MIDTERM EXAMINATION

Select the best answer from the multiple choice questions. There are 85 questions and 12 pages on the examination. Notify the instructor if your examination does not have 12 pages. Clearly indicate on the scan form the one best answer to each question among the answers provided. Be sure that you have selected your choice correctly on the scan form. Be sure that you have entered your name and identification number on the scan form and filled out the bubbles in the columns for the letters of your name and numbers of your identification number correctly (see front and back). Use a #2 pencil and fill all circles completely.

1. The goal of public health is to guarantee that all members of society achieve optimal health.
   a. True
   b. False

2. The major reason(s) for the increase in longevity globally has been:
   a. Improved treatment of diabetes
   b. Adoption of more health lifestyles
   c. Improved sanitation
   d. Increasing provision of clean water
   e. c. and d. above

3. According to Professor Detels, the major cause of ill health globally is:
   a. Smoking
   b. Obesity
   c. Poverty
   d. Sedentary lifestyles
   e. Malnutrition

4. The major contributing factor associated with death in children under five years of age globally is:
   a. Pneumonia
   b. Measles
   c. Prematurity
   d. Under-nutrition
   e. Injuries

5. The United States has led the world in increasing the average life span
   a. True
   b. False

6. The highest proportion of premature deaths in the United States is due to:
   a. Genetic predisposition
   b. Social circumstances
   c. Environmental exposures
   d. Problems with health care
   e. Behavioral patterns
7. The leading cause of death in the United States is:
   a. **Heart diseases**
   b. Cancer
   c. Diabetes
   d. Motor vehicle accidents
   e. HIV

8. The prevalence of obese residents among those over 17 years old in the U.S. is lowest in which of the following states?
   a. Utah
   b. California
   c. Oregon
   d. **Colorado**
   e. Mississippi

9. Which is the most prevalent behavioral cause of death in the United States?
   a. Diet/activity patterns
   b. **Tobacco**
   c. Alcohol
   d. Use of recreational drugs

10. The best measure of compromised function due to conditions causing ill health is:
    a. Mortality
    b. Morbidity
    c. **Disability-adjusted life years**
    d. Life span

11. Which of these is **not** a direct adverse health impact resulting from poor community design?
    a. Air pollution
    b. Diminished physical activity
    c. Increased incidences of obesity and chronic diseases
    d. **Sexually transmitted diseases**

12. Health is a state of equilibrium between which of the following?
    a. **Agent-host-environment**
    b. Time-place-person
    c. Agent-place-person
    d. Agent-time-place
    e. Host-environment-time

13. Prevalence is:
    a. **A proportion**
    b. A rate
    c. An index of health
    d. All of the above
14. For measuring prevalence, the numerator is
a. Number of cases existing in a given population at a single point in time
b. Number of new cases occurring in a given population in a specified time period
c. Number of deaths due to a particular cause in a given population in a specified time period
d. None of the above

15. Epidemiology is useful for:
   a. Diagnosing disease in a patient
   b. Describing the clinical characteristics of diseases
   c. Identify precursors and risk factors for disease
   d. Assessing the cost-effectiveness of interventions
   e. b. and c. above

16. Epidemiology is the core science of public health:
   a. True
   b. False

17. Evidence supporting direct transmission of *Capilleria philippinensis* in northern Luzon includes all of the following EXCEPT:
   a. Age-distribution of secondary cases
   b. Effect of treatment on the spread of infection
   c. Sequential cases in households
   d. Proximity of the cases to the sea

18. Epidemiologists use which characteristics to describe disease occurrence in populations?
   a. Agent-host-environment
   b. **Time-place-person**
   c. Agent-place-person
   d. Agent-time-place
   e. Host-environment-time

19. Quality of health care and coverage is commensurate with national expenditures globally:
   a. True
   b. False

20. The highest proportion of health dollars in the U.S. is spent on:
   a. **Hospital care**
   b. Physician services
   c. Prescription drugs
   d. Nursing home care
   e. Administration
21. The highest proportion of hospital care in the U.S. is paid by:
   a. Medicare
   b. Medicaid
   c. **Private health insurance**
   d. Out of pocket (patient pays)
   e. Social security

22. The major burden of personal health care costs in the U.S. is borne by:
   a. Patients’ out of pocket expenditures
   a. Medicare
   c. **Private health insurance**
   d. Medicaid

23. The largest proportion of health care insurance in the United States is paid for by:
   a. The public
   b. **Employers**
   c. Employees
   d. The government

24. Half of Medicare costs are paid for the last six months of life:
   a. True
   b. False

25. Hospitals in the U.S. are primarily dependent on what source(s) of money to survive?
   a. Private health insurance
   b. Medicare
   c. Out of pocket payments by patients
   d. All of the above
   e. **a. and b. above**

