



Choose the correct answer for each of the following questions: (100 marks)

- Epidemiology involves studying of the diseases.**
 A. Distribution and Determination. B. Determination and Frequency.
 C. Distribution and Frequency. D. Distribution, Determination, and Frequency.
- Epidemiology comes from word: "epi: on or upon", "demos: people", and "logos: study".**
 A. English. B. French. C. Greek. D. Spanish.
- One of the uses of Epidemiology is to:**
 A. Diagnose individual animal diseases. B. Determine the origin of the disease.
 C. Develop new antibiotics. D. Perform surgical procedures
- The epidemiology triad (Epidemiological triangle) of how diseases are caused and spread includes:**
 A. Agent, host, environment. B. Time, place, person.
 C. Source, transmission, susceptibility. D. Infectivity, pathogenicity, severity.
- When a disease occurs frequently or present constantly in a population, the disease is considered:**
 A. Pandemic. B. Endemic. C. Epidemic. D. Chronic.
- The disease that occurs in greater of normal expectation is known as:**
 A. Epidemic. B. Endemic. C. Pandemic. D. Epizootic.
- The disease that becomes unusually widespread and even global in its spread is called:**
 A. Epidemic. B. Endemic. C. Pandemic. D. Epizootic.
- An exotic disease is a disease that:**
 A. Affects only wild animals. B. Introduced into a new area previously free from it.
 C. Has no known treatment. D. Spreads rapidly within a population.
- Foot and mouth disease of cattle is an example of disease.**
 A. Contagious. B. Non-infectious. C. Sporadic. D. Metabolic.
- Peste des Petits Ruminants "PPR" in sheep is an example of disease.**
 A. Contagious. B. Non-infectious. C. Sporadic. D. Metabolic.
- An example of a multifactorial disease is:**
 A. Mastitis. B. Rabies. C. Tetanus. D. Rift Valley Fever.
- The transmission of the infection from one generation to next generation is transmission.**
 A. Vertical. B. Horizontal. C. Direct. D. Indirect.
- An infection that results in no noticeable clinical signs is called infection.**
 A. Clinical. B. Convalescent. C. Inapparent. D. Acute.
- A subclinical disease:**
 A. Has obvious clinical signs. B. Can be detected only by laboratory tests.
 C. Is always fatal. D. Cannot be diagnosed.
- A carrier animal is one that:**
 A. Shows severe clinical signs of disease. B. Sheds infectious agents without clinical signs.
 C. Cannot transmit the disease. D. Dies immediately after infection.
- Morbidity measures of a disease.**
 A. Death rate. B. Amount. C. Cure rate. D. Economic impact.
- Case fatality rates are of greater value in Disease.**
 A. Acute. B. Chronic. C. Subclinical. D. Subacute.

18. The case-fatality rate represents the number of:

- A. Deaths of diseased animals. B. Cases over the total population.
C. Recoveries over of cases. D. Exposed animals over infected animals.

19. is the number of new cases occurring during specified period in population at risk.
A. Prevalence. B. Incidence. C. Occurrence. D. Density.

20. is the number of cases of disease existing at a specific time.
 A. Prevalence. B. Incidence. C. Occurrence. D. Density.

21. Cumulative incidence measures of diseases.
A. Severity. B. Risk. C. Duration. D. Rate.

22. The incidence of a disease is affected by:
A. Cure for a disease or death of a patient. B. New cases only.
C. Diagnostic methods. D. Vaccination rate.

23. In which of the following circumstances does the prevalence of a disease decrease in population?
 A. If the incidence rate of the disease falls. B. If the duration of the disease is long.
C. If the number of animals is too high. D. If the number of animals is too low.

24. Prevalence will increase if:
A. Incidence decreases but duration remains constant. B. Case-fatality rate rises sharply.
C. Recovery rate increases while incidence stays the same.
 D. Incidence remains constant, and duration of disease increases.

25. Morbidity rate is the:
 A. Number of diseased animals over the total number of animals at risk.
B. Number of animals at risk over the number of target population.
C. Number of dead animals over the total number of animals at risk.
D. Number of animals without risk over the number of target population.

