

EPIDEMIOLOGY

FINAL ARCHIVE



1. One of the following is a notifiable disease:

- A. Common cold
- B. Acne vulgaris
- C. Polio
- D. Tinea
- E. Seasonal influenza

Answer: C

2. One of the following is a dead-end infection:

- A. Rabies
- B. Polio
- C. HIV
- D. Scabies
- E. HBV

Answer: A

3. Turbidity of water can be removed by the following except:

- A. Disinfection
- B. Boiling
- C. Chlorination
- D. Coagulation
- E. Filtration

Answer: A

4. One of the following is an example of food-borne infections:

- A. Staphylococcus
- B. DDT
- C. Mussels
- D. Typhoid
- E. Clostridium botulinum

Answer: D

5. Public water supply must be the following except:

- A. Safe
- B. Reasonably soft
- C. Cheap
- D. Purified
- E. Plentiful

Answer: D



6. Virulence is best measured by:

- A. Relative risk
- B. Death rate
- C. Case fatality rate
- D. Secondary attack rate
- E. All of the above

Answer: C

7. Insufficient water for hygiene or contamination due to unhygienic practices, a definition of:

- A. Waterborne disease
- B. Water- washed disease
- C. Water based disease
- D. Water- related vector-borne disease
- E. Chemically contaminated water

Answer: B

8. Iodization of salt is considered a:

- A. Primordial prevention
- B. Health promotion
- C. Specific protection
- D. Secondary prevention
- E. Tertiary prevention

Answer: C

9. One of the following is NOT a health promotion:

- A. Health education
- B. Environmental modifications
- C. Nutritional interventions
- D. Chemoprophylaxis
- E. Lifestyle and behavioral changes

Answer: D

10. The epidemiological marker for HBV:

- A. Anti- HCV antibody
- B. HBsAg
- C. Anti- HAV antibody
- D. HBeAg
- E. Hepatitis D

Answer: B



11. As per water- borne diseases, one is INCORRECT control measure:

- A. Provision of potable water
- B. Proper sewage disposal
- C. Proper cooking and hygienic handling of food
- D. Observation of personal hygiene
- E. Immunoglobulins lasting 3 to 6 months

Answer: E

For questions 12-15:

	TRUE	FALSE
POSITIVE	85	10
NEGATIVE	80	20

12. The accuracy of the test:

- A. 82.5%
- B. 84.6%
- C. 85%
- D. 87%
- E. 80%

Answer: B

13. The sensitivity of the test:

- A. 80%
- B. 81%
- C. 80.9%
- D. 79.5%
- E. 82.5%

Answer: C



14. The specificity of the test:

- A. 88%
- B. 88.9%
- C. 87.5%
- D. 89%
- E. 90%

Answer: B

15. The positive predictive value of the test:

- A. 88%
- B. 89%
- C. 89.4%
- D. 90%
- E. 87.5%

Answer: C

16. Active surveillance can be described as:

- A. Waiting for reports from providers
- B. Proactively seeking out cases
- C. Collecting only hospital records
- D. Depending on media sources
- E. Relying solely on lab confirmations

Answer: B

17. A case showing clinical features without lab confirmation:

- A. A confirmed case
- B. A possible case
- C. A probable case
- D. A suspected case
- E. A compatible case

Answer: C

18. Spot map is best described as:

- A. A map showing trends over time
- B. A map displaying cases aggregated by region
- C. A map marking individual cases at their locations
- D. A map used only for international outbreaks
- E. A map comparing incidence and prevalence

Answer: C



19. All of the following are agent factors for cancer EXCEPT:

- A. Nutritional: smoked fish, beef, alcohol
- B. Chemical: Aniline, asbestos, benzol
- C. Physical agent: heat, radiation
- D. Mechanical: friction
- E. Environment: air pollution, ozone layer depletion

Answer: E

20. All of the following are host factors for cancer EXCEPT:

- A. Age: in developing countries, common among young people
- B. Sex: more among men than women
- C. Occupation: coal tar, soot, pitch, dyes, UV radiation
- D. Habits: smoking, alcoholism and low fibre diet
- E. Chemical: Aniline, asbestos, benzol

Answer: E

21. In a study of 400 smokers and 600 non-smokers, 120 smokers and 30 non-smokers developed hypertension. One of the following represents the % population attributable risk:

