

ASSESSMENT OF 30 MCQs

FPSC NO : 57
MCQs on INFECTIOUS DISEASE
Submission DEADLINE : 27 JANUARY 2015, 12 NOON

INSTRUCTIONS

- To submit answers to the following multiple choice questions, you are required to log on to the College Online Portal (www.cfps2online.org).
- Attempt ALL the following multiple choice questions.
- There is only ONE correct answer for each question.
- The answers should be submitted to the College of Family Physicians Singapore via the College Online Portal before the submission deadline stated above.

1. One of the modern day worries is about emerging infections. Which of the following is an emerging infection with the greatest global impact?
 - A. H1N1 infection.
 - B. Human papilloma virus infection.
 - C. H5N1 infection.
 - D. HIV/AIDS.
 - E. SARS.
2. A mysterious disease outbreak in the town of Ravenna in Italy occurred in 2007. The symptoms were fever, exhaustion and severe bone pain. What is this mysterious disease due to?
 - A. Ebola infection.
 - B. Dengue fever.
 - C. Chikungunya disease.
 - D. Malaria.
 - E. Hendra virus infection.
3. An outbreak of encephalitis occurred in Malaysia and Singapore in 1998 – 1999. What was the causative agent?
 - A. Ebola virus.
 - B. SARS virus.
 - C. Chikungunya virus.
 - D. Hendra virus.
 - E. Nipah virus.
4. Emerging infectious diseases that originate in wildlife have been traced to global hot spots. Which of the following is one of these hot spots?
 - A. South and South East Asia.
 - B. Russia.
 - C. South Africa.
 - D. Australia.
 - E. North America.
5. Global food production and distribution processes can result in widely disseminated foodborne infections. A large outbreak of foodborne infection caused by a Shiga toxin producing E coli took place in Germany and France in 2011. What was the contaminated item that caused the disseminated foodborne infection?
 - A. Tomatoes.
 - B. Beef.
 - C. Duck.
 - D. Sprouts.
 - E. Chicken.
6. The discovery of new antibiotics is important to be ahead of drug resistance. Of the following classes of antibiotics, which is the latest to be discovered in the last 15 years?
 - A. Macrolides.
 - B. Glycopeptides.
 - C. Quinolones.
 - D. Lipopeptides.
 - E. Oxazolidinones.
7. A 50-year-old man is diagnosed to have a community acquired MRSA (CA-MRSA) infection. Which of the following clinical feature is consistent with such a diagnosis?
 - A. Culture positive for MRSA after 48 hours hospitalisation
 - B. The patient presents in the outpatient setting.
 - C. The patient has an indwelling catheter.
 - D. The patient tested negative for MRSA infection within the last one year.
 - E. The patient was recently staying in nursing home for respite care.

- 8. NDM-1 stands for New Delhi metallo-beta-lactamase, an enzyme produced by bacteria like E.coli and Klebsiella pneumonia that confers antibiotic resistance to a number of antibiotics. Which of the following antibiotics is not affected by this enzyme?**
- Cephalosporin.
 - Colistin.
 - Carbapenem.
 - Aminoglycoside.
 - Glycopeptide.
- 9. Resistance in many Gram negative bacteria is the result of the production of extended spectrum beta-lactamases (ESBL). Which of the following classes of antibiotics is not inactivated by ESBL?**
- Trimethoprim.
 - Aminoglycosides.
 - Glycopeptides.
 - Quinolones.
 - Carbapenems.
- 10. With regards to infection control of multidrug-resistant Gram-negative bacteria, several tier 1 and tier 2 recommendations have been proposed. Which of the following recommendations is a tier 1 recommendation?**
- Use real-time feedback to enhance adherence.
 - Increase frequency of education and provide timely feedback.
 - Increase frequency feedback on susceptibility patterns of antibiotics to clinicians.
 - Focus on best prevention and practices for healthcare workers.
 - Implement active surveillance culture.
- 11. About the six killer diseases in childhood before the advent of immunisation, which of the following is ONE of these?**
- Bronchial asthma.
 - Pertussis.
 - Herpes simplex.
 - Acute glomerulonephritis.
 - Traumatic brain injury.
- 12. For the immunization programme of mumps, measles and rubella (MMR) to be effective, which of the following percentages of each age cohort need to be vaccinated?**
- 92 – 95%.
 - 65 – 75%.
 - 45 – 55%.
 - 22 – 25%.
 - 12 – 15%.
- 13. About childhood exanthemas, which of the following statements is CORRECT?**
- The causative agent is a virus.
 - Diagnosis is based on examination.
 - Paradoxically, the majority are adults.
 - Laboratory tests are usually not needed.
 - The majority are actually drug reactions.
- 14. About varicella, which of the following is CORRECT?**
- The diagnosis is usually made by immuno-fluorescence from fluid within the vesicles.
 - Thrombocytopenia is a key feature.
 - Varicella is readily diagnosed on clinical grounds.
 - Herpes simplex is a differential diagnosis.
 - The varicella virus is completely eradicated from the body after infection.
- 15. About Kawasaki disease which of the following statements is CORRECT?**
- Kawasaki disease can cause coronary aneurysms.
 - Kawasaki is characterized by onset of fever of three days followed by a rash.
 - Kawasaki disease is accompanied by bilateral exudative conjunctivitis
 - The most severe cases of Kawasaki disease occur above the age of one year.
 - Kawasaki's disease does not affect adults.
- 16. A 55-year-old man wants to travel to Johannesburg to visit his son, daughter-in-law and a grandson. His only significant medical history is he had a thymoma successfully operated when he was 30 years old. He asks about yellow fever vaccination. Which of the following statements is CORRECT?**
- Yellow fever is transmitted by Culex fatigans mosquitoes in equatorial Africa and South America.
 - Yellow fever can be given to a person with allergy to eggs provided it is done so in a hospital.
 - This patient is at risk of developing post vaccination encephalitis because of his age.
 - Yellow fever vaccine must be given at an official yellow fever vaccine centre.
 - Yellow fever vaccine is safe for this patient.
- 17. Immunisation for international travel has been categorised as “required” immunisations, “recommended”, and “routine” immunisations. Which of the following immunisations is a “required” immunisation?**
- Typhoid.
 - Japanese encephalitis.
 - Rabies.
 - Hepatitis A.
 - Meningococcal.

