

**KISII UNIVERSITY**  
**UNIVERSITY EXAMINATIONS**

**FIRST YEAR EXAMINATION FOR THE AWARD OF THE**  
**DIPLOMA IN CLINICAL MEDICINE AND SURGERY**  
**THIRD SEMESTER 2022/2023**  
**[MAY-AUGUST, 2023]**

**CIMS 0173: ENVIRONMENTAL HEALTH**

**STREAM: Y1S3**

**TIME: 2 HOURS**

**DAY: MONDAY, 12:00 – 2:00 PM**

**DATE: 31/07/2023**

**INSTRUCTIONS**

**1. Do not write anything on this question paper.**

**SECTION I: SHORT ESSAY QUESTIONS**

**Answer all questions in this section**

1. Rodents especially rats are important in community medicine
  - a) Give reasons as to why it is important (5marks)
  - b) Describe the **clinical features** of at least one disease associated with rats which is recognizable at community level (2marks)
  - c) What are the **control measures** for rats (3marks)
  
2.
  - (a) Mention at least **five** classes of occupational hazard (5marks)
  - (b) Give at least one **control measure** for each (5marks)
  
3. There's an outbreak of Cholera in your area.
  - a) State the **clinical manifestations** of Cholera disease (3marks)
  - b) Describe the **clinical intervention for the disease** (3marks)
  - c) **Outline the prevention and control measures** you will undertake (4marks)
  
4. Discuss the **different types of environment** (10marks)
  
5. Describe the components of environmental health (10marks)

6. Describe **methods of medical waste disposal** from a level four hospital  
(10marks)

## **SECTION II: LONG ESSAY QUESTIONS**

### **Answer any two questions**

1. Water plays an important role in environment. Discuss the methods of water purification on small and large scale.  
(20marks)
2. a. Discuss methods of waste segregation in hospital (10marks)  
b. Discuss strategies for prevention of occupational diseases (10 marks)
3. Discuss the various methods of waste management (20 marks)

## **SECTION III: MULTIPLE CHOICE QUESTIONS** **CIRCLE/CHOOSE ONE CORRECT RESPONSE**

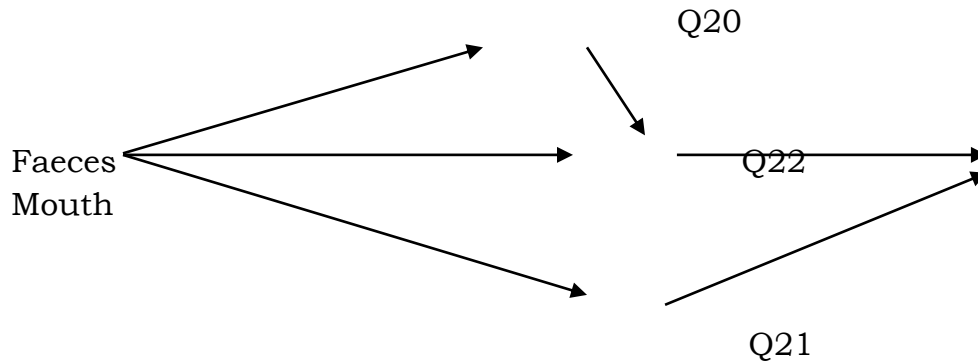
### **MCQ: only one true answer**

1. The first activity of a clinician at an accident scene is;  
(a) Identify himself and start treating the victims  
(b) Organize for ambulatory transport  
(c) Triage the victims  
(d) Inform the medical officer of health
2. The principal recipient of feedback in a communication process is?  
(a) The whole community  
(b) The specific audience during the process  
(c) The communication  
(d) The target audience for the intended message
3. The operational work force at the community level I are;  
(a) Traditional birth attendants (TBAs)  
(b) The herbalist  
(c) Community health workers  
(d) Community midwives
4. Which of the following is a PHC principal?  
(a) Equality  
(b) Control of all endemic diseases  
(c) Accessibility  
(d) Adequate water supply and sanitation
5. Which of the following work place hazards appears entirely in physical state?  
(a) Gases

