



الفصل: الأول

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الامتحان النهائي

مادة : علم الصحة العامة والوبائيات

نموذج (A)

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الوقت (صباحا)

إسم الطالب: التوقيع:

الرقم الجامعي-----

تعليمات :

- (1) عدد الأسئلة (40) سوالا لكل سؤال إجابة واحدة صحيحة فقط
- (2) مدة الإمتحان (60 دقيقة) ولن يعطى وقت إضافي لنقل الإجابات على ورقة الكمبيوتر
- (3) على كل طالب تظليل الإجابة بشكل واضح وعدم ثني ورقة الكمبيوتر
- (4) يمنع منعاً باتاً إحضار الهاتف النقال الى قاعة الإمتحان وكل من يخالف ذلك يعرض نفسه للعقوبات التي نصت عليها أنظمة وقوانين الجامعة
- (5) ورقة الإجابة المعتمدة هي ورقة الكمبيوتر ولن ينظر في الإجابات الموضوعة على ورقة الإئلة
- (6) على كل طالب التأكد من كتابة اسمه ورقمه الجامعي في اعلى ورقة الكمبيوتر و تظليل اسمه ورقمه الجامعي باغلاق كامل للدائرة ويمنع وضع علامة X على الجواب الصحيح

Questions from 1-5: For each numbered hepatitis marker below, select from the lettered options the one that matches it

1. HBcAG (C)
2. HBsAg (B)
3. Total anti-HBc (A)
4. HBIGM (E)
5. HBeAg: (D)
 - A. It indicates past infection
 - B. when it is present in the blood it indicates the presence of complete virus which is infectious
 - C. It is not detected in serum by conventional techniques
 - D. If detected in the serum of a person, it indicates high infectivity
 - E. Its presence indicates recent infection.

6. All the following statements are false regarding the Hepatitis marker Anti HBsAg EXCEPT:
 - A. It indicates past infection
 - B. It indicates low infectivity.
 - C. Its presence indicates recent infection.
 - D. It indicates high infectivity
 - E. It indicates either recovery or past vaccination

7. HAV is excreted in faeces for about:
 - A. One week before to 2 weeks after jaundice onset.
 - B. One week before to one week after jaundice onset.
 - C. 2 weeks before to one week after jaundice onset.
 - D. 2 weeks before to 2 weeks after jaundice onset.
 - E. Non of the above

8. Viral hepatitis caused by virus A, B, C, D, E); have more or less similar features but differ in all the following EXCEPT:
 - A. Epidemiological characteristics,
 - B. Their prevention and control.
 - C. Immunological characteristics
 - D. Clinical manifestations.
 - E. Pathological characteristics.

9. Immunoglobulin is indicated in combination with HB vaccine in case of:
 - A. Sure sexual exposure.
 - B. Per-Cutaneous accidental exposure.
 - C. Per mucosal accidental exposure
 - D. Peri- natal transmission for the baby born from mother who is HBV case or carrier.
 - E. All of the above

10. All the following statements are true regarding HCV infection EXCEPT:
 - A. It is a DNA single stranded virus
 - B. The clinical course of the disease is mild
 - C. Chronicity is more common

- D. Mode of transmission is similar to HBV infection, but peri natal transmission is more
- E. Diagnosis depends on exclusion of HAV and HBV infections and detection of Anti HC.

11. All the following are true regarding HB recombinant vaccine EXCEPT:

- A. It is prepared by genetic engineering and does not contain any viral particles
- B. It should be given 0.5 ml IM in the deltoid region in adults and in the anterior lateral aspect of the thigh in infants.
- C. It should be administered in three doses, initially, one and six months later for adults and as part of EPI program for infants.
- D. Boosters are required except for hem- dialysis patients.
- E. Immunity against HBV is believed to persist for at least 15 years after successful immunization

12. Source of infection of HBV include all the following EXCEPT:

- A. Human blood and blood products.
- B. Saliva, semen and vaginal secretion.
- C. Tears, sweat, and urine.
- D. Breast milk
- E. Contaminated needles , syringes and other intravenous equipment

13. All the following measures applied to cases of hepatitis A EXCEPT:

- A. Report to local health authority.
- B. Isolation of cases.
- C. Precautions during the first two weeks of illness to prevent transmission of infection, but no more than two weeks after onset of jaundice.
- D. Concurrent and terminal disinfection: sanitary disposal of feces, urine and blood (by using disinfectants 'sodium hypo chlorite 0.5 %')
- E. No specific treatment is available.