THE SILENT RISK OF UNDETECTED

CHRONIC DISEASES

According to the National Health Survey 2010, 1 in 2 Singapore residents who has diabetes, and 1 in 4 who has hypertension had not been previously diagnosed.¹

The risk of getting chronic diseases increases from the age of 40. If left undiagnosed and untreated, they can lead to serious health problems, like ischaemic heart disease, the second leading cause of death in Singapore.²

To reduce such risks, the Integrated Screening Programme (ISP) recommends regular health screening to detect chronic conditions early.

As a doctor, you can do your part by encouraging your patients to get screened today.

For further details on ISP, please visit www.hpb.gov.sg/healthscreening or email hpb_integratedscreening@hpb.gov.sg

1. National Health Survey, 2010
2. MOH Statistics 2006

DISEASE	SCREENING TEST	AGE TO SCREEN FROM (YEARS)	FREQUENCY OF SCREENING
For men and women			
Obesity	Body mass index Waist circumference measurement	18 and older	Once every year
High blood pressure	Body pressure measurement	18 and older	Once every 2 years
Diabetes	Fasting venous blood glucose	40 and older	Once every 3 years
High blood cholesterol	Fasting venous blood glucose	40 and older	Once every 3 years
Colorectal cancer	Faecal Immunochemical Test (FIT) or Screening Colonoscopy	50 and older	Once every year Once every 10 years
For women only			
Cervical cancer	Pap smear	25 and older who have ever had sexual intercourse	Once every 3 years
Breast cancer	Mammogram	50 and older	Once every 2 years

This table serves as a guide for healthy individuals with average risk.

18. A Muslim couple aged 30 and 25, and their 18 month-old son are travelling to Saudi Arabia for the Haj. They are enquiring on the meningococcal vaccine. Which of the following statements is CORRECT?

- A. The meningococcal vaccine protects against serogroups C, X, Z, W-135.
- B. The meningococcal vaccine protects against serogroups B, C, Y, W-135.
- C. Serogroup C is highly immunogenic.
- D. The meningococcal vaccine is fully protective in the 18-month-old boy against the major serogroups.
- E. Meningococcal meningitis is prevalent from December to June in Sub-Saharan Africa.

19. A 25-year-old man and his fiancé also aged 25 is hitch-hiking to Latin America. They are enquiring about the typhoid vaccine. Which of the following statements is CORRECT?

- A. Typhoid vaccine is not really necessary for travel to endemic areas provided food hygiene is observed.
- B. Multi-drug resistant strains are prevalent in Latin America.
- C. Typhoid vaccine is unsafe for immune-compromised individuals.
- D. Primary protection consists of one 0.5 ml intramuscular injection.
- E. The Vi capsular polysaccharide typhoid vaccine is NOT licenced in Singapore.

20. An elderly Singapore couple is thinking of returning to India to visit distant relatives whom they have not seen for 30 years. The need for cholera immunisation is brought up for discussion. Dukoral which is a cholera vaccine, is available in Singapore.