26. Mortality rate is the:
A. Number of diseased animals over the total number of animals at risk.
B. Number of animals at risk over the number of target population.
C. Number of dead animals over the number of diseased animals.
 D. Number of dead animals over the number of animals at risk.

27. The ability of organisms to cause the disease refers to the:
A. Pathogenicity. B. Infectivity. C. Virulence. D. Chronicity.

28. Virulence refers to:
A. The ability of an agent to transmit the disease. B. The severity of the disease caused by an agent.
C. The resistance of a host to infection. D. The environmental persistence of a pathogen

29. Inanimate objects that can facilitate the transfer of diseases are known as:
A. Fomites. B. Vectors. C. Plants. D. Birds.

30. General rules for recent exotic diseases in the country are:
A. Vaccinating animals. B. Slaughtering affected animals with strict hygienic conditions.
C. Treating affected animals. D. Quarantine affected animals from not affected animals.

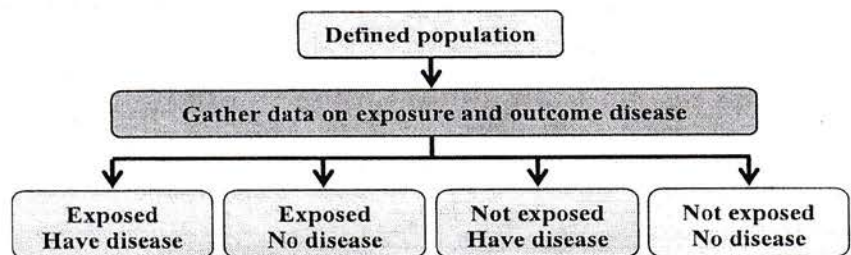
31. An animal in which an infectious agent undergoes some development is called:
A. Final host. B. Intermediate host. C. Natural host. D. Carrier host.

32. Transmission of infectious pathogens from the infected host to the susceptible host by an intermediate vehicle refers to transmission.
A. Direct. B. Indirect. C. Vertical. D. Backward.

33. An arthropod that physically carries an infectious agent to its primary or secondary host refers to:
 A. Mechanical vector. B. Biological vector.
C. Experimental vector. D. Accidental vector.

34. Based on intervention, epidemiological studies can be divided into:
 A. Observational or Experimental. B. Descriptive or analytical.
 C. Prospective or Retrospective. D. Cohort or cross-sectional.
35. Epidemiological studies aim to assess the relationship between:
 A. Animal and animal. B. Exposures and outcomes.
 C. Exposures and exposures. D. Outcomes and outcomes.
36. In epidemiological studies, when the investigator introduces an intervention and records the differences, the study is called:
 A. Observational. B. Experimental. C. Ecological. D. Case-report.
37. In epidemiological studies, when the investigator stands apart to record the differences, the study is called:
 A. Observational. B. Experimental. C. Interventional. D. Case-report.
38. In prospective studies:
 A. Animals are observed backward. B. Animals are followed over time
 C. Only dead animals are analyzed. D. No follow-up is required
39. Cohort studies can be:
 A. Only prospective. B. Only retrospective. C. Both prospective and retrospective. D. Neither.
40. The timeline in a Case-control study is:
 A. Forward. B. Backward C. Circular. D. Back-and-forth.
41. Clinical trial is a type of study.
 A. Observational. B. Experimental. C. Descriptive. D. Cross-sectional.
42. Clinical trials can be:
 A. Only therapeutic. B. Only prophylactic. C. Both therapeutic and prophylactic. D. Neither.
43. Case-control studies are efficient for:
 A. Outbreaks. B. Rare diseases. C. Rare exposure. D. Rare diseases and exposures.
44. Cohort studies are efficient for:
 A. Outbreaks. B. Rare diseases. C. Rare exposure. D. Rare diseases and exposures.
45. In cohort studies, there are two samples based on:
 A. Exposure. B. Outcome. C. Design. D. Number of animals.
46. In case-control studies, there are two samples based on:
 A. Exposure. B. Outcome C. Design. D. Number of animals.
47. The easiest study design to determine the prevalence of the diseases is:
 A. Clinical trial. B. Case-Control study. C. Cross-sectional study. D. Cohort study.

