



الفصل: الأول

العام الدراسي 2010-2011

الامتحان النهائي

مادة : علم الصحة العامة والوبائيات

نموذج (A)

يوم الثلاثاء - 4 / 1 / 2011

الوقت (9 - 11) صباحا

إسم الطالب: التوقيع:

الرقم الجامعي-----

تعليمات :

- (1) عدد الأسئلة (80) سؤالاً لكل سؤال إجابة واحدة صحيحة فقط
- (2) مدة الإمتحان (120 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 الإسنلة
- (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

1. **In all the following diseases second attack rate is not reported or is very rare EXCEPT:**
 - A. Meningococcal meningitis
 - B. Rabies
 - C. Anthrax
 - D. Plague**
 - E. Yellow fever

2. **In all the following diseases there are no chronic carrier state EXCEPT:**
 - A. Viral hepatitis A
 - B. Polio myelitis
 - C. Plague
 - D. Viral hepatitis B**
 - E. Cholera

3. **Normal placenta offers a barrier against the transmission (trans-placental in utero transmission) of all the following infections EXCEPT:**
 - A. Malaria
 - B. Hepatitis B
 - C. Tuberculosis
 - D. All of the above
 - E. Non of the above**

4. **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.

5. **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

6. **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

Questions from 7 -11: For each numbered hepatitis marker below, select from the lettered options the one that matches it

7. HBcAG (B)

8. HBsAg (A)

9. Anti-HBsAg: (E)

10. HBIGM (C)

11. HBeAg: (D)

- A. It is detected in acute illness and chronic carriers.
- B. Can be only detected in the liver tissues in person with acute or chronic HB infection.
- C. Class antibody to HBcAg
- D. It is contained also in the core of HBV
- E. It develops during convalescence.

12. The reservoir of infection in meningococcal meningitis is man in the form of:

- A. Cases
- B. Sub clinical cases.
- C. Carriers.**
- D. All of the above.
- E. Non of the above.

13. 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

14. 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.

15. 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
- 16. 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.
- 17. 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
- 18. Rabies virus is present in all the following fluids of the infected animal EXCEPT:**
- A. lymph,
 - B. milk
 - C. saliva,
 - D. urine
 - E. stool**
- 19. 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
- 20. If a person is subjected to a wound, all the following measures are true regarding prophylaxis against tetanus EXCEPT:**
- A. Proper wound management with removal of foreign matter from wounds by thorough cleaning with debridement of any devitalized or necrotic tissue
 - B. If he is not immunized before give Td but not tetanus immunoglobulin (TIG)
 - C. If he is immunized but not certain of having 3 doses give Td and not TIG.
 - D. If he is immunized by 3 or more doses of tetanus, do not give either Td or TIG.
 - E. If he is immunized by 3 doses of tetanus but the last one was since more than 10 years, give Td, but not TIG.**

21. All the following statements are true regarding prophylaxis against neonatal tetanus EXCEPT:

- A. Immunization schedule for pregnant women has been recommended and it consists of five doses of tetanus toxoid (TT), respecting the minimum interval between doses.
- B. There is no evidence for contraindications of TT immunization of pregnant woman at any time during pregnancy.
- C. Any subsequent dose administered after the first dose counts as a dose towards the five dose schedule even if administered at a longer interval than the recommended minimum interval.
- D. If young woman have documentation of having received three doses of DPT in infancy, those doses counts as one doses of TT towards the five dose TT schedule.
- E. Protection of the woman and her newborn starts two weeks after the administration of the second dose.

22. Indications of vaccination with HA vaccine include all the following EXCEPT:

- F. Persons traveling or working in high endemic area of HAV infection.
- G. Children (< 2 years) living in communities with high rates of HAV infection.
- H. All persons of clotting factors disorders (factor VIII, factor IX) who receive replacement therapy.
- I. Persons with chronic liver diseases.
- J. In out-break, for persons who receive immune globulin (IG)

23. 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.

24. 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.

25. Confirmation of a case of neonatal tetanus is based on:

- A. Recovery of the organism from the site of infection (umbilical stump)
- B. Laboratory confirmation
- C. Clinical findings
- D. Detectable antibody response

- E. Non of the above
- 26. 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
- 27. 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.
- 28. All the following statements are true regarding HA vaccine EXCEPT:**
- A. Hepatitis A vaccine is highly immunogenic.
 - B. Data concerning the persistence of antibodies are limited because the current vaccine has been evaluated < 10 years.
 - C. It is recommended to be given to persons traveling to endemic areas at least two weeks prior to travel.
 - D. If not vaccinated prior to travel, give IG in addition to the vaccine.
 - E. 95 % of adults having protective levels of antibody within one month after vaccination.
- 29. 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.
- 30. 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 %

31. 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 1M injection.
- E. Penicillin and anti-tetanic measures should be applied according to severity of the wound and the history of tetanus immunization

32. 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.

33. 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.