14. All the following measures are recommended to contacts of hepatitis A patient EXCEPT:

- A. Enlistment
- B. Surveillance for the incubation period
- C. Passive immunization with IG (IM) 0.02 ml/kg) IM injection in deltoid before exposure or within 2 weeks after exposure
- D. Active immunization with hepatitis A vaccine should be given as soon as possible after exposure, and not later than one week after exposure.
- E. Investigation for source of infection and missed cases.

15. All the following are reservoirs for viral hepatitis A EXCEPT:

- A. Asymptomatic i. e. anicteric. usually in children.
- B. Sub clinical cases.
- C. Chronic carriers
- D. Clinical cases.
- E. Incubating carriers.

- 16. Risk factors that precipitate paralytic polio in an individual include all the following EXCEPT:**
- A. Stress,
 - B. Fatigue,
 - C. Young age
 - D. Intramuscular injection,
 - E. Operative procedures such as tonsillectomy.
- 17. All the following are reservoirs of polio myelitis EXCEPT:**
- A. Clinical cases.
 - B. Subclinical cases
 - C. Fecal temporary carriers.
 - D. Chronic carrier.
 - E. A and B
- 18. All the following statements are true for Sabin oral Polio vaccine EXCEPT:**
- A. It induces both circulatory and intestinal antibodies.
 - B. It prevents both paralysis and intestinal re infection.
 - C. Due to the interference between the three types, booster doses are required to ensure protective immunity.
 - D. Commonly post vaccine paralysis may occur in immune-suppressed persons.
 - E. Not given to HIV patients or even to their household contacts.
- 19. Polio cases are most infectious from:**
- A. 10-14 days before and after the onset of symptoms and the virus is excreted in the feces for 3-6 weeks.
 - B. 7-10 days before and after the onset of symptoms and the virus is excreted in the feces for 2-4 weeks.
 - C. 10-14 days before and after the onset of symptoms and the virus is excreted in the feces for 2-4 weeks.
 - D. 7-10 days before and after the onset of symptoms and the virus is excreted in the feces for 3-6 weeks.
 - E. Non of the above.
- 20. A suspected or confirmed case of polio should be isolated in the hospital for:**
- A. Two weeks after onset of symptoms
 - B. Three weeks after onset of symptoms
 - C. Four weeks after onset of symptoms
 - D. Five weeks after onset of symptoms
 - E. Six weeks after onset of symptoms
- 21. Measures applied during Polio myelitis epidemics include all the following EXCEPT:**
- A. Disease notification
 - B. Mass vaccination
 - C. Postpone elective nose and throat surgery and avoid IM injections.
 - D. Identify the route of introduction of poliovirus into the community

- E. Active surveillance for AFP cases should continue for at least the incubation period beyond the onset of the last case in an area.

22. All the following statements are true regarding polio myelitis EXCEPT:

- A. In temperate countries, Poliovirus infection typically peaks in the summer months
- B. In tropical countries, there is no seasonal pattern for polio myelitis.
- C. Poliomyelitis is a disease of young children and adolescents in the developing countries.
- D. In developed countries: adults were affected less commonly than children with increased both the disease severity and deaths.
- E. Sex difference have been noticed in the ratio of three male to one female

23. In approximately ? % of persons, initial infection may progress directly to active pulmonary disease or disseminated leading to milliary TB, tuberculosis meningitis or extra-pulmonary lesions.