48. Which type of studies do the following diagram represent?



- A. Clinical trial.
 B. Case-Control study.
 C. Cross-sectional study.
 D. Cohort study.

49. Descriptive studies are used to:
 A. Examine the relationship between exposure and outcome. B. Determine treatment efficacy.
 C. Describe disease patterns without inferring causation. D. Conduct randomized trials.
50. Cross-sectional studies can examine:
 A. Only one outcome. B. Multiple outcomes. C. Only rare diseases. D. Only past exposures.

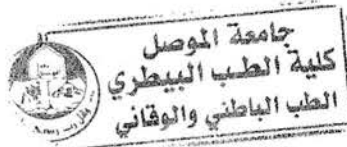
51. One of the criteria for determining a causal relationship is:
 A. Temporal relationship. B. Economic cost. C. Sample size. D. Laboratory availability.
52. In epidemiological interpretation of "Risk Ratio", when the confidence interval (95% CI) includes (number 1) the Risk Ratio is considered:
 A. Statistically significant. B. Statistically not significant.
 C. Normal distribution. D. Skewed distribution.
53. The ratio of the incidence in exposed animals to the incidence in unexposed animals is known as:
 A. Attributable risk. B. Odds ratio. C. Risk ratio. D. Hazard ratio.
54. Odds ratio is of two odds.
 A. Multiplication. B. Ratio. C. Addition. D. Subtraction.
55. Relative Risk (Risk ratio) is usually measured in:
 A. Case-control studies. B. Cohort studies. C. Ecological studies. D. Case reports.
56. Measures of association between disease and predisposing factors include:
 A. Only risk ratio. B. Only odds ratio. C. Both risk ratio and odds ratio. D. Neither one.
57. Which of the following is true about odds ratio and risk ratio?
 A. Represent different ratio. B. Calculated the same way.
 C. Can be used in all studies. D. Have same interpretations
58. Which of the following is true about "Attributable Risk"?
 A. Can be directly calculated from the Odds Ratio. B. Is the same as Relative Risk.
 C. Cannot be directly calculated from the Odds Ratio. D. Only used in case-control studies.
59. When the odds ratio is one (= 1), the relationship is
 A. Not found. B. Great. C. Small. D. Moderate.
60. When the risk ratio is smaller than one (< 1), the relationship is
 A. Not found. B. Positive. C. Negative. D. Moderate.
61. Attributable Risk =
 A. $(RR - 1) / RR$. B. $(RR + 1) / RR$. C. $(RR - 1) + RR$. D. $(RR + 1) + RR$.
62. The population of individuals selected to participate in the study is known as:
 A. External population. B. Target population. C. Study population. D. Sample.
63. If the population is accessible in some order, the practical way is to use sampling.
 A. Stratified random. B. Systemic random. C. Cluster. D. Simple random.
64. A well-planned sample can provide:
 A. Information only for selected individuals. B. Virtually the same information for all individuals.
 C. Information only for qualitative data. D. Information only for historical data.
65. Which of the following is true about "Probability sampling"?
 A. Only certain individuals are selected. B. Every individual has a chance to be included.
 C. Only experts choose the sample. D. No randomization is used.
66. Judgment sampling is a type of sampling.
 A. Probability. B. Random. C. Non-probability. D. Cluster sampling
67. Cluster sampling is a type of sampling.
 A. Non-probability. B. Probability. C. Judgment. D. Convenient.
68. A cross-sectional study has:
 A. One sample. B. Two samples. C. Multiple samples. D. No sample.
69. When the sample is chosen because it is easy to obtain (e.g. a nearby herd) is called:
 A. Convenient sample. B. Judgment sample. C. Purposive sample. D. Probability sample.
70. In Epidemiology, one of the most difficult things in sampling is:
 A. Finding an experienced person to collect samples. B. Finding a representative sample.
 C. Sampling quickly. D. Sampling aseptically.