26. In England the government provides health care directly:
   a. True
   b. False

27. In terms of quality of national health care globally, the United States ranks:
   a. First
   b. Third
   c. Tenth
   d. Fourteenth
   e. **Thirtieth**

28. According to the IOM report in 1988, the three major functions of public health are:
   a. Epidemiology, prevention, environmental health
   b. Epidemic control, health promotion, surveillance
   c. **Assessment, policy setting and assurance**
   d. Disease control, health promotion, safeguarding the environment
   e. Monitoring health care, preventing epidemics, and protecting the environment
29. The “public health system” includes:
   a. Employers
   b. The community
   c. The media
   d. **All of the above**
   e. a. and b. above

30. Evaluation cuts across all the functions of public health:
   a. **True**
   b. **False**

31. Biostatistics is a strategy to account for variation in human biologic and responses:
   a. **True**
   b. **False**

32. Biostatistics can be used to:
   a. Prove the relationship of two health factors to each other
   b. Determine the probability of events
   c. Prove hypotheses
   d. **All of the above**
   e. **b. and c. above**

33. The usual probability for rejecting the null hypothesis is:
   a. 0.33
   b. 0.20
   c. **0.05**
   d. 0.001
   e. 0.0005

34. The optimal statistical strategy for measuring a relationship of a particular predictor variable and an outcome when other factors may be related to the predictor variable is:
   a. Chi square
   b. Linear regression
   c. **Multiple regression analysis**
   d. Correlation analysis
   e. Any of the above

35. Microarrays are a useful strategy for measuring:
   a. The relationship of microbes to one another
   b. The relationship of bacteria to disease
   c. **The relationship of gene expression to probability of disease**
   d. All of the above

36. The probability of transmission of an infectious agent is associated with:
   a. The environment
   b. Social factors
   c. Genetic and biologic factors
   d. **All of the above**
   e. a. and b. above
37. The leading infectious disease killers of children under five years of age globally are:
   a. **Acute respiratory diseases and diarrhea**
   b. HIV/AIDS and tuberculosis
   c. Measles and mumps
   d. Malaria and tuberculosis
   e. Diarrhea and malaria

38. Dysentery is caused by:
   a. Staphlococci
   b. **Shigella**
   c. Salmonella
   d. Klebsiella
   e. None of the above

39. UC Berkeley is experiencing an epidemic of:
   a. Measles
   b. **Mumps**
   c. Polio
   d. Syphilis
   e. Chicken pox

40. The number of people living with HIV/AIDS in LA County is increasing each year:
   a. **True**
   b. False

41. Influenza is characterized by its surface glycoproteins:
   a. **True**
   b. False

42. Which of the following types of influenza cause outbreaks of human disease?
   a. A
   b. B
   c. C
   d. All of the above
   e. **a. and b. above**

43. Influenza incidence peaks in:
   a. **January-February**
   b. April-May
   c. June-July
   d. September-October
   e. Constant rate throughout the year

44. Which of the following causes the largest change in the antigenic structure of the influenza virus?
   a. Antigenic drift
   b. **Antigenic shift**
   c. Antigenic collapse
   d. Antigenic enhancement
45. Natural hosts of influenza virus include all of the following EXCEPT:
   a. Birds
   b. Ducks
   c. **Dogs**
   d. Pigs
   e. Horses

46. During influenza epidemics, most deaths occur in:
   a. 0-4-year-olds
   b. 18-25-year-olds
   c. 35-48-year-olds
   d. 65+ years old
   e. **a. and d. above**

47. The 1917 influenza epidemic was caused by which of the following strains of virus?
   a. H1N1
   b. H5N1
   c. H5N3
   d. H3N1
   e. H1N3

48. The magnitude of disease burden can be measured by:
   a. Morbidity/disability of the disease
   b. Mortality of the disease
   c. Economic cost from the disease
   d. Prevalence
   e. **All of the above**

49. The highest proportion of Angelenos are:
   a. White
   b. **Hispanic-American**
   c. Asian-American
   d. African-American
   e. Sri-Lankan-American

50. The leading cause of death in Los Angeles County is:
   a. Heart disease
   b. **All cancers**
   c. Diabetes
   d. HIV/AIDS
   e. Pertussis

51. The leading cause of pre-mature death among Latinos in Los Angeles is:
   a. Diabetes
   b. **Homicide**
   c. Coronary heart disease
   d. Chronic respiratory diseases
   e. Cholera
52. The leading cause of disability-adjust life years (DALYS) in Los Angeles County is:
   a. Coronary heart disease
   b. Violence
   c. All cancers
   d. Homicide
   e. **Substance abuse**

53. Globally, the highest numbers of disability-adjusted life years (DALY) are lost due to which infectious diseases?
   a. Diarrhea
   b. HIV/AIDS
   c. Malaria
   d. **Lower respiratory tract infections**

54. The discovery of penicillin was the major factor responsible for the rapid decline of infectious diseases in the 20th century:
   a. True
   b. **False**

