



**KENYA MEDICAL TRAINING COLLEGE
FACULTY OF CLINICAL SCIENCES
DEPARTMENT OF CLINICAL MEDICINE**

**FINAL QUALIFYING EXAMINATION
FOR
DIPLOMA IN CLINICAL MEDICINE AND SURGERY**

PAPER: COMMUNITY HEALTH

DATE: 26th July, 2021

TIME: 3 HOURS (9:00 A.M – 12 NOON)

INSTRUCTIONS

1. This paper consists of:
 - Section 1 (40 Multiple Choice Questions)
 - Section 2 (8 Short Answer Questions)
 - Section 3 (1 Long Answer Question)
2. Attempt **ALL** Questions
3. Write the **EXAMINATION NUMBER** given on all the answer sheets provided and on the question paper.
4. Ensure that all examination answer scripts are handed in at the end of the examination
5. Ensure you sign the examination register provided

EXAMINATION NUMBER

COMMUNITY HEALTH**SECTION I: MULTIPLE CHOICE QUESTIONS - (40 MARKS)**

1. 2019 Novel Corona Virus was first identified in
 - a) Shanghai, China
 - b) Wuhan, China
 - c) Guangzhou, China
 - d) Wuxi, China
2. Which element of the primary health care (PHC) was incorporated after the Alma-Ata declaration
 - a) Nutrition
 - b) Expanded program for immunization
 - c) Mental health
 - d) Safe water and sanitization
3. Which of the following statement is true about the role of cultural practices, values and beliefs?
 - a) They are counterproductive and reduce accessibility of the health services by the community
 - b) They provide opportunities for increasing the community's ability to effectively access health services
 - c) They are the cause of majority of the diseases in the community
 - d) They reduce the community's ability to utilize health services
4. The health promotion approach that aims at increasing an individual's knowledge about the causes of health and illness is;
 - a) Behaviour change approach
 - b) Social change approach
 - c) Biomedical approach
 - d) Community development approach
5. The sustainability of community health programs will be realized if there is
 - a) Improved relationships between families and community members
 - b) Effective mechanisms for disease prevention and control for the population
 - c) Empowerment of all members of the community to realize their rights and responsibilities for the attachment of good health for all
 - d) Improved and adequate disease surveillance activities for population
6. Which one of the following is NOT a symptom of vitamin A deficiency?
 - a) Growth retardation
 - b) Dry skin
 - c) Xerophthalmia
 - d) Malformation of long bones

7. Concerning mid upper arm circumference (MUAC)
 - a) Severe malnutrition is defined by $MUAC > 11.5\text{cm}$ or 115 mm in children aged 6-59 months
 - b) It is the circumference of the left upper arm.
 - c) It is measured at the mid-point between the tip of the shoulder and the wrist joint.
 - d) It is used to assess stunting
8. Criteria for an adequate house include;
 - a) It should be multi-storeyed
 - b) It should have an in-built toilet
 - c) It should have adequate light and ventilation
 - d) It should have a cemented floor
9. Sullage means
 - a) Waste water excluding human excreta
 - b) Solid excreta of human beings
 - c) Solid and liquid excreta of animals
 - d) Waste water including human excreta
10. Aeration of water during waste water treatment removes;
 - a) Air
 - b) Bacteria
 - c) Insoluble matter
 - d) Human waste
11. Which of the following is a water-related disease?
 - a) Dysentery
 - b) Polio
 - c) Malaria
 - d) Hepatitis A
12. The technique that utilizes probability sampling
 - a) Snowball sampling.
 - b) Purpose sampling
 - c) Convenience sampling
 - d) Stratified sampling
13. Which of the following is a measure of dispersion?
 - a) Mean
 - b) Standard deviation
 - c) Mode
 - d) Median
14. Sensitivity is the ability of a screening test to identify
 - a) True positive
 - b) True negative
 - c) False positive
 - d) False negative
15. The stage of a disease in which signs and symptoms usually occur is known as
 - a) Stage of susceptibility
 - b) Stage of sub-clinical disease

- c) Stage of clinical disease
d) Stage of recovery, disability or death
16. The sub-clinical stage of a disease begins with/at
- Appropriate exposure to the agent
 - Pathological changes which occur without individual being aware of them
 - Onset of symptoms and signs of the disease
 - Time of diagnosis
17. Infectivity refers to
- The proportion of exposed persons who become infected
 - The proportion of infected individuals who develop clinically apparent disease
 - The proportion of clinically apparent cases are severe or fatal
 - The proportion of exposed persons who are asymptomatic
18. Which of the following statement regarding factors of disease causation is FALSE?
- Enabling factors assist in the development of a disease e.g. socio-economic status
 - Precipitating factors are associated with immediate exposure to the disease agent e.g. drinking contaminated water
 - Reinforcing factors create a state of susceptibility so that the host becomes vulnerable to the agent e.g. sex
 - Risk factors increase the chances of an individual to develop a disease
19. The first (1st) step in investigating a disease outbreak is;
- Defining the population at risk
 - Confirming the existence of the outbreak
 - Verification of the diagnosis
 - Finding cases systematically and recording information
20. The systematic and on-going assessment of all aspects of occurrence and spread of diseases that are pertinent to effective control is known as
- Quarantine
 - Screening
 - Surveillance
 - Isolation
21. The sequence with which a disease turns into a handicap is as follows
- Disease, Disability, impairment, handicap
 - Disease, impairment, disability, handicap
 - Disease, disability, handicap, impairment
 - Impairment, disease, disability, handicap
22. The last measure of severity of a disease is
- Crude death rate
 - Age-specific death rate
 - Case fatality rate
 - Prevalence rate
23. Regarding population pyramids
- A change in fertility rate, mortality rate and migration are considered the only demographic dynamics that can directly affect the size, distribution and composition of any population including its age and sex structure

