

單選, 答案請寫於 ( ) 中

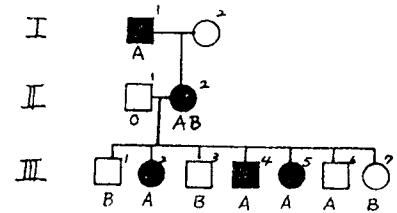
- ( ) 1. Which one is not usually seen in the treatment strategy for metabolic diseases?
- a) dietary restriction
  - b) replacement for deficient metabolites
  - c) use cytokines to modify immune responses
  - d) inhibit the production of abnormal metabolites
- ( ) 2. Cancer derived from connective tissue fibroblasts is usually named
- a) adenoma
  - b) leukemia
  - c) lymphoma
  - d) sarcoma
- ( ) 3. Both Mrs. Wang's youngest brother and her son have color blindness, which is an X-linked recessive disease. What is the chance that Mrs. Wang being a carrier?
- a) 100%
  - b) 50%
  - c) 25%
  - d) 5%
- ( ) 4. While eating at a seafood restaurant, a 47-year-old man develops abdominal pain, chest tightness and skin rash. His blood pressure drops to 80/50mm Hg. The most likely mechanism involved in his illness is
- a) lead poisoning
  - b) IgE-mediated release of histamine and kinins from mast cells
  - c) IgM-mediated activation of the classic complement pathway
  - d) Rotavirus infection
- ( ) 5. Assuming that body weight in a particular population is normally distributed with a mean of 81.5Kg and a standard deviation of 4.5Kg, which interval contains approximately 95% of the population?
- a) 63-100 Kg
  - b) 68-95 Kg
  - c) 67-94 Kg
  - d) 72-91 Kg
- ( ) 6. The mechanism for bleeding tendency in patients with liver failure is
- a) decrease production of serum albumin
  - b) decrease production of coagulation factors
  - c) inactivation of tissue thrombin
  - d) decrease production of platelets
- ( ) 7. The following infectious disease is now preventable with vaccination except one
- a) measles
  - b) Hepatitis B
  - c) Escherichia coli
  - d) small pox

(背面仍有題目, 請繼續作答)

8. Which of the following is a non-invasive prenatal genetic test which has the least risk to the fetus?
- ( ) a) fetal cord blood sampling  
 b) chorionic villus sampling  
 c) fetoscope  
 d) isolation of fetal cells from maternal blood
9. Which statement about chromosomal disorders is correct ?
- ( ) a) are due to point mutation of DNA  
 b) usually result in enzyme deficiency  
 c) abnormalities in autosomes are usually more severe clinically than sex chromosomes  
 d) balanced translocation carriers cannot have normal children
10. In patients with insulin-dependent diabetes mellitus (IDDM), anti-islet cell antibodies are frequently found in their blood. From this observation, which of the following statement is wrong about IDDM?
- ( ) a) IDDM is an HLA associated disorder  
 b) pancreatic islet cells are destructed through autoimmune mechanisms  
 c) IDDM patients usually have mutations in insulin receptors  
 d) T cells infiltration around pancreatic islets can be observed in histology examination

The pedigree in a family affected with nail-patella syndrome and the results of their ABO red cell antigen typing are shown below.

11. What is the possible inheritance pattern?
- ( ) a) autosomal dominant  
 b) autosomal recessive  
 c) X-linked dominant  
 d) X-linked recessive
12. Which one person in the family is a recombinant?
- ( ) a) I-2  
 b) II-2  
 c) III-1  
 d) III-2



The ABO/nail-patella syndrome  
 black symbol: affected  
 letters: ABO blood groups

13. A 25 year-old woman is brought to the emergency department 12 hours after a suicide attempt. She took approximately 200 aspirin tablets (each tablets contains 300mg acetylsalicylic acids). Select the most likely pattern of her arterial blood gas.

	PH	PO <sub>2</sub> mmHg	PCO <sub>2</sub> mmHg	HCO <sub>3</sub> Meg/L
a)	7.15	98	33	11
b)	7.30	56	80	38
c)	7.40	100	24	18
d)	7.50	56	33	25

- ( ) 14. Following a cerebral hemorrhage, a 68-year-old man has a weakness of left side of his body and lower part of his face on the left, Select the branch of artery that is most likely involved.
- a) right cerebral artery
  - b) left cerebral artery
  - c) right mesentric artery
  - d) left vertebral artery
- ( ) 15. For patients with familial hypercholesterolemia, the risk of which disease is increased significantly?
- a) colon cancer
  - b) coronary heart disease
  - c) hypertension (high blood pressure)
  - d) diabetes mellitus
- ( ) 16. Which of the following is true about mitochondrial diseases?
- a) most patients are male
  - b) show a pattern of maternal transmission
  - c) patients are at risk for skin cancers
  - d) the mutations are located in X-chromosome
- ( ) 17. The following condition has been reported after the nuclear power plant accident in Chernobyl (車諾比), which one is most likely true?
- a) increased cases of thyroid cancer in children lived around that area
  - b) increased cases of breast cancer in women lived around that area
  - c) increased cases of colon cancer in men lived around that area
  - d) increased cases of oral cancer in young men lived around that area
- ( ) 18. The following hormones are involved in the regulation of blood pressure except one?
- a) angiotensin
  - b) aldosterone
  - c) leptin
  - d) renin
- ( ) 19. For embryonal cell carcinoma, which one is the tumor marker that can be detected in the blood of these patients?
- a)  $\alpha$ -fetoprotein
  - b) cortisol
  - c) alkaline phosphatase
  - d) calcitonin
- ( ) 20. What is the percentage of chance that two sibs inherit same HLA haplotype?
- a) 50%
  - b) 25%
  - c) 10%
  - d) 5%