

請作答於『答案卡』，每題 2 分 ※ 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. 一個二十歲男性出現血尿，腎臟切片可見在間質(mesangium)有免疫球蛋白堆積，最可能的疾病為：
(A) Goodpasture 症候群 (B) IgA 腎病變 (C) 快速進展性腎絲球病變 (D) Alport 症候群
2. Krukenberg 氏瘤是指腸胃道腺癌轉移至哪一器官？
(A) 腎臟 (B) 肝臟 (C) 卵巢 (D) 肺臟
3. 後天性免疫不全症候群是由於致病病毒侵犯何種細胞引起的？
(A) B 型淋巴球 (B) 協助性 T 細胞 (C) 抑制性 T 細胞 (D) 自然殺手細胞
4. 下列何種骨腫瘤好發於中老年人？
(A) 骨肉瘤 (B) 軟骨肉瘤 (C) 類骨骨瘤 (D) 巨細胞肉瘤
5. 先天性腎上腺增生最常見的原因是缺乏：
(A) 5-hydroxylase (B) 11-hydroxylase (C) 17-hydroxylase (D) 21-hydroxylase
6. 下列水腫的原因何者是因為滲透壓下降？
(A) 心臟衰竭 (B) 門脈高壓 (C) 腎臟衰竭 (D) 營養不良
7. 第一型糖尿病的特徵不包括：
(A) 中老年人 (B) 依賴胰島素 (C) 胰島炎 (D) 抗胰島抗體
8. 下列何者非早產的後遺症？
(A) 壞死性腸炎 (B) Peutz-Jegher 症候群 (C) 新生兒黃疸 (D) 敗血症
9. 腎上腺皮質腫瘤不斷的分分泌大量aldosterone稱為：
(A) Conn's syndrome (B) Cushing's syndrome (C) Addison's disease (D) Albert's syndrome
10. 急性發炎的病灶會發熱，係因：
(A) 組織水腫 (B) 血管的血栓形成 (C) 血管擴張 (D) 組織中纖維蛋白沈積
11. 奇異栓塞 (paradoxical embolism) 是指：
(A) 健康人因鞍狀肺栓塞猝死 (B) 靜脈栓子經心室缺損進入動脈
(C) 未形成梗塞的栓塞 (D) 在動脈形成的血栓
12. 慢性肺心症最主要的病理變化是：
(A) 左心室肥大或擴大 (B) 右心室肥大或擴大 (C) 左心室萎縮 (D) 右心室萎縮
13. 子宮頸癌和何型的人類乳突瘤病毒最有關？
(A) Type 1, 3 (B) Type 6, 11 (C) Type 16, 18 (D) Type 9, 17
14. 下列何疾病會造成人類絨毛膜促性腺激素 (HCG) 上昇？
(A) 子宮肌瘤 (B) 子宮內膜異位 (C) 葡萄胎 (D) 成熟的畸胎瘤
15. 下列何者非結節性硬化症的特徵？
(A) 神經纖維瘤 (B) 腎臟血管肌肉脂肪瘤 (C) 心臟橫紋肌瘤 (D) 大腦結節
16. 下列何疾病和 Epstein-Barr 病毒最有關？
(A) 口腔癌 (B) 鼻咽癌 (C) T 細胞淋巴瘤 (D) 白血病
17. 下列有關 Paget's disease 何者是錯的？
(A) 未控制的骨破壞，及旺盛但卻不協調突骨母細胞反應
(B) 可以是單一骨頭或許多骨頭
(C) 軟骨肉瘤是其併發症
(D) 會導致病理性骨折
18. 下列何者不易造成肉芽腫性發炎？
(A) 結核病 (B) 梅毒 (C) 貓抓病 (D) 麻瘋
19. 海洋性貧血是因為：
(A) 鐵缺乏 (B) 維生素 B₁₂ 缺乏 (C) 血紅素結構異常 (D) 血紅素生成不足

