reports: Regular Check-ins
Response: Good emergency response plan
Review: Detailed documentation of problem, solution & policies, updates accordingly

Page 1 of 2

MUAC: → Both adults & children → Measures accurate quantitative data
→ Both under & overnutrition → Community diagnosis
→ Predicts mortality
→ Sensitive to acute dx in nutrition status
* → Current & Past nutrition status
→ Convenient, non-invasive & culturally acceptable

Thurs
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dan kethak

J

UNIVERSITY OF HAIROBI
SCHOOL OF PUBLIC HEALTH

4TH YEAR BACHELOR OF MEDICINE AND BACHELOR OF SURGERY
COMMUNITY HEALTH
CONTINUOUS ASSESSMENT TEST (CAT)

DATE: Thursday, 22nd August 2013

TIME: 2.00 - 5.0

INSTRUCTIONS

Read and follow the instructions. There are three sections to this paper.

Section I: SHORT ANSWER QUESTIONS

QUESTION 1 AND 2 are compulsory. Each question carries 10 marks

Section II: SHORT ANSWER QUESTIONS

Answer any other eight (8) questions. Each question carries 10 marks

Section III: LONG ANSWER QUESTIONS

Answer BOTH questions in this section. Each question carries 20 marks

The Total time allocated to this Paper is 3 hours

Write your student registration number on EACH answer paper

ANSWER EACH QUESTION ON A SEPARATE SHEET OF PAPER

Section I: SHORT ANSWER QUESTIONS (Questions 1 and 2 are compulsory)

- 1. Describe the UN Process Indicators for assessing quality of Emergency Obstetric Care ✓
- 2. Using the principles of prevention and control of communicable diseases, highlight measures you would apply at various entry points to address endemic diarrheal diseases in your community ✓

Section II: SHORT ANSWER QUESTIONS (Answer any eight [8] questions)

- 3. Using a sketch diagram, briefly describe the demographic transition theory and outline its strengths and weaknesses ✓
- 4. In point form, provide 5 things you would use to educate an 80 years old Kibera slum woman who had mitral valve replacement six months ago ✓

- A: Caused by burning of paper & wood \rightarrow H₂O
 - B: Flammable liquids which vaporize eg gasoline \rightarrow CO₂ & dry powder
 - C: Energized electrical equipment \rightarrow dry chemical powder
 - D: Metals eg Titanium \rightarrow special powder which melts & causes surface of burning metals
 - 1) Determine Age of child
 - 2) Accurate measuring
 - 3) Plot wt above on growth chart of appr gender & compare to sd.
 - 4) Interpret direction of growth
 - 5) Discuss child's growth & follow up w mother
28. List five activities in the Growth Monitoring programme in a health centre
29. Name all the classes of fire and state the type of fire extinguishers corresponding to each class of fire. Name 2 key stakeholders who should be involved in fire safety
30. List four features of a successful community based health programme

- With examples, compare the following demographic concepts
 - Reproduction rate of women will concern during a menstrual cycle
 - Recundability and Period fertility
 - Multiple decrement and Standard period life table

Section III: LONG ANSWER QUESTIONS. (Answer BOTH questions in this section)

The following are distances from the household to the nearest public health facility as recorded in a recent community diagnosis:

HH No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Distance from facility	6	8	12	6	8	7	9	8	6	7	8	4	7	8	7	7

- What is the median distance $L_n + \left(\frac{L_{n+1} - L_n}{f}\right)$
- Calculate the mean, variance and standard deviation (use the individual values)
- Calculate the standard error of the mean $SEM = \frac{SD}{\sqrt{n}}$ $SEM = cd/\sqrt{n}$
- Construct a 99% confidence interval for the mean distance from household to health facility in the population from which this random sample was drawn.

Note: $t_{99}(15) = 2.9467$

Dr. X conducted a study to determine if there was any association between exposure to radiation in uterus and development of tumors. Of the 2215 children who had been exposed to radiation, 59 developed tumors, while of the 1395 children who hadn't been exposed, 13 developed tumors.

- What study design was this? *Retrospective Cohort Study (Prospective)*
- Present the above results using a 2 by 2 contingency table.

	a	b
	c	d
- Compare the risks of developing tumors between the two groups of children. $RR = \frac{I_e}{I_o}$
- How many times more is the risk of tumors if a child is exposed to radiation compared to unexposed? $RR = 2.859 \times$
- How much of tumors are attributable to exposure to radiation? $AP = \frac{I_e - I_o}{I_e}$

$$AP = \frac{I_e - I_o}{I_e}$$

$$AR = 0.02664 - 0.009319 = 0.0173$$

$$17 \text{ per } 1000 \text{ cases of ut d2 Radiation}$$

$$MR\% = \frac{2.859 - 1}{2.859} \times 100 = 65.4\%$$

incidence exp = 2.664%
incidence unexp = 0.9319%

Global warming → takes heat from the greenhouse effect where the energy emitted by the earth's surface & warms the earth's atmosphere to a T° above what it would have been without the greenhouse effect. The earth's surface is warmed by the sun's rays, most of which are absorbed by clouds, most also by earth & some radiated back at longer wavelength most of which is absorbed by the greenhouse gases like CO_2 , CH_4 . The atmosphere is also heated by conduction & radiation. The earth being colder radiates energy & and towards. Diminished radiation is absorbed by the greenhouse gases & warms the atmosphere. The atmosphere warms as air.