- A. 2 %
- B. 5 %
- C. 10 %
- D. 15 %
- E. 20 %

24. A case of Pulmonary TB is confirmed in all the following conditions EXCEPT:

- A. Positive sputum for acid fast bacilli by direct microscopic examination of two initial specimens.
- B. Culture positive for acid fast bacilli but negative microscopic examination of sputum specimens.
- C. Positive sputum for acid fast bacilli by direct microscopic examination of a single smear specimen and radiologic abnormalities consistent with active pulmonary tuberculosis
- D. Symptoms suggestive of pulmonary tuberculosis; with at least three negative sputum specimens for acid fast bacilli by direct microscopic examination.
- E. Positive sputum for acid fast bacilli by direct microscopic examination of a single smear specimen and, culture positive for acid fast bacilli.

25. In cases of pulmonary TB, mycobacterium is present in different forms. The one responsible for relapse is:

- A. Rapid multipliers
- B. Slow multipliers
- C. Intermittent multipliers
- D. All of the above
- E. Non of the above.

26. From all the following modes of transmission of TB infection, one of them is not common:

- A. Droplet contact transmission
- B. Air- born transmission,
- C. Contact with contaminated articles
- D. Common vehicle by the ingestion of unpasteurized milk
- E. Common vehicle by the ingestion dairy products.

27. TB is a disease of moderate communicability as measured by secondary attack rate which is about:

- A. 10 %
- B. 20 %
- C. 30 %
- D. 40 %
- E. 50 %

28. The method of choice for TB case finding is:

- A. Tuberculin testing
- B. Sputum culture.
- C. Direct smear examination
- D. Radiography
- E. Any of the above

29. The standard cut-off point for positive tuberculin test is 10 mm area of indurations. In all the following situations a cut-off level of 5 mm is considered positive test EXCEPT:

- A. Chest radiographs consistent with old healed lesion
- B. Contacts of smear negative pulmonary TB cases.
- C. Chest radiographs consistent with active lesion
- D. Clinical evidence of TB.
- E. HIV infection

30. Causes of false negative tuberculin test include all the following EXCEPT:

- A. Pre-allergic state (incubation period of infection)
- B. Infection with atypical mycobacterium.
- C. High fever and exanthema us diseases (measles)
- D. Advanced pulmonary TB, TB meningitis and milliary TB.
- E. In late stage of pregnancy.

31. All the following statements are true regarding personal factors associated with TB. EXCEPT:

- A. In early childhood both sexes are equally susceptible.
- B. Frequency of infection increases with increasing age especially in females.
- C. No congenital TB (TB bacilli are not transferred across the healthy placenta.
- D. Malnourished individuals are more prone to develop tuberculosis
- E. The clustering of cases in families is attributed to exposure risk and not to the genetic predisposition.

32. A latent TB infection may flare up converted into a TB case after all the following cases EXCEPT:

- A. Uncontrolled diabetes,
- B. Cancer,
- C. Renal failure,
- D. Minor surgeries,
- E. AIDS and prolonged intake of immunosuppressive drugs.

33. The most important mode of transmission of meningococcal meningitis is:

- A. direct contact through droplet infection
- B. indirect contact with contaminated articles
- C. air born transmission
- D. all of the above
- E. non of the above

34. Susceptibility to meningococcal infection is general but the most susceptible are:

- A. Female sex
- B. Older ages
- C. Younger ages
- D. Middle ages
- E. Non of the above

35. The second attack rate of meningococcal meningitis is:

- A. common
- B. less common
- C. rare
- D. very rare
- E. non of the above

36. All the following statements are true regarding the available vaccine against meningococcal meningitis EXCEPT:

- A. Purified polysaccharides vaccine
- B. The vaccine is either a monovalent (A or C) or bivalent (A & C) or polyvalent (A-C-Y- W135).
- C. No available effective vaccine against group B meningo-coccus
- D. It is administered by single subcutaneous injection for those above 2 years of age.
- E. These vaccines are indicated as a general measure

37. All the following statements are true regarding the available vaccine against meningococcal meningitis EXCEPT:

- A. Post vaccination immunity starts after 10 days of vaccination
- B. Post vaccination immunity lasts for about three years
- C. Post vaccination immunity lasts for about five years
- D. Booster dose is recommended in case of continuous exposure
- E. It is administered by single subcutaneous injection for those above 2 years of age.