20. 下列何者非血鐵質沉著症常傷害的器官？
 (A) 腦 (B) 心 (C) 肝 (D) 胰
21. 下列何疾病幾乎都發生在青少年男性？
 (A) 血管纖維瘤 (B) 微血管瘤 (C) 血管肉瘤 (D) 竇狀血管瘤
22. 子宮內膜癌的好發因子不包含：
 (A) 肥胖 (B) 多次懷孕 (C) 過度雌性素刺激 (D) 糖尿病
23. 第一型血友病是因缺乏：
 (A) 第五因子 (B) 第六因子 (C) 第七因子 (D) 第八因子
24. 血栓的成因不包括：
 (A) 血管內皮的傷害 (B) 正常血流的改變 (C) 過強的凝結力 (D) 維生素缺乏
25. 神經母細胞瘤常見何基因的增幅？
 (A) N-myc (B) K-ras (C) B-raf (D) Her-2
26. Which description is **wrong** about cell death?
 (A) Membrane bleb is diagnostic for apoptotic cell death.
 (B) Cellular swelling is the first manifestation of all forms of injury to cells.
 (C) The morphological appearance of necrosis is the result of denaturation of intracellular proteins and enzymatic digestion of lethally injured cells.
 (D) Chromatin condensation is typically seen in cells ensuing apoptosis.
 (E) Inflammation is frequently associated with cells undergoing necrosis, while it is not seen in cells ensuing apoptosis.
27. Which description is **wrong**?
 (A) Glycogen storage in cells can be demonstrated by PAS stain.
 (B) Lipid accumulation in cells can be demonstrated by Oil-red-O stain.
 (C) Melanin is a brown-black pigment seen in melanocytes and is due to trypsin activity on the cellular amino acid content.
 (D) Excesses of bilirubin can lead to jaundice.
 (E) Formation of lipofuscin in cells results from free radical injury and lipid peroxidation, but lipofuscin itself is not injurious to the cells.
28. Which of following statements about adult (somatic) stem cells is **incorrect**?
 (A) The somatic stem cells in intestine and hair follicle are regulated by Wnt and BMP pathways.
 (B) The somatic stem cells in bone marrow can be divided into hematopoietic stem cells and marrow stem cells (MSC).
 (C) The somatic stem cells in hair follicle bulge play certain roles during normal homeostasis of skin.
 (D) The somatic stem cells in liver are located in the canals of Hering, and are bipotential progenitors that can develop to either hepatocytes or biliary cells.
 (E) Growth and regeneration of injured skeletal muscle occur by replication of satellite cells.
29. About the receptors and signal transduction pathways of various growth factors, which of following statements is **incorrect**:
 (A) The types of receptors on membrane include receptors with or without intrinsic tyrosine kinase activity, G-protein-linked receptor, and steroid hormone receptors.
 (B) Most of the ligands for receptors with tyrosine kinase activity function in stimulating cell proliferation and growth.
 (C) Receptors lacking intrinsic tyrosine kinase activity that recruit kinases can transmit extracellular signals to the nucleus by activating members of the JAK (Janus kinase) family of proteins.
 (D) A large number of ligands signal through G-protein-linked receptor, including chemokines, vasopressin, epinephrine and norepinephrine.
 (E) Ligand activated steroid receptors can either bind to hormone response elements within target genes, or interactively bind with other transcription factors to regulate target genes.

30. Which description(s) is (are) **wrong**?
- The pathophysiology of mitochondria disease involves an interplay between mutation of mitochondrial and nuclear genomes.
 - Each cell has mitochondria for energy production so that mitochondrial disease could affect all cells equally.
 - Mitochondrial disease such as Leber's hereditary optic neuropathy is characterized by maternal inheritance pattern.
 - Mitochondrial diseases commonly have a progressive course, of which the phenomenon is so called "anticipation".
- (A) a, b (B) b, c (C) c, d (D) a, c (E) b, d
31. Which description(s) about Fragile X syndrome is (are) **wrong**?
- Fragile X syndrome accounts for the second most common cause of mental retard and affects female more often than male.
 - Sherman's paradox could be explained by the positional effect of CGG expansion located within the 5' UTR of *FMR-1* gene.
 - Fragile X syndrome is caused by absence of FMRP protein due to hypermethylation of upstream CGG expansions of *FMR-1* gene.
