TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MEDICAL SCIENCES

UNIVERSITY EXAMINATION FOR:

BMLS

AML4313: EPIDEMIOLOGY

END OF SEMESTER EXAMINATION

SERIES:APRIL2016

TIME:2HOURS

DATE: Pick DateSelect MonthPick Year

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). AttemptALL questions.

Circle the correct answer in section A.

Section A

1. Which of the following is an example of primary prevention of diseases?

a) Rehabilitation
b) Counseling
c) Prevention of environmental acquired diseases
d) Breast cancer screening through self examination and mammography
e) Colon cancer screening through occult blood test

2. Which of the following is a disease transmission prerequisite?

a) Direct contact
b) Susceptible host
c) Portal of exit
d) Mode of transmission
e) Indirect contact

3. Which of the following involves change in form and numbers?

a) Propergative
b) Cyclopropagative
c) Cyclodevelopmental

d) Developmental
e) None of the above

4. Which of the following disease control measures are targeted to individual patient level?

a) Route of transmission
b) Host
c) Screening
d) Targeted measures
e) Notification

5. The following prevention and control strategies target the reservoir host (Human host) EXCEPT?

a) Quarantine
b) Notification
c) Surveillance
d) Vector control
e) None of the above

6. The following disease control strategies are targeted to improving quality of life EXCEPT?

a) Diet
b) Behavioral
c) Hygiene practices
d) Chemoprophylaxis
e) Environmental engineering

7. Which of the following is the increased probability of a specified outcome not necessarily a causal factor?

a) Determinant
b) Risk factor
c) Risk marker
d) None of the above

8. The following are clinical stages of the natural history of diseases EXCEPT?

a) Medical care sought
b) Pathologic evidence of disease
c) Diagnosis
d) Treatment
e) Symptoms

9. The time interval between infections to development of clinical disease is also known as?

a) Non- infectious period
b) Infectious period
c) Lag period
d) Latent period
e) Incubation period

10. Which of the following best defines RISK?

a) Likelihood that an individual will contract a disease
b) Number of total cases of disease present at a particular time
c) Number of new cases, injuries, disabilities in a defined population
d) Extent of illness or disability in a defined population

e) The accumulated number of cases

11. Which of the following is calculated using all the existing cases?

a) Risk
b) Incidence rate
c) Prevalence rate
d) Cumulative incidence
e) Point incidence

12. Which of the following measures the rate of new diseases occurring over time?

a) Risk
b) Prevalence
c) Cumulative incidence
d) Incidence rate
e) Point prevalence

13. Prevalence rates are increased by the following factors EXCEPT?

a) Immigration of ill cases
b) Immigration of healthy cases
c) Emigration of susceptible cases
d) Prolongation of life cases without cure
e) All of the above

14. The following are sources of morbidity statistics EXCEPT?

a) Surveys
b) Schools
c) Disease reporting
d) Absenteeism records
e) Hospital records

15. Which of the following studies start with a group of subjects who are negative of the outcome of interest?

a) Experimental
b) Case control
c) Cohort
d) Ecological
e) Survey

16. Which of the following study design begins with the exposure levels

a) Cohort
b) Case-control
c) Experimental
d) Survey
e) Randomized control trials

17. The following are potential biases in cohort studies EXCEPT?

a) Analytical bias
b) Selection bias
c) Bias from non response
d) Selection bias

e) Information bias

18. Which of the following is true about case- control studies?

a) Useful in determining risk of exposure
b) Useful at one point in time
c) Useful in incidence studies
d) Useful when the disease being investigated is common
e) Useful when the disease being investigated is rare

19. The following are disadvantages of cohort studies EXCEPT?

a) Information not readily available
b) Bias in selection
c) Expensive
d) Difficult to validate
e) Requires fewer subjects

20. Which of the following is true about selection of cases and controls?

a) Select from one source
b) Only one control per case
c) Controls should be hospitalized patients
d) Select from a variety of sources
e) Choose incidence cases only

21. The following are recall problems in case-control except?

a) Limitation in recall
b) Bias from lack of follow up
c) Recall bias
d) All of the above
e) None of the above

22. The following are disadvantages of cross section studies EXCEPT?

a) Show association with survival but not risk of developing the disease
b) Identify prevalence but not incidence
c) Design less complex
d) Represent only those surveyed
e) Expensive to carry out

23. Which of the following is a retrospective study?

a) Cross sectional
b) Case control
c) Concurrent cohort
d) Randomized trial
e) Longitudinal studies

24. Randomized trial is also known as?

a) Prospective study
b) Retrospective study
c) Cross sectional study
d) Concurrent cohort
e) Experimental study

25. Which of the following is the odd one out?
a) Concurrent cohort study
b) Prospective cohort study
c) Retrospective cohort study
d) Concurrent prospective study
e) Longitudinal study
26. The following are examples of randomized trials EXCEPT?
a) Hormonal therapy on breast cancer
b) Effect of coffee on coronary heart disease
c) HIV AIDS in married women
d) Carotene and cancer
e) Effect of Z-map on Ebola patients
27. Why is randomization the best approach in selection of subjects?
a) Uses random numbers
b) Non predictability
c) Instill physician bias
d) Use of non random numbers
e) Expensive approach
28. Stratified randomization is useful when using?
a) A cross section study
b) Defined population
c) Two treatment groups
d) Carrying out experiments
e) There is a concern that certain variables may affect the outcome
29. Which of the following relates to accuracy?
a) Reliability
b) Validity
c) Yield
d) Sensitivity
e) Predictive values
30. Which of the following statements is not true?
a) As prevalence increases positive predictive value increases
b) As sensitivity increases positive predictive value increases but to a lesser extend
c) As specificity decreases, positive predictive value increases
d) As specificity increases, positive predictive value increases
e) As sensitivity increases positive predictive value remains constant

Section B

1. Outline the advantages of prospective cohort and retrospective studies (10mks)

ii. Describe matching in selection of cases and controls in case control studies (10mks)

2. Define and describe epidemiological surveillance (8mks)

a) Describe the following (12mks)

   i. Indirect mode of disease transmission

   ii. Masking in randomized controlled trials

   iii. When is the odds ratio a good estimate of the relative risk