38. Indications of vaccination with meningococcal vaccine include all the following EXCEPT:

- F. To young children as part of the expanded program of immunization
- G. Newly aggregated young persons as military recruits and school children
- H. Inter-national travelers to endemic areas.
- I. During pilgrimage.
- J. During community outbreaks.

39. All the following statements are true regarding control measures of meningococcal meningitis EXCEPT:

- A. Reporting to local health authority.
- B. Isolation for 7 days after the start of the specific treatment for the sake of community
- C. Specific treatment should begin immediately when the clinical diagnosis is made even before meningo-coccus have been identified.
- D. Treatment can save the lives of 95% of the patients provided that it is started during the first two days of illness.
- E. Disinfection; concurrent and terminal

40. The duration of clinical course of rabies is ? , and death is often due to respiratory paralysis.

- A. 3-5 days
- B. 3-6days
- C. 2-5 days
- D. 2-6 days
- E. 2-7 days

41. The case fatality rate of rabies is:

- A. 80 %
- B. 85 %
- C. 90 %
- D. 95 %
- E. 100%

42. Incubation period of rabies is ranging from 4 days up to one year depending on all the following except:

- A. Site of the bite and severity of the wound
- B. Age of the bitten person.
- C. The amount of the virus
- D. Presence of clothes.
- E. Post exposure intervention

43. All the following statements are true regarding reservoirs for rabies EXCEPT:

- A. Urban cat, dog, horse and camel act as reservoirs of urban rabies.
- B. Healthy carriers are present among cats and horses.
- C. Fox, Jackals, raccoons and vampire bats act as reservoirs for wild rabies.
- D. No healthy carriers are present among the foxes and raccoons.

E. No healthy carriers are present among dogs.

44. All the following statements are true regarding rabies vaccine EXCEPT;

- A. The vaccine is a human cell diploid vaccine (HCDV), prepared in culture of human diploid fibroblast cells.
- B. It is administered in 5 doses, 1 ml intramuscular injection in the deltoid regions.
- C. The first dose is given as soon as possible after exposure (zero dose),
- D. The others at 3, 7, 14, 28, days after exposure.
- E. A booster dose is given after 60 days.**

45. All the following statements are true regarding passive immunization against rabies EXCEPT:

- A. The aim of passive immunization is to prolong the incubation period and delay the fixation of the virus to the CNS until the vaccine works
- B. From the limitation of the horse antiserum is that the person may develop sensitivity after injection.
- C. If the horse antiserum is given in combination with the vaccine it may inhibit the vaccine action.
- D. Rabies immunoglobulin is better than the horse antiserum however it is expensive.
- E. From the limitations of rabies immunoglobulin is the risk of anaphylaxis**

46. All the following are post exposure measures to be done to a person bitten by a dog EXCEPT:

- A. Cleaning: wash with soap and water and apply antiseptic to the site of bite.
- B. Suture the wound to prevent additional trauma that leads to the spread of the virus to the torn blood vessels.**
- C. Local application of the half of the dose of the immunoglobulin
- D. The other half of the dose of the immunoglobulin should be given IM injection.
- E. Penicillin and anti-tetanic measures should be applied according to severity of the wound and the history of tetanus immunization

47. If a person is bitten by a healthy dog, all the following measures have to be done EXCEPT:

- A. Give human immunoglobulin to the person
- B. Penicillin and anti-tetanic measures should be applied according to severity of the wound and the history of tetanus immunization
- C. Put the dog under observation for 20 days**
- D. If no signs appear on the dog don't vaccinate the bitten person.
- E. If the dog shows signs of rabies start the vaccine immediately.

48. For those who come in frequent contact with animals the following measures have to be done for prevention and control of rabies EXCEPT:

- A. Health education for personal hygiene during handling them.
- B. HDCV vaccine is given IM injection in deltoid region,
- C. Three doses; first dose followed by two doses at 7th, 21st day.