 - FMRP is an RNA binding protein and could regulate local mRNA translation in neurons.
- (A) a, b (B) b, c (C) c, d (D) a, d (E) b, d
32. Which one of the following is **NOT** a feature of anaplasia?
- (A) Disorderly arrangement of cells (B) Variation in size of nuclei
(C) Loss of cell polarity (D) Less crowding of cells
(E) Pleomorphism
33. Which description(s) is (are) **wrong**?
- Burkitt lymphoma is caused by increased MYC protein expression resulting from translocation of the genes t(8;14).
 - Neuroblastoma is mostly caused by overexpression of N-MYC gene resulting from hypomethylation of N-MYC promoter.
 - HPV type 1 and 7 have been implicated in the genesis of cervical squamous cell carcinoma.
 - Constitutive activation of RAS oncogene caused by point mutation is frequently seen in epithelial tumors such as pancreatic adenocarcinoma and colon adenocarcinoma.
- (A) a, b (B) b, c (C) c, d (D) a, d (E) b, d
34. Which description(s) is (are) **wrong**?
- Tobacco is the most common exogenous cause of human cancers, accounting for 90% of esophageal cancer.
 - Acute aspirin overdose causes alkalosis first as the consequence of stimulation of the respiratory center, followed by metabolic acidosis later.
 - The effect of cocaine is through its inhibition on reuptake of dopamine and norepinephrin in the synapses of the central and peripheral nervous system.
 - Hormone replacement therapy has a protective effect on the development of atherosclerosis in women over age 60.
- (A) a, b (B) b, c (C) c, d (D) a, d (E) b, d
35. Which description is **wrong**?
- (A) Bulimia is a condition in which the patient takes food and then self-induces vomiting.
(B) Marasmus in children presents as generalized edema.
(C) The earliest manifestation of vitamin A deficiency is night blindness.
(D) Deficiency in vitamin D causes rickets in children and osteomalacia in adults.
(E) Scurvy is caused by vitamin D deficiency.
36. Which is **not** the modifiable risk factor in ischemic heart disease?
- (A) Hyperlipidemia (B) Hyperthyroidism
(C) Hypertension (D) Cigarette smoking
(E) Diabetes mellitus

37. Which description is **wrong**?
- (A) The most common agents for lymphangitis are group A β -hemolytic streptococci.
 (B) Varicose veins typically involve in superficial veins of the upper and lower legs.
 (C) Deep leg veins are the preferred sites for thrombophlebitis.
 (D) The superior vena caval syndrome is usually caused by neoplasm's that compress or invade the superior vena cava.
 (E) Raynaud phenomenon results from an exaggerated vasodilatation of digital arterioles.
38. Which of the following about adult T cell lymphoma/leukemia is **wrong**?
- (A) Caused by human T cell leukemia virus type I
 (B) Occurs mainly in Japan, West Africa and the Caribbean
 (C) Tropism for helper-T cells
 (D) Usually associated with t(8;14)
 (E) Adults with this disease frequently have cutaneous lesions and marrow involvement.
39. Which description is **INCORRECT**?
- (A) Multiple myeloma is a neoplasm caused by excessive proliferation of germinal center B cells.
 (B) Follicular lymphoma frequently associates with overexpressed BCL2-IgH fusion protein.
 (C) T-cell acute lymphoblastic leukemia/lymphoma originates from neoplastic growth of precursor T cells of thymic origin.
 (D) Extranodal NK/T cell lymphoma is EBV-associated.
 (E) Reed-Sternberg cells could be seen in Hodgkin lymphoma.
40. Which description about acute lung injury (ALI) is **INCORRECT**?
- a. ALI exhibits hyaline membrane in alveolar walls in the acute stage.
 b. In the organizing stage, type I pneumocytes proliferation is seen.
 c. ALI is characterized by significant hypoxemia caused by cardiac failure.
 d. In most cases of ALI, granulation tissue seen in the alveolar wall and spaces resolves, leaving minimal functional impairment.