- b) The concave sides (curved in) of a population pyramid indicates low death rates
 - c) The convex sides (curved out) of a population pyramid indicates high death rates
 - d) A square-like structure suggests a rapid population growth
24. Push factors of migration include
- a) Family re-unification
 - b) Safety and security
 - c) Conflict
 - d) Job-opportunities
25. In a study that began in the year 1999, a group of 800 adults in Nyeri county were asked about alcohol consumption. The occurrence of cases of cancer between 2009 and 2019 was studied in this group. This is an example of
- a) Prospective cohort study
 - b) Cross-sectional study
 - c) Retrospective cohort study
 - d) Clinical trial
26. The principle of ethics that guard against avoidable harm to subject is
- a) Justice
 - b) Non-maleficence
 - c) Autonomy
 - d) Truth-telling
27. Vulnerable group in a work place improvement include?
- a) Permanent workers
 - b) Married workers
 - c) Casual workers
 - d) All workers
28. Regarding non-communicable diseases (NCDs) in Kenya
- a) NCDs are also known as infectious diseases
 - b) Kenya has added stroke, musculoskeletal diseases and accidents and injuries to its list of disease of importance, in addition to WHO prioritized five (5) main NCDs
 - c) The WHO prioritized five (5) main NCDs include: cardiovascular disease, diabetes mellitus, mental health, malaria and cancers
 - d) The risk factors and causes of NCDs are unknown and are mostly non-modifiable
29. Cholera
- a) It is caused by a virus named vibrio cholera
 - b) The main sign of cholera is severe bloody diarrhea
 - c) Cholera is confirmed through blood culture as the gold standard for laboratory diagnosis
 - d) Rehydration and electrolyte replacement reduces case fatality rates
30. Athlete's foot can be prevented by
- a) Using moisturizer between your toes
 - b) Sharing towels, socks and shoes with other people
 - c) Wearing silk socks and roomy shoes made of natural material like leather
 - d) Drying your feet gently but thoroughly after washing particularly between the toes

31. An indirect cause of maternal mortality
- Sepsis
 - Anaemia
 - Obstructed labour
 - Eclampsia
32. When using the 5-TT (Tetanus toxoid injections) schedule in the ante-natal clinic(ANC)
- TT2 should not be given less than 4 weeks after TT1
 - The schedule should be restarted from TT1 if the interval between 1st and 2nd pregnancy is less than 5 years
 - TT4 is given during the 2nd pregnancy any time before 8 months of pregnancy
 - TT4 is given during the 2nd pregnancy any time after 8 months of pregnancy
33. Which of the following is NOT a sign of good attachment when breastfeeding?
- Chin touching breast
 - Mouth wide open
 - Lower lip turned inward
 - More areola seen above than below the mouth
34. Which of these is a live attenuated vaccine
- Cholera
 - Measles
 - Tetanus
 - Hepatitis B
35. Regarding immunization
- Inactivated polio vaccine (IPV) is given at 6 weeks, intramuscularly, in the right outer thigh
 - Pneumococcal vaccine is given at 6, 10 and 14 weeks respectively, intramuscularly in the left outer thigh
 - Rota virus vaccine is administered at 10 and 14 weeks respectively, orally
 - Measles rubella vaccine (MR) is administered at 9 and 18 months respectively, as a deep subcutaneous injection over the deltoid muscle of the right upper arm
36. Mental health can be promoted through
- Physical well being
 - Urban environment
 - Moderate use of alcohol
 - Early marriage
37. Schizophrenia refers to
- A mental disorder whose main feature is an odd and characteristic state of altered mood
 - A severe mental disorder that results in personality deterioration and loss of touch with reality that manifests as hallucinations and delusions
 - A mental disorder caused by medical conditions which induce brain dysfunction leading to characteristic psychological symptoms
 - A mental disorder characterized by a state of tension and apprehension with hyper activity of the autonomic nervous system as a natural response to perceived threat

38. Drug addiction/dependence
- Is a brain/physical disease
 - Has no compulsion element
 - Best treatment is by imprisonment of the addict
 - Psychotherapy has no role in treatment
39. Regarding Catha Edulis (Khat/miraa)
- It has no psycho stimulant effect
 - When taken it produces euphoria, suppress appetite and hunger and makes one alert
 - It cannot cause physical/physiological dependence
 - Amphetamine induced psychotic disorder is distinguishable from schizophrenia
40. Which of the following is NOT a key objective of the Kenya Health Policy 2014-2030?
- Eliminate communicable conditions
 - Halt and reverse the rising burden of non-communicable conditions
 - Provide exposure to health risk factors
 - Provide essential health care

SECTION 2: SHORT ANSWER QUESTIONS - (40 MARKS)

- Our health status is not determined by a single variable, but rather by the interaction between many factors. Outline five (5) factors which determine health (5 marks)
- The Kenyan health system defines 6 levels of health service delivery. Outline the services offered at level one: community services (5 marks)
- List five (5) diseases transmitted by the vector mosquito (5 marks)
- By use of a diagram, illustrate the natural progression of disease (5 marks)
- outline five (5) roles of a clinician in disease surveillance and response (5 marks)
- List five (5) modifiable risk factors of a non-communicable diseases (NCDs) (5 marks)
- 500 students out of the total 2000 students in KMTTC Nairobi Campus had gastroenteritis after taking their evening meal
 - calculate the true attack rate (2.5 marks)

- ii) calculate incidence rate (2.5 marks)
8. Giving examples, outline five (5) potential health hazards in the work environment (5 marks)

SECTION 3: LONG ANSWER QUESTION (20 MARKS)

1. Communicable diseases are among the leading causes of death and disability in Kenya. Describe the major ways of controlling communicable diseases (20 marks)