

※ 注意：請用 2B 鉛筆作答於答案卡，並先詳閱答案卡上之「畫記說明」。

- ( ) 1. In people with Barrett metaplasia, what kind of metaplasia occurring on their lining epithelium of the esophagus:  
 (A) squamous epithelium into columnar epithelium  
 (B) columnar epithelium into squamous epithelium  
 (C) transitional epithelium into columnar epithelium  
 (D) columnar epithelium into stromal cells  
 (E) None of the above
- ( ) 2. About "hyperplasia", which of the followings is incorrect:  
 (A) Definition: increase in the size of cells  
 (B) Usually occur with hypertrophy  
 (C) increased local production of growth factors is one of the possible mechanism  
 (D) activation of particular intracellular signaling pathway is another possible mechanism  
 (E) the cause may be pathologic or physiologic
- ( ) 3. 下列何種疾病的遺傳模式為性染色體隱性遺傳(X-linked recessive inheritance)?  
 (A) 葡萄糖-六-磷酸鹽去氫酶缺乏症(蠶豆症) (B) 地中海型貧血  
 (C) 三染色體 18 症(trisomy 18) (D) 馬凡氏症候群(Marfan's syndrome)  
 (E) 帕金森氏症(Parkinson's disease)
- ( ) 4. 下列有關基因印記(genomic imprint)與相關疾病的敘述，何者為非？  
 (A) 在某些特殊情況下，只有其中的一份基因可被正常地啟動。至於哪一份基因能夠啟動而表現，端視於基因的來源，某些基因只能表現自父親遺傳而來的部份；而某些基因只能表現自母親遺傳而來的部份，這樣的現象稱為「基因印記」  
 (B) 普拉德-威利症候群(Prader-Willi Syndrome, PWS)與天使症候群(Angelman Syndrome)都屬於這一類型的遺傳疾病  
 (C) 天使症候群與普拉德-威利症候群，目前已知其發病原因都在於第十五號染色體上的一個基因，UBE3A，失去原本效用所導致  
 (D) 天使症候群起因可能是來自於母方的第十五號染色體發生缺失  
 (E) 普拉德-威利症候群起因可能是來自於父方的第十五號染色體發生缺失
- ( ) 5. 下列何者不為發紺性先天性心臟病？  
 (A) 左心發育不全症候群 (B) 肺動脈瓣閉鎖合併完整的心室中隔 (C) 法洛四重畸症  
 (D) 開放性動脈導管 (E) 完全性大動脈轉位
- ( ) 6. 下列何者為間質性腫瘤？  
 (A) squamous cell carcinoma (B) hemangioma (C) adenocarcinoma  
 (D) all of the above (E) none of the above
- ( ) 7. 下列哪一基因突變後可成為致癌基因？  
 (A) growth factor receptor (B) transcription factor  
 (C) intracellular signal transduction protein (RAS) (D) cyclin and cyclin-dependent kinase  
 (E) all of the above
- ( ) 8. 感染性單核球增生症(infectious mononucleosis)為何種病原體初次感染所造成的疾病？  
 (A) 帶狀皰疹(varicella zoster virus)  
 (B) 單純皰疹第一型(HSV-1)  
 (C) 人類免疫缺陷病毒(human immunodeficiency virus, HIV)  
 (D) EBV (Epstein-Barr Virus)  
 (E) 人類乳突病毒(human papilloma virus, HPV)
- ( ) 9. 乾酪性壞死(caseous necrosis) 是何種感染症的病理特徵？  
 (A) 狂犬病 (B) 肺結核 (C) 隱球菌 (D) 梅毒 (E) 淋病
- ( ) 10. 成人社區型肺炎最常見是何種病原菌感染所引起？  
 (A) 結核菌 (B) 隱球菌 (C) 葡萄球菌 (D) 肺炎球菌 (E) 腦膜炎雙球菌

見背面

- ( ) 11. 下列關於慢性發炎的敘述何者正確？  
 (1)慢性發炎可以是急性發炎消退過程中的歷程，但也可以一開始就是慢性發炎  
 (2)慢性發炎通常伴隨纖維化及組織功能的損害  
 (3)慢性發炎主要參與的發炎細胞為淋巴球、漿細胞及巨噬細胞  
 (4)肉芽腫性發炎為一特殊型態的慢性發炎狀態：  
 (A) 1, 2, 3 (B) 1, 2, 4 (C) 2, 3, 4 (D) 1, 3, 4 (E) 1, 2, 3, 4
- ( ) 12. 下列何者是一種免疫性器官？  
 (A) 甲狀腺(thyroid gland) (B) 腎上腺(adrenal gland) (C) 胸腺(thymus)  
 (D) 攝護腺(prostate) (E) 副甲狀腺(parathyroid gland)
- ( ) 13. 下列有關自體免疫疾病的敘述，何者為是：  