- (A) a, b (B) b, c (C) c, d (D) a, d (E) b, d
41. Irreversible enlargement of the airspaces distal to the terminal bronchiole is called:
- (A) Emphysema (B) Atelectasis (C) Emphysema (D) Congestion (E) Bronchogenic cyst
42. Which description about Helicobacter pylori gastritis is **INCORRECT**?
- (A) H. pylori have flagella that allow the bacteria to be motile in viscous mucus.
 (B) H. pylori secrete urease that generates ammonia to neutralize gastric acid.
 (C) CagA-negative strains are more involved in ulcer or cancer development.
 (D) H. pylori show tropism for gastric epithelia without invasion into cells.
 (E) Intraepithelial neutrophils and subepithelial plasma cells are characteristics of H. pylori gastritis.
43. Which description about gastric tumor is **INCORRECT**?
- (A) Gastric adenocarcinoma incidence in Japan is higher than in North America.
 (B) Gastrointestinal stromal tumor is a mesenchymal tumor originating from smooth muscle.
 (C) Fundic gland polyp occurs in the gastric body and fundus as a well-circumscribed lesion.
 (D) Approximately 75% of all gastric polyps are hyperplastic polyps.
 (E) Signet-ring cell morphology is seen in diffuse type of gastric adenocarcinoma.
44. Which description is **INCORRECT**?
- (A) Cysts found in pancreas are mostly neoplastic cysts.
 (B) Inactivated p16 is seen in 95% of pancreatic carcinoma cases.
 (C) Solid-pseudopapillary neoplasm is seen mainly in young women.
 (D) Intraductal papillary mucinous neoplasms arise more frequently in men than in women and they involve the head of the pancreas.
 (E) Cysts in the pancreas, liver and kidney frequently coexist.
45. Long duration of torsion of testis could result in:
- (A) germ cell tumor in testis (B) tuberculosis in testis
 (C) syphilis (D) granulomatous orchitis
 (E) hemorrhagic testicular infarct

46. Which description about breast cancer is **INCORRECT**?
- (A) Mutations in BRCA1 and BRCA2 account for the majority of sporadic breast cancers.
 - (B) BRCA1-associated breast cancers are commonly poorly differentiated.
 - (C) The major risk factors for sporadic breast cancer are related to hormone exposure.
 - (D) The majority of sporadic breast cancers are ER positive.
 - (E) Axillary lymph node metastasis is the most important prognostic factor for invasive carcinoma in the absence of distant metastases.
47. Which description is **INCORRECT**?
- (A) Seborrheic keratosis is benign epidermal hyperplasia frequently seen in middle-aged or older individuals.
 - (B) Skin tag is generally detected as a soft, flesh-colored tumor in middle-aged or older individuals.
 - (C) Palisading at the periphery of tumor cell islands is microscopically seen for basal cell carcinoma in skin.
 - (D) Erythema multiforme is a self-limited disorder caused by a hypersensitivity reaction to certain infections and drugs.
 - (E) Maturation of nevus cells can be seen in melanoma.
48. Which description is **INCORRECT**?
- (A) Both Duchenne muscular dystrophy and Becker muscular dystrophy are X-linked.
 - (B) Rimmed vacuoles are frequently seen in polymyositis.
 - (C) Peri-fascicular atrophy and vasculitis are hallmark pathological findings for dermatomyositis.
 - (D) Muscle fiber type can be highlighted by ATPase stain.
 - (E) Ragged red fibers are associated with mitochondrial disease.
49. Which description is **INCORRECT**?
- (A) Guillain-Barre syndrome is an acute-onset immune-mediated demyelinating neuropathy and is often self-limited.
 - (B) The most common Diabetic neuropathy involves distal sensory and motor nerves.
 - (C) Traumatic neuroma is a mass composed of randomly organized axons and connective tissue in response to injury in peripheral nerves.
 - (D) Uremia neuropathy can be asymptomatic or be associated with diminished deep tendon reflex.
 - (E) Charcot-Marie-Tooth disease is HMSN type I caused by mutation in myelin-associated genes.
50. Which disease is **not** associated with cataract?
- (A) Wilson disease
 - (B) Hypertension
 - (C) Corticosteroid use
 - (D) Radiation exposure
 - (E) Diabetes mellitus