- (b) Particulates
  - (c) Dusts
  - (d) Carbon monoxide
6. The difference between biological monitoring and environmental monitoring at work place is that;
- (a) In the former body fluids are used and in the latter it is the working area which is assessed
  - (b) Environmental monitoring is expensive than the biological
  - (c) Biological monitoring is done in the workers breathing space
  - (d) Biological monitoring is entirely practiced by environmental hygienist
7. The host factors that influence diseases causation include;
- (a) Dosage
  - (b) Age
  - (c) Mortality
  - (d) Prognosis
8. The process of taking water from its source for analysis by the government chemist or national health public health laboratories is known as;
- (a) Sampling
  - (b) Epidemiological investigations
  - (c) Biological monitoring
  - (d) Chemical analysis
9. Which of the following makes a final decision that unclaimed dead body should be disposed?
- (a) Police officer
  - (b) Medical officer
  - (c) Public health officer
  - (d) Judge
10. Drug abuse
- (a) Simply means using drugs without prescription
  - (b) Is when one starts craving for drugs routinely
  - (c) Means having to depends largely or entirely on drugs
  - (d) Is a significant impairment after a period of sustained use of drugs
11. The psychoactive drug heroine is a
- (a) Stimulant
  - (b) Depressant
  - (c) Hallucinogen
  - (d) Suppressant
12. The difference between drug tolerance and craving is;
- (a) Craving leads to dependency and tolerance leads to resistance
  - (b) Craving leads to resilience and tolerance leads to dependency

- (c) Tolerance leads to resilience and craving leads to resistance  
(d) Though cravings is psychological and tolerance is biological they both lead to dependency
13. Which of the following is a priority for a clinical officer carrying out a community diagnosis activity?  
(a) Identifying resources necessary for basic health development  
(b) Planning for mitigation when natural disaster occurs  
(c) Establishing infrastructure for local disease response  
(d) Deploying staff for local disease needs
14. The most recent development for the KEPI programme is  
(a) Is introduction of 2<sup>nd</sup> dose measles vaccine  
(b) The introduction of vitamin A as both a food supplement and a vaccine  
(c) Beyond Zero campaigns and National immunization days  
(d) The introduction of Rotavirus vaccinations
15. Routinely at 14 weeks;  
(a) All children must received all vaccines previously missed  
(b) All children should get polio 3 and Penta 3 vaccines doses  
(c) Yellow fever vaccine is given but only is selected sub-counties within the Rift valley region  
(d) Vitamin a could be administered to children facing malnutrition
16. Which of the following diseases is water borne?  
(a) Malaria  
(b) Typhoid  
(c) Bilharzia  
(d) Teaniasis
17. The best working definition of sound is;  
(a) Noise  
(b) Pressure variation in the natural states of matter  
(c) A vibration which could be detected by auditory systems of a man  
(d) A change in the inertia
18. Primary protein could be sourced from?  
(a) Meat and beans  
(b) Milk and water melon  
(c) Meat and green leafy vegetables  
(d) Beans and maize (githeri)
19. Which of the following people are most predisposed to cholera  
(a) Children aged below six months  
(b) Nurses and other medical workers  
(c) Women  
(d) Males of all ages

Use the link below on oral – faecal routes to answer questions 20 – 23



20. The point marked Q20 represents
- Flies
  - Mosquitoes
  - Cockroaches
  - Rodents
21. The point marked Q21 represents
- Food
  - Faeces
  - Water
  - Fingers
22. The central point at Q22 could be
- Food or waters
  - Fingers or faeces
  - Flies of faeces
  - Faeces or water
23. In Kenya, one of the reason why people avoid the construction of pit latrines is;
- Weak collapsible soils
  - Deep soil profiles
  - Brittle rocks
  - Ignorance and government policies
24. One of the main aims of the KEPI programme is;
- To improve primary school enrolment rates
  - Reduce population and habits of nomad communities
  - Reduce and control mortality and morbidity in children below one year
  - Fight cholera
25. Factors which increase the susceptibility of a community to the impact of hazards could be summed up as
- Risks