- A. 0.05
- B. 0.10
- C. 50
- D. 66.7
- E. 75

Answer: D

22. In a population of 100 people, 33 were against vaccinated against measles. Among the remaining 33 susceptible individuals, 22 developed measles during an outbreak. The communicability of measles among susceptibles:

- A. 0.33
- B. 0.5
- C. 0.66
- D. 0.75
- E. 0.8

Answer: C



23. In a study, 70 people developed lung cancer, of whom 50 were exposed to smoke. Among 100 people without cancer, 70 were non-exposed. The strength of association between smoking and lung cancer is approximately:

- A. 2.8
- B. 3.5
- C. 4.2
- D. 5.8
- E. 6.5

Answer: E

24. About diagnostic tests, one is INCORRECT:

- A. Applied to a single person
- B. Results are conclusive
- C. Results are based on one criteria
- D. Can be used for screening
- E. May be costly

Answer: C

25. All of the following cause bias, EXCEPT:

- A. Confounding
- B. Selection
- C. Recalling
- D. Misclassification
- E. Random error

Answer: E

26. All of the following are important components for the prevention of accidents, EXCEPT:

- A. Inter- sectoral coordination
- B. Safety education
- C. Enforcement of laws
- D. Promotion of safety measures
- E. Yoga

Answer: E



27. In an outbreak, cases started on 10 March, reached the maximum on 12 March, peaked on 13 March, and began to decline on 14 March. The epi-curve shape that best represents this outbreak would be:

- A. Plateau or gradual rise and fall
- B. Irregular peaks separated by periods with no cases
- C. Single sharp peak
- D. Multiple peaks (waves) separated by incubation periods
- E. Sharp peak followed by smaller successive peaks

Answer: C

28. One of the following outbreaks is best represented by multiple peaks separated by incubation periods in an epi-curve:

- A. Food poisoning at a wedding
- B. Contaminated water supply
- C. Sporadic contamination of restaurant food
- D. Measles
- E. Cholera

Answer: D

29. An outbreak shows an initial sharp peak followed by smaller successive peaks representing secondary cases. The disease outbreak this pattern best represents:

- A. Measles
- B. Influenza
- C. Food poisoning at a wedding
- D. Cholera
- E. Sporadic food contamination

30. NOT a risk factor for high BP:

- A. Being overweight or obese
- B. High sodium intake
- C. Using tobacco
- D. Too much vitamin D in your diet
- E. Not being physically active

Answer: D



31. The study design that is considered best for establishing causality between a drug and its response:

- A. Case- control study
- B. Cohort study
- C. Cross- sectional study
- D. Randomized controlled trial
- E. Ecological study

Answer: D

32. A newborn infant is born to an HBsAg-positive mother. The recommended post- exposure prophylaxis:

- A. Hepatitis B vaccine only, starting at 0 month
- B. Hepatitis B vaccine plus HBIG, with the vaccine given after 1 month
- C. Hepatitis B vaccine plus HBIG, with the vaccine given after 6 months
- D. HBIG only, no vaccine
- E. Hepatitis B vaccine plus HBIG, with the vaccine given immediately (0 month)

Answer: E

33. In adults living in countries with low or intermediate HBV endemicity, the recommended hepatitis B vaccination schedule:

- A. 0, 1, 6 months
- B. 0, 2, 4 months
- C. 0, 1, 12 months
- D. 0, 3, 6 months
- E. 0, 6, 12 months

Answer: A

34. Natural history of a disease is best studied by:

- A. Case- control study
- B. Cohort study
- C. Cross- sectional study
- D. Randomized controlled trial
- E. Ecological study

Answer: B



35. One of the following statements correctly distinguishes screening tests from diagnostic tests:

- A. Screening tests are applied to symptomatic individuals, diagnostic tests to asymptomatic individuals.
- B. Screening tests provide conclusive results and are usually the basis for treatment.
- C. Screening tests are less accurate, applied to groups, and not necessarily conclusive; diagnostic tests are more accurate, applied to individuals, and results are conclusive.
- D. Diagnostic tests are less expensive and applied to a population; screening tests are more expensive and applied to a single person.
- E. Screening tests always evaluate multiple criteria, while diagnostic tests evaluate only one criterion.