- D. If the risk continues booster doses should be given every four years
- E. B and C.

49. Mode of transmission of anthrax include all the following EXCEPT;

- A. Direct or indirect contact with products of infected animals
- B. Direct or indirect contact with soil containing spores.
- C. Common vehicle through ingestion of inadequately cooked meat.
- D. Common vehicle through milk of infected animals
- E. Air borne through inhalation of spores in dust or during wool sorting or from dried skin or hair

50. All the following statements are true regarding vaccination against anthrax EXCEPT;

- A. Primary vaccination consists of three subcutaneous (0.5 ml each) injections at 0, 2, and 4 weeks,
- B. Primary vaccination is followed by booster doses at 6, 12, and 18 months.
- C. To maintain immunity, an annual booster dose is recommended.
- D. Interruption of the vaccination schedule requires restarting the entire series of the vaccine or addition of extra doses.
- E. It could be administered to an immune suppressed person if necessary, but the response to the vaccine may be sub-optimal

51. Bacillus anthracis is considered one of the most likely biological warfare agents because of all the following EXCEPT:

- A. The ability of spores to be transmitted by the respiratory route.
- B. The high case fatality rate of inhalation anthrax,
- C. High communicability of anthrax
- D. The greater stability of B. anthracis spores compared with other potential biological warfare agents.
- E. Spores can remain for years very resistant to the environmental conditions.

52. All the following measures are to be conducted for control of anthrax EXCEPT:

- A. Notification to the health authority
- B. Isolation of the patient
- C. Specific treatment with penicillin
- D. Concurrent and terminal disinfection
- E. Contacts should be investigated to search for history of exposure to infected animal or its products

53. If the person is bitten by a dog who died, all the following measures have to be done EXCEPT:

- A. Cleaning: wash with soap and water and apply antiseptic to the site of bite.
- B. Give immunoglobulin; half the dose locally and the other half IM injection.
- C. Penicillin and anti-tetanic measures should be applied according to severity of the wound and the history of tetanus immunization
- D. Start vaccination immediately.
- E. Examine the brain of the dog for Negri's bodies, if negative, complete vaccination.

54. The primary difference between a surveillance system and a survey is:

- A. A surveillance system is population-based
- B. A surveillance system is ongoing
- C. A survey is generally cheaper
- D. A surveillance system cannot assure confidentiality
- E. A survey is population-based

(Questions 55-56) A study was undertaken to evaluate the use of computed tomography (CT) in the diagnosis of lumbar disk herniation. Eighty patients with lumbar disk herniation confirmed by surgery were evaluated with CT, as were 50 patients without herniation. The CT results were positive in 56 of the patients with herniation and in 10 of the patients without herniation.

55. The sensitivity of CT for lumbar disk herniation in this study is:

- A. 20%
- B. 30%
- C. 70%
- D. 80%
- E. 85%

56. The specificity of CT in this study is:

- A. 85%
- B. 70%
- C. 20%
- D. 30%
- E. 80%

57. Regarding screening test, all of the following are true Except:

- A. Validity of the screening test is ability of the test to define those who have the disease and those who do not have the disease
- B. Sensitivity and specificity are the two components of screening test validity
- C. Yield of screening is the amount of previously unrecognized disease that is diagnosed and brought to treatment as a result of screening
- D. Sensitivity and specificity are usually directly related
- E. Many conditions are suitable for screening whether communicable, non communicable or even defects

Questions from (58-60): The following table summarizes the results of a study to evaluate a clinical “signs and symptoms” screening test for group A β -hemolytic streptococcus infection (strep throat). In the study, pediatric residents used this test to diagnose 150 randomly selected pediatric patients presenting with pharyngitis as either having strep throat (Test +) or not (Test -). Each study participant was simultaneously diagnosed according to the results of a throat culture (the gold standard procedure; D+ or D-).

