



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MEDICAL SCIENCES

UNIVERSITY EXAMINATION FOR:

DEGREE OF MEDICAL LABORATORY SCIENCES

AML 4313: EPIDEMIOLOGY

SPECIAL SUPPLEMENTARY EXAMINATION

SERIES: AUGUST 2017

TIME: 2 HOURS

DATE: Pick Date Sep 2017

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **TWO** Section(s). Attempt **ALL** questions.

Circle the correct answer in section A.

Section A

1. Which of the following phenomena is assessed in analytic epidemiology?
 - a) Environment
 - b) Age
 - c) Place
 - d) Time
 - e) Geography
2. Which of the following describes the factors that influence health?
 - a) Specified population
 - b) Distribution
 - c) Determinants
 - d) Study
 - e) Application to control
3. Which of the following is true about primary prevention?
 - a) Involves early screening
 - b) Examples include occult blood test for colon cancer
 - c) Identify people with disease

- d) Can be used in preventing environmental acquired diseases
 - e) It is an example of social prevention
4. The following are specific objectives of epidemiology EXCEPT?
- a) Determine disease found in the community
 - b) Identify causes of disease and risk factors
 - c) Study the natural history of disease
 - d) Evaluate new diagnostic measures
 - e) Conduct secondary prevention
5. The following are personal characteristics to look for in descriptive epidemiology EXCEPT?
- a) Gender
 - b) Ethnicity
 - c) Seasonal variation
 - d) Socio economic status
 - e) Behavior
6. Which of the following involves completing the clinical picture?
- a) Efficiency of health services
 - b) Cause effect relationship is determined
 - c) Identification of syndromes
 - d) History of disease
 - e) Community diagnosis
7. Which of the following prevention measure is targeted towards individuals?
- a) Surveillance
 - b) Environment
 - c) Route of transmission
 - d) Targeted measures
 - e) Treatment
8. Which of the following statements is true about prevention measures targeting the high risk population
- a) Examples include HIV in married women
 - b) Examples include advice against smoking
 - c) Relatively inexpensive
 - d) Considered public health approach
 - e) It is non invasive
9. The number of total cases of disease present at a particular time (numerator) in a specific population (denominator) is called
- a) Mortality
 - b) Incidence
 - c) Prevalence
 - d) Morbidity
 - e) None of the above
10. Which of the following measures the proportion of persons who develop a disease in a known span of time
- a) Mortality
 - b) Incidence rate

- c) Prevalence
 - d) Morbidity
 - e) Cumulative incidence
11. Which of the following relates to accuracy / correctness?
- a) Yield
 - b) Prediction
 - c) Reliability
 - d) Validity
 - e) Specificity
12. Which of the following diseases has a short latent period and long infectious period?
- a) HIV AIDS
 - b) Malaria
 - c) Dengue
 - d) Chicken Pox
 - e) Tuberculosis
13. Which of the following is the ability of a test to exclude those who don't have disease
- a) Sensitivity
 - b) Specificity
 - c) Reliability
 - d) Prediction
 - e) Yield
14. Which of the following is a measure of the strength of association based on prospective studies
- a) Risk factor
 - b) Attributable risk
 - c) Odds ratio
 - d) Relative risk
 - e) Determinant
15. Which of the following is an indirect mode of disease transmission?
- a) Droplet
 - b) Transplacental
 - c) Direct contact
 - d) Sexual activity
 - e) Mosquito bite
16. What does a relative risk greater than one mean
- a) Risk in exposed is same as non-exposed
 - b) Risk in exposed is greater than non- exposed
 - c) Risk in exposed is less than non-exposed
 - d) None of the above
 - e) All of the above
17. The following statements are true about when odds ratio is an estimate of relative risk EXCEPT?
- a) When cases are representative of diseased population
 - b) When controls are representative of population without disease
 - c) When the disease being studied occurs at low frequency

- d) All of the above
 - e) None of the above
18. Which of the following studies determine prevalence at a point in time?
- a) Case control
 - b) Experimental
 - c) Cross section
 - d) Cohort
 - e) Survey
19. Which one of the following is not an advantage of cross section study design?
- a) Short term
 - b) Fewer resources required
 - c) Less statistical analysis
 - d) More easily controlled
 - e) Design too complex
20. Which of the following are advantages of cross section studies except?
- a) People who are ill may not show up for survey
 - b) Often, not possible to establish temporal relationship between exposure and onset e.g. does high cholesterol precede CHD?
 - c) It is effective if disease levels are low
 - d) Represent only those who are surveyed
 - e) Identify prevalence, not incidence necessarily
21. Which one of the following is a retrospective study
- a) Longitudinal
 - b) Randomized trial
 - c) Case control
 - d) Cross sectional
 - e) Survey
22. Which of the following is a prevalence study
- a) Cohort
 - b) Survey
 - c) Cross section
 - d) Experimental
 - e) All of the above
23. The Framingham study was designed to study the following multiple factors that cause coronary heart diseases Except?
- a) Elevated blood cholesterol
 - b) Increased vitamin intake
 - c) Increased physical activity
 - d) Increase in body weight
 - e) Diabetes mellitus
24. The following is true about sampling of study participants EXCEPT
- a) Should be valid, reliable surveys

- b) Critical number of subjects; the more, the better
 - c) Should be randomized
 - d) Rule out bias
 - e) None of the above
25. Which of the following is not a disadvantage of cohort studies?
- a) Expensive
 - b) Assess magnitude of risk
 - c) Unpredictable variables
 - d) Results not extrapolated to general population
 - e) Study results are limited
26. The time interval from infection to development of infectiousness is known as?
- a) Incubation
 - b) Latent
 - c) Infectious
 - d) Non-infectious
 - e) None of the above
27. Which of the following is not true about primary prevention programmes
- a) Programs must be rigid to ethical issues.
 - b) Programs should be targeted to the recipients most in need.
 - c) Programs should muster a variety of community resources.
 - d) Effective prevention requires legislative action and social policy decisions.
 - e) Programs should be continuous.
28. Which of the following is not true about time characteristics in disease prevention?
- a) Changing or stable?
 - b) Seasonal variation.
 - c) Clustered (epidemic) or evenly distributed (endemic)?
 - d) Point source or propagated.
 - e) None of the above
29. Epidemiology begins with asking the following questions EXCEPT?
- a) WHY
 - b) WHO
 - c) WHEN
 - d) WHERE
 - e) None of the above
30. The likelihood that an individual will contract a disease is known as
- a) Prevalence
 - b) Incidence rate
 - c) Cumulative incidence
 - d) Risk

e) None of the above

Section B

31. Describe herd immunity (10mks)

(ii). Describe masking in experimental studies (10mks)

32. (a). Describe three types of cohort studies (5mks)

(b). Malaria is highly endemic in the Western region of Kenya, describe the malaria epidemics using descriptive epidemiology (15mks)