

Multiple choice (單選，每題 5 分)

1. () Cancers derived from epithelial cells are termed:
 - a. carcinomas
 - b. adenomas
 - c. Sarcomas
 - d. lymphomas
 - e. granulomas

2. () Which of the following best describes the formation of a malignant tumor?
 - a. Toxic substances in the blood change all the cells supplied by a single vessel and turn these cells into a tumor.
 - b. All cells irradiated by an X-ray beam turn into cancer cells.
 - c. Electromagnetic waves from cellular phones cause a brain tumor in the temporal lobe.
 - d. Multiple mutations accumulate in a single cell and render this cell immortal. This cell proliferates uncontrollably and forms a malignant tumor.
 - e. All benign tumors will eventually turn into cancers.

3. () Which of the following is not among the factors that promote the invasiveness of a tumor?
 - a. overexpression of growth factor receptors
 - b. Secretion of proteins that promote new vessel formation
 - c. activation of sensors that increase cell death (apoptosis) when cells are detached from their original site
 - d. increase in proteases that degrade extracellular matrix proteins
 - e. decrease in the function of tumor suppressor genes

4. () Salk vaccine (injection) and Sabin vaccine (oral) for poliomyelitis :
 - a. The former is in routine use in Taiwan.
 - b. The latter is live, less safe.
 - c. The former is more effective.
 - d. The former is live, safer.
 - e. American Pediatric Association recommends the use of the latter.

5. () Which is not among the common clinical organs transplanted in human?
 - a. Cornea
 - b. Lung
 - c. Heart
 - d. Ovary
 - e. Kidney

(背面仍有題目,請繼續作答)

6. () Rheumatic fever is an autoimmune damage to heart valves induced by streptococcal infection, the most likely mechanism of this autoimmunity is:
- exposure of sequestered antigen
 - general immune activation
 - disruption of thymic selection
 - colonization of bacteria in the heart
 - molecular mimicry
7. () For effective AIDS prevention...
- Peptides encoded by variable gene segments are good targets.
 - Antibodies produced by exposed people are protective.
 - Both T cell and B cell immunity are necessary.
 - Vaccines based on the binding sites for HIV's cell entry coreceptor, IL-4 receptor, are promising.
 - None of the above
8. () Harry (blood type A) and Sally (blood type B) got married and had a son (blood type O). What is the chance that they will have a blood type A baby in their next delivery?
- 0
 - 10%
 - 25%
 - 50%
 - 100%
9. () Which of the following statements about chromosomal disorders is correct?
- A baby with three copies of chromosome 21 usually cannot survive the first year of life.
 - Abnormalities caused by sex chromosomes are usually less severe clinically than autosomes.
 - Chromosomal disorders are due to point mutations in DNA sequences.
 - Balanced translocation carriers cannot have normal children.
 - Individuals with two X chromosomes always have female phenotypes.
10. () Jimmy has severe anemia caused by a mutation in one of his hemoglobin genes. The only chance to cure this disease is to perform bone marrow transplantation. What is the gene that needs to be matched between the potential donor and Jimmy?
- HLA
 - H-2
 - X chromosome
 - IL-2
 - G6PD

11. () Jimmy has a sister who is willing to donate her bone marrow to save Jimmy. What is the chance that Jimmy and his sister will be completely matched for the gene in question 10?
- 100
 - 75
 - 50
 - 25
 - 10
12. () Which of the following is correct regarding renal diseases?
- Anemia in chronic renal failure is due to blood loss during the process of dialysis.
 - Protein loss through the urine is one of the major pathogenic processes of nephrotic syndrome.
 - Due to heavy urine loss of electrolytes, high salt diet is necessary for a patient with nephrotic syndrome.
 - Due to loss of lipids in the urine, low serum lipid level in the serum is common in patients with nephrotic syndrome.
 - None is correct
13. () Which of the following is correct regarding respiratory diseases?
- Premature babies have difficulty in respiration shortly after birth because their lung cells are not mature enough to produce IgA.
 - Smokers of cigarettes have decreased neutrophils in their airway.
 - High IgE levels are detected in all patients with asthma.
 - The most common allergens for asthma in Taiwan are pollens.
 - Asthma is caused by inflammation in the airway.
14. () Which of the following does not cause sex transmitted diseases?
- herpesvirus
 - human papillomavirus
 - neisseria gonorrhoeae
 - chlamydia trachomatis
 - hepatitis a
15. () Which of the following factor will increase the risk of cervical cancer (of uterus)?
- late age at first sexual intercourse
 - multiple sexual partner
 - breast feeding
 - irregular menstruation
 - alcohol consumption

16. () Which of the following is not part of routine vaccination in our country ?
- tetanus toxoid
 - BCG
 - Hib (Hemophilus influenza type B vaccine)
 - poliomyelitis
 - hepatitis B
17. () Which is not true regarding Dengue fever ?
- Effective vaccines are available
 - Skin rashes and bleeding tendency are often observed in patients
 - The second infection is often more severe than the first one
 - The causative organism is transmitted by mosquitoes
 - All are true
18. () Which of the following disorders that lead to poor vision is not part of the sequelae of poorly controlled diabetes mellitus ?
- glaucoma
 - cataract
 - ischemic stroke of visual cortex
 - retinopathy
 - All are related to diabetes mellitus.
19. () The following hormones or mediators are involved in the regulation of blood pressure except ?
- calciferol
 - angiotensin
 - NO
 - aldosterone
 - rennin
20. () If the mean diastolic blood pressure in a population is 75 mmHg and the standard deviation is 5 mm Hg. The range of diastolic blood pressure that covers 95% of the population will be:
- 70-80 mmHg
 - 65-75 mmHg
 - 60-70 mmHg
 - 65-85 mmHg
 - 60-90 mmHg