A 2 x 2 table summarizing Results of the “signs and Symptoms “(S/S) is given:

| Clinical signs and symptoms test (S/S) | Throat culture (D+) | Throat culture (D-) | Total |
|--|---------------------|---------------------|------------|
| Test +v | 28 | 30 | 58 |
| Test -v | 12 | 80 | 92 |
| Total | 40 | 110 | 150 |

58. For the study population, prevalence is estimated by:

- A. $58/150 = 0.39$
- B. $28/150 = 0.19$
- C. $40/58 = 0.69$
- D. $40/150 = 0.27$**
- E. $28/40 = 0.70$

59. The sensitivity of the “signs and symptoms” screening test is:

- A. $28/58 = 0.48$
- B. $58/150 = 0.39$
- C. $80/110 = 0.73$
- D. $28/150 = 0.19$
- E. $28/40 = 0.70$**

60. The probability that a child with strep. throat will be diagnosed as disease-free by the “signs and symptoms” test is :

- A. $12/92 = 0.13$
- B. $92/150 = 0.61$
- C. $12/40 = 0.30$**
- D. $40/150 = 0.27$
- E. $12/150 = 0.08$

61. Surveillance data is useful to the epidemiologist in the following EXCEPT:

- A. Identifies and correctly classifies a large proportion of target health events.
- B. Correctly reflects the distribution of events over time, place and person.

- C. Includes clear definitions of health events under surveillance.
- D. Leads to meaningful and effective public health action based on the data processed in the system.
- E. Provide a cross sectional look at the health situation

62. All the following statements are true regarding identifying diseases for surveillance EXCEPT:

- a. It affects large number of people.
- b. It causes substantial mortality or disability.
- c. It is the target of a national, regional or international control program.
- d. It is preventable and the surveillance will lead to an immunization campaign.
- e. An extensive outbreak of a severe disease in many persons such as cholera or meningitis

63. All the following are considered limitations of surveillance except:

- A. Time constraints
- B. Labor intensity
- C. Assessment difficulties
- D. Reporting inadequacies
- E. Dissemination problems

64. The total deaths in a village in 1980 were 100. Of these 16 were due to pneumonia. If the total population is 10, 000, then the proportionate mortality rate from pneumonia equals to:

- A. 160
- B. 10
- C. 1.6
- D. 16
- E. 100

65. In a community X the total population was 30, 000.000 persons in 2005. if 60, 000 deaths from TB occurred in the same year and total deaths equals 375, 000, then the specific death rate from TB equals:

- A. 20
- B. 2
- C. 200
- D. 160
- E. 16

First

66. The geographical differences in disease occurrence are important dimensions of

- a. Molecular epidemiology
- b. Analytical epidemiology
- c. Applied epidemiology
- d. Descriptive epidemiology.
- e. Genetic epidemiology

67. Second attack frequency can measure:

- a. Viability of the organism
- b. Period of and ease of communicability
- c. Pathogenicity and virulence of micro-organism.
- d. Antigenic power of micro-organism
- e. Dose of infection (inoculums)

68. The outcome of infection depends on all of the followings EXCEPT:

- a. Host resistance (immunity)
- b. Microbiological agent invasiveness
- c. Microbiological agent toxicity
- d. Microbiological agent Virulence
- e. Reservoir resistance (immunity)

69. The ability of the organism to live outside the body is termed:

- a. Tropism
- b. Virulence
- c. Ease of communicability
- d. Antigenic power
- e. Viability

70. Colostrums contains plenty of antibodies and is considered a type of:

- A. Active artificial immunity
- B. Active natural immunity
- C. Passive artificial immunity
- D. Passive natural immunity
- E. Chemoprophylaxis

71. Relative risk measures indicate which of the following?

- a. The probability that a person who is exposed to a certain risk factor will develop the disease in question
- b. How much more likely it is that a patient who has the disease has been exposed to a particular risk factor compared to a healthy individual
- c. The magnitude of the association between a disease (or other related health outcome) and a suspected risk factor
- d. the incidence of a disease
- e. The risk difference between those exposed and those who are not exposed