 (A) 葛瑞夫茲病(Graves disease)的自體抗體(autoantibody)，作用在促甲狀腺激素釋放激素(TRH)的受體，造成甲狀腺素不正常大量分泌，無法受到回饋作用控制，使得病人在臨床上有甲狀腺功能亢進與凸眼的問題。  
 (B) 自體免疫疾病(autoimmune disease)的成因主要在於自體耐受性(self tolerance)的破壞。臨床不會有家族性或遺傳性，經常因為感染等外在因素，造成免疫系統的混淆，而引發免疫系統攻擊自體的器官。  
 (C) 紅斑性狼瘡(SLE)的病人在全身多處器官會有病變，例如臉部的蝴蝶斑(malar rash)、關節炎、腎炎、血清中有抗細胞核抗體(antinuclear antibody)等。  
 (D) none of the above
- ( ) 14. 下列何者為第一型過敏反應？  
 (A) 橋本氏病(Hashimoto's 病)  
 (B) 盤尼西林所致之無防禦性休克(penicillin-related anaphylactic shock)  
 (C) 肺結核(tuberculosis)  
 (D) 全身紅斑性狼瘡(systemic lupus erythematosus)
- ( ) 15. 下列何者為傳染性心內膜炎之高危險群？  
 (A) 牙科手術(dental surgery) (B) 泌尿道手術(urological surgery)  
 (C) 靜脈注射毒癮者(IV drug abuser) (D) 嚴重感染(severe infection)  
 (E) 以上皆正確(all of the above)
- ( ) 16. 慢性胰臟炎最常見的原因是：  
 (A) 酒癮 (B) 遺傳 (C) 膽結石 (D) 病毒性肝炎 (E) 自體免疫
- ( ) 17. 有關子宮頸病變，下列敘述何者正確？  
 (A) 低級別鱗狀上皮內病變(Low-grade squamous intraepithelial lesion)主要是由低危險性人類乳突瘤病毒(Low-risk Human papilloma virus)第 6、11 型(HPV type 6、11)的感染所引起  
 (B) 子宮頸鱗狀上皮細胞癌(squamous cell carcinoma)主要是人類乳突瘤病毒第 31、33 型(HPV type 31、33)的感染所引起  
 (C) 子宮頸腺癌(adenocarcinoma)主要是人類乳突瘤病毒第 16、18 型(HPV type 16、18)的感染所引起  
 (D) All of the above  
 (E) None of the above
- ( ) 18. 下列那一種情況與異型性複雜性子宮內膜增生(Atypical complex endometrial hyperplasia)的發生最不相關？  
 (A) 慢性無排卵性月經週期(Anovulatory cycle) (B) 子宮內膜萎縮(atrophy)  
 (C) 卵巢長濾泡顆粒性細胞瘤(Granulosa cell tumor) (D) 長期單獨使用雌激素  
 (E) 初經較早或停經較晚
- ( ) 19. 乳房腫塊最常見的原因是：  
 (A) 纖維腺瘤(Fibroadenoma) (B) 乳管原位癌(Ductal carcinoma in situ)  
 (C) 侵犯性乳管癌(Invasive ductal carcinoma) (D) 纖維囊腫性病變(Fibrocystic change)  
 (E) 葉狀腫瘤(Phyllodes tumor)

- ( ) 20. 以下哪種腎臟疾病病人，是與抗基底膜(anti-glomerular basement antibody)有相關性？  
 (A) 古德巴斯德症候群(Goodpasture's syndrome) (B) IgA 腎病  
 (C) 糖尿病腎病(diabetic nephropathy) (D) 鏈球菌感染後的急性腎絲球腎炎
- ( ) 21. 下列何者常見於結核病(Tuberculosis)？  
 (A) 空洞形成(Cavitation) (B) 乾酪性壞死(Caseous necrosis) (C) 常在肺尖(Apices)發生  
 (D) All of the above (E) None of the above
- ( ) 22. 高血壓性腦出血最常發生於何處？  
 (A) 額葉 (B) 視丘 (C) 基底核 (D) 枕葉 (E) 頂葉
- ( ) 23. 帕金森氏症(Parkinson's disease)的病灶發生於腦何處最常見？  
 (A) 視丘 (B) 基底核 (C) 海馬迴 (D) 嗅葉 (E) 黑質
- ( ) 24. 關於睪丸癌(testicular cancer)，請選出正確的敘述：  
 (1)很少發生在小孩； (2)年紀愈大，愈易罹患；  
 (3)多為生殖細胞癌； (4)有些病人會有胎兒蛋白( $\alpha$ -fetoprotein)上升  
 (A) 1, 2, 3 (B) 1, 3 (C) 2, 4 (D) 3, 4
- ( ) 25. 骨肉瘤(Osteosarcoma)之治療何者正確？  
 (A) 直接截肢(Amputation) (B) 術前化療(Neoadjuvant chemotherapy)  
 (C) 放射線治療(Radiotherapy) (D) 抗生素(Antibiotics)治療
- ( ) 26. miRNAs usually regulate gene expression through:  
 (A) activation of the promoter (B) binding to the 3'UTR of mRNA  
 (C) suppression of the enhancer (D) binding to the ATG start codon of mRNA
- ( ) 27. Cellular and tissue necrosis is usually associated with:  