55. The majority of TB cases in Los Angeles Country occur among:
   a. **Asian and Hispanic immigrants**
   b. Asian and African immigrants
   c. Hispanic and African immigrants
   d. American-born Asians
   e. American-born Hispanics

56. The current syphilis outbreak in Los Angeles is primarily occurring among:
   a. Male sex workers
   b. Female sex workers
   c. Desperate housewives
   d. **Men who have sex with men**
   e. Politicians

57. Which of the following was among the top five causes of death in the United States in 2007?
   a. **Unintentional injuries**
   b. Diabetes
   c. Homicide
   d. Automobile accidents
   e. Sexually transmitted diseases

58. From 1999 to 2008 there was a decline in all the leading causes of death in Los Angeles County EXCEPT:
   a. Coronary heart disease
   b. **Alzheimer's disease**
   c. Cancers
   d. Diabetes
   e. Emphysema
59. The percent of women who smoke declined in Los Angeles County from 2002 to 2007:
   a. True
   b. False

60. The prevalence of obesity in Los Angeles County is highest in:
   a. Malibu
   b. South Central
   c. The westside
   d. San Fernando
   e. Long Beach

61. The most common recreational drug used in Los Angeles County is:
   a. Cocaine
   b. Methamphetamine
   c. Heroin
   d. Marijuana
   e. Peptobismal

62. Policies implemented by the Los Angeles County Department of Public Health:
   a. Reduce the burden of disease
   b. Reduce risk factors for disease
   c. Focus on the underlying determinants of health
   d. **All of the above**
   e. b. and c. above

63. Life expectancy in Los Angeles County correlates directly with median household income:
   a. True
   b. False

64. In Professor Jonathan Fieldings’ opinion, the biggest problem for the future of global public health is:
   a. Smoking
   b. Poor sanitation
   c. Lack of support for vital research
   d. **Population growth exhausting food and water supplies etc.**
   e. The rise of the Republican Party

65. Globally, the highest rates of illiteracy are found in which of the following countries?
   a. Bangladesh
   b. China
   c. Egypt
   d. **All of the above**
   e. a. and c. above
66. One-third of the world’s population is found in:
   a. China and Indonesia
   b. China and Russia
   c. China and the United States
   d. China and India
   e. India and Indonesia

67. The world’s population is:
   a. 1.1 billion people
   b. 3.1 billion people
   c. 6.9 billion people
   d. 15.4 billion people
   e. Unknown

68. The world’s birth rates and death rates are finally equal as a result of the intensive population control efforts in the latter half of the 20th century:
   a. True
   b. False

69. Globally the most common language spoken as a first language is:
   a. English
   b. Spanish
   c. Chinese
   d. Hindi
   e. Portuguese

70. The highest proportion of persons under 15 years of age is found in:
   a. Asia
   b. Africa
   c. Russia
   d. South America
   e. The United States

71. Population growth is highest in:
   a. Low-income countries
   b. Middle-income countries
   c. High-income countries
   d. About the same in all countries

72. Life expectancy of females in developed nations is ________________________ males:
   a. Longer than
   b. About the same as
   c. Shorter than

73. Globally there is an inverse relationship between wealth and fertility:
   a. True
   b. False
74. In the year 2050, the highest proportion of the world’s population will live in:
   a. Asia  
   b. Africa  
   c. North America  
   d. South America  
   e. Indonesia

75. Over the next 20 years, the fastest rate of population growth will occur in:
   a. Asia  
   b. Africa  
   c. North America  
   d. South America  
   e. Indonesia

76. In order to survive, developed countries such as the U.S. and Japan will need to increase worker productivity:
   a. True  
   b. False

77. An aging population is a serious public health issue in:
   a. India  
   b. Nigeria  
   c. Japan  
   d. Brazil

78. The average duration of an untreated depressive episode is:
   a. 2 weeks  
   b. Four months  
   c. Two years  
   d. 30 years  
   e. Is a chronic condition

79. Community surveys for mental illness are likely to:
   a. Underestimate the prevalence  
   b. Overestimate the prevalence  
   c. Approximate the true prevalence

80. One in four Americans are likely to suffer from depression at some point in their lives:
   a. True  
   b. False

81. Women are more likely to suffer from:
   a. Mood disorders  
   b. Anxiety disorders  
   c. Substance disorder  
   d. All of the above  
   e. a. and b. above
82. In general, people with mental illness have a shorter life span compared to people without mental illness:
   a. True
   b. False

83. Having one episode of depression increases the likelihood of having another episode:
   a. True
   b. False

84. Prevention of mental disorders should focus on which of the following age groups?
   a. <10 years old
   b. 11-19 years old
   c. 20-30 years old
   d. 30-39 years old

85. Primary prevention of mental illness should target:
   a. The population
   b. Individuals at risk
   c. Symptomatic individuals
   d. All of the above
   e. b. and c. above