72. All of the following statements about the attributable risk of a disease are true EXCEPT:

- a. Attributable risk is synonymous with the incidence of the disease
- b. Attributable risk is the probability that a healthy individual will develop the disease during a specified time period
- c. Attributable risk is the underlying rate from which RR is derived
- d. Attributable risk is the ratio of the incidence of the disease among those exposed to the relevant risk factor to the incidence of the disease among those with no such exposure
- e. A+C

73. If there are 50 cases of puerperal sepsis out of 20 000 deliveries during the year 2005 in a community with total population of 1000 000. The attack rate of puerperal sepsis equals to:
- A. 200 /1000
 - B. 2.5 / 1000**
 - C. 0.05 /1000
 - D. 1 /1000
 - E. Non of the above
74. Seven cases of hepatitis A occurred among 70 children attending a child care center. Each infected child came from a different family. The total number of persons in the 7 affected families was 32. One incubation period later, 5 family members of the 7 infected children also developed hepatitis A. The secondary attack rate among family contacts of those cases equals:
- A. 10 %
 - B. 20 %**
 - C. 15.6 %
 - D. 21.9 %
 - E. Non of the above

Questions from (75 -76): A comparison of clinically diagnosed versus autopsy confirmed myocardial infarction (MI) was performed among 1000 consecutive diseased patients, as shown in the following table;

| Clinical diagnosis | Autopsy MI | Findings No MI | Total |
|--------------------|------------|----------------|-------------|
| MI | 160 | 80 | 240 |
| No MI | 40 | 720 | 760 |
| Total | 200 | 800 | 1000 |

75. From the following lettered options select one for each numbered questions:
- A. 72/800
 - B. 200/1000
 - C. 160/200
 - D. 160 /240
 - E. 720/760
76. The prevalence of myocardial infarction at autopsy equals: **B**
77. The positive predictive value of the clinical diagnosis **D**
78. The negative predictive value of clinical diagnosis **E**

79. A new, effective treatment for a common disease, leading to complete cure, is developed. Which of the following impacts on disease occurrence is expected?

- A. Decreases duration of illness, leading to decreased prevalence
- B. Decreases incidence of illness, leading to decreases prevalence
- C. Decreases incidence and duration of illness, leading to decreases prevalence
- D. No change in observed incidence or duration; no change in prevalence.
- E. Effects on prevalence cannot be determined from the information provided.

80. The food and drug Administration approves an effective influenza vaccine for use in USA. Assuming that a high degree of vaccine coverage is achieved, what is the expected impact of this major public health initiative?

- A. Decreased duration of influenza illness leading to decreases prevalence.
- B. Decreases incidence of influenza illness leading to decreases prevalence.
- C. Decreased incidence offset by increased duration; no change in prevalence.
- D. No change in observed incidence or duration: no change in prevalence.
- E. Effects on prevalence cannot be determined from the information provided.

(Questions 81 and 82) are based on the following table:

Incidence and Mortality of Disease

| Age Groups | Disease A | | Disease B | | Total | |
|------------|-----------|--------|-----------|--------|--------|------------|
| | Cases | Deaths | Cases | Deaths | Deaths | Population |
| 0-12 | 2 | 1 | 300 | 1 | 40 | 22,000 |
| 13-24 | 101 | 34 | 267 | 0 | 30 | 18,000 |
| 25-64 | 50 | 42 | 1,042 | 2 | 125 | 50,000 |
| >64 | 0 | 0 | 986 | 95 | 303 | 30,000 |
| Totals | 153 | 77 | 2,595 | 98 | 498 | 120,000 |

81. The case fatality rate of disease A is:

- A. $77/120,000 \times 1,000$
- B. $77/120,000 \times 100,000$
- C. $153/120,000 \times 100,000$
- D. $153/498 \times 100$
- E. $77/153 \times 100$

82. **The proportionate mortality rate for disease B is:**

- A. $98/120,000 \times 100,000$
- B. $2,595/120,000 \times 100,000$
- C. $98/2,595 \times 100$
- D. $98/498 \times 100$**
- E. Cannot be determined.

83.