Differentiate between global warming and ozone depletion. Ozone depletion → thinning of the ozone layer due to complex rxns involving CFCs and other halogenated ozone depleting substances (ODS), allowing harmful UVB light to pass through the earth's atmosphere. Define a communicable disease, and outline the areas at which measures can be taken to control a communicable disease. (skin Ca, catarrh, Symbiosis)

List 5 key issues within the County Health System that needs to be addressed to meet Kenya Constitution 2010 requirement on citizens' right to achieve highest attainable standard of health, and health care services: Availability, Affordability, Accessibility, Staffing, Quality, Acceptability.

Plan a health education session for a patient suffering from diverticulosis who is experiencing mild abdominal pain, diarrhoea alternating with constipation. 1. Assess learning needs, styles, willingness. 2. Set study objectives. 3. Plan & implement: content, material, style. 4. Evaluate teaching & learning. 5. Document. 6. Develop effective teaching.

Community health workers are important vehicles for disease control. Itemize their specific role in a given location experiencing cholera outbreak. - Teach comm. - Visit homes to determine health situation. - Recommend ORS - Be available to respond to acute disease. - Refer. - Maintain registers & keep records of events. - Promote care seeking & compliance. - Report to CHW on specific cholera concerns.

With examples, briefly describe the three levels of disease prevention. 1^o - Before dx, ITNs. 2^o - early in dx e.g. etc. exercise, immunize. 3^o - Curative to prevent disability e.g. HTN.

Briefly explain the main differences in use of mid-upper arm circumference (MUAC) in assessing nutritional status of children and adults in terms of: sex specific in adults, not sex specific in children. Measurement technique: different tapes. Children - mid-upper arm 13.5. Adult - a1-33.

NORMAL Adm. > 13.5 cm Child > 11-13.5 cm Child > 12.5-13.5 cm

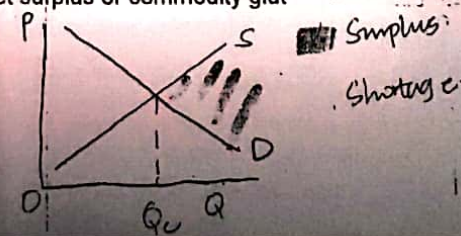
Measurement technique a) Cut-off point measurements for defining severe under-nutrition SAM < 110 mm children < 110 mm Mod. AMN children 110-125 adults < 210 adults < 210

Briefly describe five main errors that are likely to occur before, during and after conducting a national population and housing census in Kenya. Before → Pre-hearing, During → family entry, After → ...

Describe the main strengths of demographic transition theory when applied to developing countries such as Kenya. → flexibility with time periods, countries at diff. stages of dev. follow same pop. pattern. → family universal concept. → can be used as a predictor of future pop. trends.

Explain the concept of Consumer Ignorance in the use of health services. → lack adequate knowledge of relative cost & degree of effectiveness of HC services. → cannot select based on quality/price/where to start/No knowledge of market/practice regulations.

Illustrate diagrammatically when a market surplus or commodity glut occurs in a market. → supply & demand beyond equilibrium point.



with getting rich richer, fall in poverty - immediate migration patterns Technology ignored

SIRMA

REGISTRATION NO:

UNIVERSITY OF NAIROBI

5

School of Public Health

4th YEAR BACHELOR OF MEDICINE AND BACHELOR OF SURGERY

CONTINUOUS ASSESSMENT TEST (CAT)

DATE: Thursday 13, 2015

TIME: 2.00PM - 5.00PM

INSTRUCTIONS

Read and follow the instructions. There are Three sections to this paper.

Section I: SHORT ANSWER QUESTIONS.

QUESTION 1 and 2 are compulsory. Each question carries 10 marks.

Section II: SHORT ANSWER QUESTIONS. Answer any other eight [8] questions.

Each question carries 10 marks.

Section III: LONG ANSWER QUESTIONS.

Answer Two Questions. Each Question Carries 20 Marks.

The total time allowed for this paper is 3 hours.

Write your student registration number on each answer page.

ANSWER EACH QUESTION ON A SEPARATE SHEET OF PAPER.

Section I: SHORT ANSWER QUESTIONS (Question 1 and 2 are compulsory)

5. Immune system deficiency

1. Up to early 1990's, the Macdonald food industry used Chlorofluorocarbons (CFCs) to manufacture their food packaging materials. Explain why this was a public health concern.

1. Depletion of ozone → skin up, cataracts, macular deg. → premature ageing
 2. CNS effects upon inhalation → headache, dizziness, nausea, alcohol like effects
 3. Ingestion → N, V, D
 4. Contact → Dermatitis & skin irritation

2. In a study of cholera vaccine, the rate of developing cholera was estimated among those receiving vaccine and those receiving placebo: Vaccine efficacy (VE) = Risk_{unv} - Risk_v

= 9.97%
 90/903
 17/847
 = 2.012

	Cases	Person-years
Placebo 100 per 1000 97%	90	903
Vaccine 20 per 1000 2.01%	17	847

How much of the disease would be prevented by vaccination? (5 marks)

80%
 $VE = 9.97 - 2.01 = 7.96$
 9.97

Section II: SHORT ANSWER QUESTIONS - Answer any Eight [8] questions

3. Briefly outline any five high impact nutrition interventions in Kenya.

HINI 10.
 $VE = 1 - RR = 80%$

4. (a) Briefly describe the logical framework approach in evaluation (2 marks)
 (b) List and define the factors which are under management control (3 marks)

Setting standards, Measuring actual performance, Taking corrective actions

5. Briefly describe five main errors that are likely to occur before, during and after conducting a national populations and housing census in Kenya

(i) Calculate and interpret

1. What was intended to happen: (Objectives) page 1 of 2
2. " has been achieved or objectives
3. What values should be placed on methods used.
4. What use can be made from this