- (b) Vulnerability
  - (c) Resilience
  - (d) Causes of disasters
26. During her child bearing ages, a pregnant mother receives a total of 5 tetanus toxoids for periods of up to 4<sup>th</sup> pregnancy only because;
- (a) Subsequently she develops enough oestrogen to counter any injuries
  - (b) Subsequently she accumulates progesterone to counter injuries
  - (c) No woman give birth after the 4<sup>th</sup> pregnancy
  - (d) It is what is recommended in the immunization schedule
27. Which of the following is a counseling skill for drug addicts?
- (a) Teaching
  - (b) Role modeling
  - (c) Story telling
  - (d) Empathy
28. Which of the following is a PHC element?
- (a) The empowerment of women
  - (b) Maternal and child health
  - (c) Environmental sustainability
  - (d) Equity
29. In VIP toilet, the provision that controls fly nuisance is;
- (a) Self closing doors
  - (b) The dark interior
  - (c) The vent pipe
  - (d) The overhead fly screen
30. Which one of the following is a factor in the competition between man and the disease causing organism
- (a) The condition of the environment
  - (b) Religion of the community
  - (c) Infrastructure
  - (d) Skills and technology

#### **SECTION IV: MCQ: T/F**

**1. The following vaccines are live attenuated**

- (a) BCG
- (b) Rubella
- (c) OPV
- (d) Measles
- (e) Tetanus

**2. Which of the following statements is TRUE?**

- (a) All children should complete their immunization by age of 2 years
- (b) Several vaccines can be given at the same time

- (c) Minimum interval between vaccine doses should be 4 weeks
  - (d) Vaccines given at 9 months includes yellow fever
  - (e) Pneumococcal vaccine can be given between 6 weeks and 12 months
3. About vibrio cholera
- (a) Is a gram-negative bacilli
  - (b) Can survive in a fly for up to 14 days
  - (c) Usually motile
  - (d) Not sensitive to acidity and drying
  - (e) Up to 1 million vibrio-cholerae needed to cause disease
4. About Amoebiasis
- (a) Exists as a trophozoite and cyst
  - (b) Incubation period of E.Hystolytica is 2-4 weeks
  - (c) Non-pathogenic protozoa does not need treatment
  - (d) All patients presents with fever
  - (e) Entamoeba Dispar is pathogenic in humans
5. Diseases spread by faeces include:
- (a) Typhoid fever
  - (b) Poliomyelitis
  - (c) Infective Hepatitis A
  - (d) Schistosomiasis
  - (e) Amoebic dysentery
6. The following are characteristic of good housing except:
- (a) Good ventilation
  - (b) Near a pit latrine
  - (c) Near source of water
  - (d) Adequate spacing for family members
  - (e) Have access to community services
7. The following diseases need Quarantine as part of management
- (a) Ebola
  - (b) Tuberculosis
  - (c) Cholera
  - (d) Plague
  - (e) Scarlet fever
8. A comprehensive municipal solid waste management includes the following activities
- (a) Setting policies
  - (b) Developing and enforcing regulations
  - (c) Planning and evaluation
  - (d) Establishing training programs
  - (e) Establishing prices for services

9. Transmission of Amoebiasis includes:
- (a) Direct fecal oral transmission
  - (b) Sexual transmission
  - (c) Colonic irrigation
  - (d) Inhalation spores
  - (e) Direct contact
10. The following statements are true about 'CHICKEN POX'
- (a) Causative agent NOT known
  - (b) Impetigo is a differential diagnosis
  - (c) Communicable 5 days before eruption
  - (d) Diagnosis involves serum antibodies studies
  - (e) Chicken pox vaccine should be given during pregnancy to avoid infection to their new-borns
11. The following are protozoal diseases
- (a) Shigellosis
  - (b) Trypanosomiasis
  - (c) Schistosomiasis
  - (d) Amoebiasis
  - (e) Plasmidiosis
12. Factors that determine/contribute to the occurrence of a disease
- (a) Absence of vectors
  - (b) Disposal of Excreta
  - (c) Water
  - (d) Lifestyle
  - (e) Poverty
13. The following are NOT household hazardous waste:
- (a) Paint thinners
  - (b) Pesticides
  - (c) Insecticides
  - (d) Antifreeze
  - (e) Batteries
14. Components of environmental health consist of the following except
- (a) Water supply
  - (b) Personal hygiene
  - (c) Vector control
  - (d) Food hygiene
  - (e) Human waste disposal
15. The following are qualities of safe water except
- (a) Tasteless
  - (b) Colourless