Answer: C

36. One of the following would increase the prevalence of a disease even if the incidence remains stable:

- A. High cure rate
- B. Short duration of illness
- C. Chronic disease
- D. Low incidence
- E. Rapid recover

Answer: C

37. One of the following factors directly increases the incidence of a disease:

- A. Higher rate of new exposures or risk factors in the population
- B. Chronic disease with long duration
- C. Improved disease reporting
- D. Longer survival of patients
- E. Effective cure



Answer: A

38. The incidence rate is calculated from:

- A. Case- control study
- B. Prospective cohort study
- C. Cross- sectional study
- D. Randomized controlled trial
- E. Ecological study

Answer: B

39. One of the following statements is NOT true about a case-control study:

- A. Provides quick results
- B. Is relatively less expensive
- C. Involves fewer subjects
- D. Can estimate attributable risk
- E. Can provide prevalence of exposure

Answer: D

40. In 1995, a group of 3,000 adults in New York were asked about alcohol consumption. The occurrence of cancer in this group was then studied between 2010 and 2019. This study is an example of:

- A. Cross-sectional study
- B. Case-control study
- C. Clinical trial
- D. Retrospective cohort study
- E. Ecological study

Answer: D

41. One of the following is NOT an analytical study:

- A. Case- control study
- B. Cohort study
- C. Cross- sectional study
- D. Randomized controlled trial
- E. Epidemiological reports

Answer: E



42. In a case-control study examining oral contraceptive (OCP) use and thromboembolism, 84 thromboembolism patients of whom 50% take OCPs, and 168 non-thromboembolism patients of whom 14.3% take OCPs, were studied. The measure of association for OCP use:

- A. 2.8
- B. 0.66
- C. 6
- D. 1
- E. 0.5

Answer: C

43. Relative risk measures the:

- A. Strength of association, causality, and risk of outcome
- B. Prevalence, incidence, and exposure
- C. Odds, probability, and prevalence
- D. Attributable risk only
- E. Confounding, bias, and effect modification

Answer: A

44. During a sudden event in a city, public health authorities notice an increase in patients presenting to hospitals with flu-like symptoms, before any laboratory confirmation of a specific disease. The authorities are concerned that this may be related to a potential bioterrorism attack, similar to the 2001 U.S. anthrax incidents. The type of surveillance that is most appropriate to detect such unusual health events would be:

- A. Syndromic surveillance
- B. Active case surveillance
- C. Passive routine surveillance
- D. Sentinel surveillance
- E. Laboratory-based surveillance

Answer: A



45. In a cohort study of 14,000 people, 7000 smokers were observed, of whom 70 developed lung cancer, and 7000 non-smokers were observed, of whom 7 developed lung cancer. The Relative Risk (RR) of lung cancer associated with smoking?

- A. 1
- B. 5
- C. 7
- D. 10
- E. 14

Answer: D

46. One of the following is NOT considered a modifiable risk factor for obesity:

- A. Physical activity
- B. Eating habits (overnutrition)
- C. Alcohol consumption
- D. Psychological factors (emotional eating)
- E. Female sex

Answer: E

47. All of the following are true about screening EXCEPT:

- A. Screening is available for all diseases
- B. Screening is applied to apparently healthy or asymptomatic individuals
- C. Screening tests are less expensive than diagnostic tests
- D. Screening tests are usually less accurate than diagnostic tests
- E. Screening is used to detect disease early before clinical symptoms appear

Answer: A

48. In a population of 25 people, 5 new cases of a disease occur in 1 year. The incidence proportion per year:

- A. 0.2 case per year
- B. 0.02 case per year
- C. 2 cases per year
- D. 20 cases per year
- E. 0.25 case per year



Answer: A

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49. One of the following correctly defines Relative Risk (RR):
- A. $\text{Proportion of disease in exposed} \div \text{Proportion of disease in unexposed}$
 - B. $\text{Proportion of disease in exposed} \div \text{Proportion of disease in unexposed} \times 100$
 - C. $\text{Odds of disease in exposed} \div \text{Odds of disease in unexposed}$
 - D. $\text{Number of exposed} \div \text{Number of unexposed}$
 - E. $\text{Total cases} \div \text{Total population}$

Answer: A

Important topics/ subtopics to focus on:

1. Screening vs diagnostic tests
2. Cohort Studies:
 - Prospective vs retrospective
 - Key measures: incidence, relative risk (RR)
3. Key Test Characteristics:
 - Sensitivity, specificity,
 - PPV (positive predictive value), NPV (negative predictive value)
 - Accuracy
4. Relative Risk vs Odds Ratio:
 - Definitions
 - When and how each is used with interpretation
5. Characteristics of each epidemiological study designs:
 - Cross-sectional, case-control, cohort, experimental
 - Strengths, limitations, and typical uses