71. An important factor in determining programs for disease control and eradication is the:
 A. Economic cost. B. Only vaccination. C. Only quarantine. D. Only laboratory testing.
72. Control refers to:
 A. Complete elimination of infectious diseases. B. Only treating clinical cases.
 C. Reducing disease incidence to an acceptable level. D. Only monitoring wildlife.
73. Screening refers to:
 A. Gathering information about a group of animals. B. Use of diagnostic testing.
 C. Treating sick animals. D. Use of vaccination programs.
74. Removing animals from high-risk areas is:
 A. Not an appropriate disease control strategy. B. Only used in wildlife.
 C. An appropriate disease control strategy. D. Only used in cattle.
75. One of the broad aims of "Monitoring" is:
 A. Protecting public health. B. Economic profit. C. Animal breeding. D. Laboratory research.
76. Which of the following CAN NOT be used for survey?
 A. Telephone. B. Face-to-face interviews. C. Email. D. Laboratory tests.
77. One objective of surveillance is:
 A. Rapid detection of disease outbreaks. B. Long-term research only.
 C. Economic analysis. D. Only wildlife tracking.
78. Passive surveillance targets examining:
 A. Clinically normal animals. B. Clinically affected cases.
 C. Died animals. D. All animals.
79. Active surveillance targets examining:
 A. Clinically normal animals. B. Clinically affected cases.
 C. Died animals. D. All animals.
80. Isolation of animals that are either infected or suspected of being infected is known as:
 A. Control. B. Eradication. C. Quarantine. D. Movement of hosts.
81. Which of the following is true about "Screening"?
 A. It is a type of diagnostic survey. B. It is not a type of diagnostic survey.
 C. Only used in human medicine. D. Only used for chronic diseases
82. Slaughterhouses can be used as a source of data.
 A. True. B. False. C. If it is official only. D. If it is private only.
83. Which of the following is true about Case history?
 A. Can not be a source of study data. B. It is a source of study data.
 C. Only useful in human medicine. D. Only relevant for chronic diseases.
84. A variable that is affected by another variable is called:
 A. Exposure. B. Response. C. Independent. D. Explanatory.
85. A variable that impacts another variable is called:
 A. Exposure. B. Response. C. Dependent. D. Outcome.
86. Which of the following is a categorical binary variable?
 A. Age (measured in months). B. Season (winter, spring, summer, autumn).
 C. Sex (male, female). D. Herd (herd1, herd2, herd3).
87. Which of the following is an ordinal variable?
 A. Sex (male, female). B. Age (Young, Adult). C. BW (in kg). D. Breed.
88. Age, as a variable, can be presented as:
 A. Categorical only. B. Numerical only. C. Both categorical and numerical. D. Neither.
89. When "Body weight" is divided into (thin and fat), it is considered variable.
 A. Binary. B. Continuous. C. Ordinal. D. Discrete.

90. Categorical variables represent:
 A. Numerical values. B. One or more groups. C. Quantities. D. Rates.
91. Hemoglobin concentration when is used as a variable, it is considered variable.
 A. Binary. B. Continuous. C. Ordinal. D. Discrete.
92. "Season (Spring, Summer, Autumn, Winter)" is considered variable.
 A. Categorical. B. Continuous. C. Quantitative. D. Discrete.
93. Paired t-test is used for:
 A. Two independent groups. B. Two dependent groups.
 C. More than two independent groups. D. More than two dependent groups.
94. In continuous variable, the interquartile range (IQR) is:
 A. (min + max). B. (1st Q + 3rd Q). C. (max - min). D. (3rd Q - 1st Q).
95. a claim about a population.
 A. Parameter. B. Hypothesis. C. Variable. D. Percentage.
96. An appropriate statistical method for comparing two independent means is:
 A. Two sample T-test. B. Chi-square. C. Fisher's test. D. Paired T-test.
97. We use the standard error to:
 A. Report outliers. B. Describe data variability.
 C. Estimate means precision. D. Report the interquartile range.
98. When P-value equals or less than 0.05, it is considered:
 A. Not significant. B. Significant. C. Neutral. D. Error in the test.
99. When P-value is greater than 0.05, it is considered:
 A. Not significant. B. Significant. C. Neutral. D. Error in the test.
100. Multivariable analysis is important for:
 A. Determining risk factors. B. Descriptive statistics.
 C. Univariate comparisons. D. Laboratory experiments only.

Best Wishes


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