34. 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

35. The case fatality rate of adult tetanus varies between - % .

- A. 30 - 40 %
- B. 30 - 50 %
- C. 30 - 60 %
- D. 30 - 80 %
- E. 30 - 90 %**

36. All the following are true statements regarding complications of hepatitis B infection EXCEPT:

- A. Acute fulminate HBV infection may occur in pregnancy and among newborns of infected mothers.
- B. About 90% of infants who acquire acute HB infection from their mothers become chronic carriers.
- C. Infants who become chronic carriers are at risk to develop chronic hepatitis, cirrhosis and hepatocellular carcinoma.
- D. Chronic HBV infection is found in 10% of cases of acute HBV infection.
- E. The risk of chronic hepatitis increases with age.

37. 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.

38. 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

39. 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.

40. A suspected or confirmed case of polio myelitis 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

- 41. Carriers of meningococcal meningitis represent 5-30% of normal population during inter-epidemic periods but during epidemic, the carrier rate may rise to:**
- A. 30-50 %
 - B. 50-60 %
 - C. 60-70 %
 - D. 70-80%.**
 - E. 80-90 %
- 42. 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
- 43. 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
- 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. 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
- 46. 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

47. 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. 200 /1000
- C. 2.5 / 1000**
- D. 0.05 /1000
- E. 1 /1000

48. 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

49. All of the following statements about the absolute risk of a disease are true EXCEPT:

- A. Absolute risk is synonymous with the incidence of the disease
- B. Absolute risk is the probability that a healthy individual will develop the disease during a specified time period
- C. Absolute risk is the underlying rate from which RR is derived
- D. Absolute 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**

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

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

51. 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 (inoculum)

52. 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

(53, 54 questions) 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.

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

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

54. The specificity of CT in this study is:

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

55. The use of chemicals to cure clinically recognizable disease or to limit its progress is termed:

- A. Vaccination
- B. Chemoprophylaxis
- C. Mass screening
- D. Surveillance
- E. Rehabilitation

56. 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)

57. 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

58. 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

Questions from (59-61): 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:

	Throat culture (D+)	Throat culture (D-)	Totals
S/S Test (T+)	28	30	58
S/S Test (T-)	12	80	92
Totals	40	110	150

59. 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. $28/40 = 0.70$

60. 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. $28/40 = 0.70$

61. 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. $12/150 = 0.08$

62. The most definite measure of ill health is the:

- A. Birth certificate
- B. Death certificate
- C. Morbidity registers
- D. Hospital records
- E. Records linkage

63. Causes of sex differences include all of the followings EXCEPT:

- A. Anatomical differences
- B. Sex linked genetic inheritance.
- C. Hormonal factors
- D. Differences in agent virulence
- E. Differences in the defense mechanism of the body.

64. When organisms will be transmitted from hands to mouth, or from hands to abraded skin or mucus membranes; this is called:

- A. Direct transmission
- B. Vector born transmission
- C. Droplet transmission
- D. Indirect transmission
- E. Common vehicle transmission

65. The difference in disease frequency among different age groups is explained by all of the followings EXCEPT:

- A. Stage of development
- B. Degree of exposure, susceptibility and immunity
- C. Hormonal changes
- D. Sex of the individual
- E. Cumulative exposure to harmful environmental influences

66. Descriptive epidemiology includes all EXCEPT:

- A. what
- B. who
- C. when
- D. where
- E. Why

Questions from 67 -73: For each numbered disease below, select from the lettered options a mode that can be transmitted through it. Each option can be used once, twice, or more or not used at all.

67. Malaria D

68. Yellow fever C

69. Plague C

70. Polio myelitis E

71. Rabies B

72. Meningococcal meningitis B

73. Hepatitis A virus E

- A. Air born transmission
- B. Direct contact transmission
- C. Biological propagative transmission
- D. Biological cyclo-propagative
- E. Indirect mechanical transmission

74. Some pathogens have one portal of entry to new host and two or more portals of exit from reservoir. From these is one of the following:

- A. Meningitis
- B. Rabies
- C. Poliomyelitis viruses.
- D. Tetanus
- E. Yellow fever

75. Isolation at home (if home is suitable) is a measure of prevention directed to the cases (reservoirs) in all the following diseases EXCEPT:

- A. Meningitis,
- B. Tuberculosis
- C. Poliomyellitis and
- D. Hepatitis A.
- E. **C holera**

Questions from (76 -78) for each numbered disease, select the appropriate preventive measure directed to the animal reservoir of infection from the lettered options:

76. Rabies C

77. Bovine TB D

78. Anthrax E

- A. Reservoir eradication
- B. immunization
- C. killing the infected animals
- D. Slaughtering
- E. Sterilization of animal products

79. Mass treatment is a critical factor in the interruption of disease transmission. It is used in the control of one of the following diseases.

- A. Meningitis
- B. Tuberculosis
- C. **Malaria**
- D. All of the above
- E. Non of the above

80. Isolation of contacts for the longest incubation period counted from the date of last exposure is a preventive measure applied in contacts of cases of:

- A. Hepatitis A
- B. **Pneumonic plague.**
- C. Meningococcal meningitis
- D. TB
- E. Polio myelitis