- A. Cholera remains a "required" immunisation for international travel.
- B. Dukoral is given as a single injection 1 week before travel.
- C. The protective efficacy offered by Dukoral is at least 85%.
- D. Cholera is caused by gram positive cocci, *Vibrio cholera*.
- E. Dukoral offers some protection against travellers' diarrhoea.

21. A 65-year-old man wants to know more about the annual influenza vaccination that he has been recommended. He is also keen to know more of the new formulations of this "routine" immunisation. Which of the following statements is CORRECT?

- A. Approximately, 80% of acute respiratory infections are due to influenza.
- B. Influenza B strains are predominant over Influenza A strains in influenza infections the first half of 2012 in Singapore.
- C. The recombinant influenza vaccine (RIV) has the advantage of being free of antibiotic contaminants.
- D. The quadrivalent influenza vaccine (QIV) has an additional A strain over the currently available trivalent influenza vaccine.
- E. In a child, the annual influenza vaccination can be started above the age of 3 months.

22. A 50-year-old man with chronic obstructive pulmonary disease is discussing the usefulness of the pneumococcal vaccine with his family physician. Which of the following statements about this vaccine is CORRECT?

- A. Deduction through Medisave for pneumococcal vaccine is allowable only in children.
- B. The PCV13 vaccine is a polysaccharide pneumococcal vaccine.
- C. The PPV23 vaccine is a conjugate pneumococcal vaccine.
- D. The PCV13 vaccine is used in adults only.
- E. PCV13 pneumococcal vaccine will be protective in this patient against community acquired pneumonia.

23. The son of a 70-year-old woman asks his family doctor about the usefulness of the varicella zoster vaccine for his mother. Which of the following statements is CORRECT?

- A. A single dose of the varicella vaccine is adequate for protection of adults against varicella.
- B. Varicella infection requires mandatory infectious disease notification in Singapore.
- C. In the elderly person 60 years and older, varicella zoster vaccine is recommended.
- D. Herpes zoster is the manifestation the body's first encounter with the varicella virus.
- E. Varicella infection in adulthood is uncommon.

24. A 17-year-old female adolescent wishes to have the human papilloma virus (HPV) immunisation. She also asks several questions. Which of the following statements is CORRECT?

- A. For females, the eligible age group for HPV immunisation is 10 to 20 years of age.
- B. For HPV immunisation, a trivalent vaccine is used.
- C. A series of 3 injections of the HPV vaccine is recommended.
- D. HPV immunisation is NOT yet eligible for Medisave claim.
- E. HPV immunisation protects against cervical cancer but not genital warts.

25. A 40-year-old executive who is a Singaporean has been re-located by his firm to stay in the United States for a year. He sees his family doctor to find out about tetanus diphtheria (TD) and tetanus, diphtheria and acellular pertussis (TDap) immunisation for adults. Which of the following statements is CORRECT?

- A. TD for adults is given once every 5 years.
- B. TDap is given alternately with TD every 5 years.
- C. TDap needs to be given only once in adults in place of the TD booster to prevent re-emerging pertussis.
- D. In a patient who is up to date with TD or TDap immunisation, a tetanus booster is still needed in acute trauma.
- E. Instead of TD, TDap can be given every 5 years.

26. A 38-year-old man is diagnosed to have latent TB infection (LTBI). Which of the following statements is consistent with such a diagnosis?

- A. TB infection is diagnosed on the chest x-ray in an asymptomatic patient.
- B. TB infection in a patient who is asymptomatic, has no physical signs, and the chest x-ray is normal.
- C. TB infection in a child who is asymptomatic, has no physical signs, and has a normal chest x-ray.
- D. TB infection in extra-pulmonary areas, and the Chest X-ray is normal.
- E. TB infection seen on the chest x-rays of contacts of known TB cases, regardless of symptoms.

27. In a patient with latent tuberculosis infection (LTBI), which of the following is NOT a risk factor for progression to active TB?

- A. Hypertension.
- B. Chronic renal failure.
- C. Diabetes mellitus.
- D. Malignancy.
- E. HIV infection.

28. In patients with specific high risk medical conditions aged between 19 to 64 years, dual sequential vaccination of the PCV13 and PPSV23 pneumococcal vaccines is recommended. Which of the following is an exception to this recommendation?

- A. Lymphoma.
- B. HIV infection.
- C. Chronic liver disease.
- D. Asplenia.
- E. Chronic renal failure.

29. A number of complications are associated with influenza. Which of the following is NOT one of these complications?

- A. Nephritis.
- B. Pneumonitis.
- C. Myocarditis.
- D. Encephalitis.
- E. Death.

30. With regards to seasonal influenza, which of the following is a population at risk of their influenza episode being complicated with pneumonia?

- A. Neurocognitive disease.
- B. Malignancy.
- C. Chronic steroid use.
- D. Obesity.
- E. Any chronic lung disease.