 (A) increased basophilia of the cytoplasm  
 (B) nuclear fragmentation and dissolution  
 (C) increased basophilia of the nucleus  
 (D) presence of myelin figures due to protein aggregations
- ( ) 28. Which of the following statements about granulomatous inflammation is true?  
 (A) It is a cellular attempt to contain an offending agent that is difficult to eradicate.  
 (B) It is a pattern of chronic inflammation induced mainly by activated B cells.  
 (C) Tuberculosis is the prototype non-necrotizing granulomatous inflammation.  
 (D) It is associated with multinucleate giant T cells.
- ( ) 29. Infarct may be red or white. White infarct is associated with:  
 (A) Venous occlusion (B) Pulmonary infarct  
 (C) Arterial occlusion (D) Small intestinal infarct
- ( ) 30. The term for DNA sequencing technologies capable of producing large amounts of sequencing data in a massively parallel manner is:  
 (A) PCR (B) FISH (C) SNP (D) NGS
- ( ) 31. Systemic anaphylaxis is a hypersensitivity reaction of type:  
 (A) I (B) II (C) III (D) IV
- ( ) 32. Lymphatic spreading is more likely associated with  
 (A) Mixed tumor of the parotid gland (B) Mature cystic teratoma  
 (C) Sarcoma of the smooth muscle (D) Carcinoma of the colon
- ( ) 33. In a patient with AIDS, the presence of acid-fast organisms in macrophages suggests a diagnosis of  
 (A) Staphylococcal infection (B) Candida infection  
 (C) Cytomegalovirus infection (D) Mycobacterium avium infection
- ( ) 34. Diabetes, hypertension, hyperlipidemia are all associated with  
 (A) Obesity (B) Malnutrition  
 (C) Vitamin A deficiency (D) Vitamin D deficiency
- ( ) 35. Common tumors of the infancy and childhood include the following, EXCEPT:  
 (A) Neuroblastoma of the adrenal gland (B) Wilms tumor of the kidney  
 (C) Sarcoma of the soft tissue (D) Carcinoma of the liver

- ( ) 36. The vascular change that characterizes the most severe form of hypertension, ie, malignant hypertension, is:  
 (A) Hyaline deposits of the arteriole (B) Narrowing of the arterioles  
 (C) Necrosis of the arteriole (D) Thickening of the arterioles
- ( ) 37. Temporal changes in acute myocardial infarction, from early to late, are  
 (A) wavy fiber, PMN infiltration, granulation tissue formation, scar  
 (B) PMN infiltration, wavy fiber, granulation tissue formation, scar  
 (C) wavy fiber, PMN infiltration, scar, granulation tissue formation  
 (D) granulation tissue formation, wavy fiber, PMN infiltration, scar
- ( ) 38. A biopsy from a 20-year-old male with neck lymphadenopathy shows nodular and sclerotic changes, a dense infiltration of small T lymphocytes, and presence of rare Reed-Sternberg-like cells. The most likely diagnosis is:  