- (c) Oduor
  - (d) turbid
  - (e) All the above
16. Unsafe injection practices may transmit the following infections
- (a) Hepatitis B virus
  - (b) Hepatitis C virus
  - (c) Leukemia
  - (d) Poliomyelitis
  - (e) Ebola
17. Water washed diseases include
- (a) Cholera
  - (b) Poliomyelitis
  - (c) Hepatitis A
  - (d) Amoebiasis
  - (e) Scabies
18. Ways of measuring radiation exposure
- (a) Geiger Muller survey
  - (b) Ionization chamber
  - (c) Film badge
  - (d) Pocket dosimeter
  - (e) Thermoluminescent
19. Which one is not a source of river pollution
- (a) Landfill activity
  - (b) Mining
  - (c) Petroleum exploration
  - (d) Radioactive waste
  - (e) None of the above
20. Control of noise pollution at source involves;
- (a) Enclosing the source
  - (b) Insulating the source
  - (c) Using silencers on the vehicle exhaust
  - (d) Using amplifiers
  - (e) Using updated TLV regulations - the Kenya Version
21. The following are chemical methods of abating pollution:-
- (a) Grease traps
  - (b) Plain sedimentations
  - (c) Neutralization
  - (d) Coagulation
  - (e) Flocculation
22. The following are diseases associated with chemical exposure to environment except:
- (a) Siderosis

- (b) Silicosis
  - (c) Anthracosis
  - (d) Asbestosis
  - (e) tuberculosis
23. The main causes of environmental pollution are
- (a) Agricultural activities
  - (b) Industrialization
  - (c) Population growth
  - (d) Urbanization
  - (e) Forestry
24. The following statement about types of environment are true except
- (a) Abiotic environment consist of flora and fauna
  - (b) Biotic environment is also known as physical exam
  - (c) Lithosphere consist of rocks, dtones
  - (d) Hydrosphere is known as sphere of water
  - (e) None of the above
25. Which of the following diseases are not occupational diseases?
- (a) Tuberculosis
  - (b) Meningococcal meningitis
  - (c) Pneumoconiosis of any type
  - (d) Cholera
  - (e) HIV/AIDS
26. The following environmental factors may not influence the community health
- (a) Life support
  - (b) Micro organisms
  - (c) Toxins
  - (d) Agricultural waste
  - (e) Biological waste
27. Concerning food preservation
- (a) Sun drying method is the most commonly used method
  - (b) Refrigeration changes the food colour and smell
  - (c) Smoking involves putting salt into meat product and allowing them to dry
  - (d) Canning food is put in an air tight container
  - (e) All of the above is correct
28. The elements of health promotion include the following
- (a) Addressing the population as the only factor related in health issues
  - (b) Ignoring some action to factors that may not cause illness
  - (c) Initiating legislation, fiscal measures and organizational change
  - (d) Involving public participation in defining problems but not decision making
  - (e) Advocating and imposing relevant social policies in the community

29. Which of the following is NOT among the millennium development goals?
- (a) Promotion of gender equality and empowerment of men
  - (b) Reduction of adult mortality
  - (c) Improvement in maternal health
  - (d) Ensuring agricultural sustainability
  - (e) Combating HIV AIDS, Ebola and other diseases
30. General strategies that may NOT strengthen preventive and promotive health service
- (a) Occupation health and safety
  - (b) Rehabilitation
  - (c) Research and development
  - (d) Assuring availability of drugs, supplies & equipment
  - (e) Financing the health care delivery system