 (A) Follicular (Nodular) lymphoma (B) Hodgkin lymphoma  
 (C) Small lymphocytic lymphoma (D) T cell lymphoma
- ( ) 39. A 40-year-old female presents with pancytopenia, bone marrow biopsy shows severe hypocellularity. The most likely diagnosis is  
 (A) Sickle cell anemia (B) Hemolytic anemia  
 (C) Iron deficiency anemia (D) Aplastic anemia
- ( ) 40. Community-acquired bacterial pneumonia is most likely associated with  
 (A) Mycobacteria (B) Aspergillus (C) Pneumococcus (D) Pseudomonas
- ( ) 41. The most common malignant tumor of the head and neck is  
 (A) Squamous cell carcinoma (B) Adenocarcinoma  
 (C) Mixed tumor (D) Nasopharyngeal carcinoma
- ( ) 42. The micro-organism commonly associated with chronic gastritis and MALToma is  
 (A) Epstein Barr virus (B) Helicobacter pylori  
 (C) Pseudomonas aeruginosa (D) Campylobacter jejuni
- ( ) 43. In liver pathology, the combination of hypoperfusion and retrograde congestion may cause centrilobular hemorrhagic necrosis. The morphologic change is called:  
 (A) Nutmeg liver (B) Cholestatic liver (C) Fatty liver (D) Cirrhotic liver
- ( ) 44. Regarding pancreatic cancer, it is associated with the following, EXCEPT  
 (A) Smoking. (B) An intense desmoplastic reaction  
 (C) An indolent course. (D) K-ras mutation.
- ( ) 45. The glomerular disease associated with a relatively benign course, and characterized by diffuse effacement of foot processes of podocytes is:  
 (A) Membranous nephropathy (B) Minimal change disease  
 (C) Focal segmental glomerulosclerosis (D) Membranoproliferative glomerulonephritis
- ( ) 46. Which of the following statements about prostate adenocarcinoma is FALSE?  
 (A) Presence of basal cell layer when examined under microscope  
 (B) The Gleason score is used for grading.  
 (C) Bone metastasis is characteristic osteoblastic.  
 (D) Serum PSA is widely used to screen and monitor the disease
- ( ) 47. The PAP smear is used to screen for  
 (A) Breast cancer (B) Lung cancer (C) Cervical cancer (D) Colon cancer
- ( ) 48. Regarding breast cancer, target therapy with a humanized antibody has been developed against:  
 (A) ER (B) PR (C) p53 (D) Her-2
- ( ) 49. Nodular glomerulosclerosis (Kimmelstiel-Wilson disease) is found in  
 (A) Diabetes (B) Clear cell carcinoma of the kidney  
 (C) Hyperthyroidism (D) Gout
- ( ) 50. Alzheimer disease is the most common cause of dementia in older adults. The characteristic pathological finding is presence of:  
 (A) Atherosclerotic plaque (B) Demyelinated plaque  
 (C) Kuru plaque (D) Neuritic plaque