

1. 天使症候群(Angelman Syndrome)是一種罕見遺傳疾病，  
(A)請以此疾病為例解釋：(1)基因銘印(genetic imprinting)； (2) Uniparental disomy (UPD) (6%)  
(B)另外任舉一種天使症候群以外與基因銘印(genetic imprinting)相關的遺傳疾病(2%)
2. 人類乳突病毒(human papillomavirus，縮寫 HPV)已知與某些人類癌症相關，該病毒可以分為高風險型(high risk)與低風險型(lower risk)，  
(A)請舉出高風險型(high risk)與低風險型(lower risk)病毒各 2 型？(4%)  
(B)請說明高風險型(high risk)和低風險型(lower risk)病毒，與輕度鱗狀上皮內病灶(low-grade squamous intraepithelial lesion)及重度鱗狀上皮內病灶(high-grade squamous intraepithelial lesion)的關係？(6%)  
(C)其中高風險型(high risk)與低風險型(lower risk)病毒，何者與人類癌症形成較有關？(2%)  
另外請舉出兩個與人類乳突病毒相關的人類癌症？(4%)  
(D)請說明人類乳突病毒可能的致癌機轉？(8%)
3. 非小細胞肺癌 (non-small cell lung cancer，NSCLC)病人中，約有 40-80%會有哪一個基因的突變，此突變現已成為這些病人標靶治療中針對的主要標靶？(2%)  
另請列舉出至少兩種小細胞肺癌以外的肺癌病理組織型態？(4%)
4. 請列舉出四種甲狀腺癌的病理組織型態？(8%) 其中哪一種發生率最高？(2%) 哪一種惡性度最高？(2%)
5. What are the morphologic features (6%) and potential outcomes (4%) of acute inflammation and chronic inflammation?
6. What are three major types of shock (6%) and describe the pathogenesis of any one of the type of shock. (4%)
7. What are the four major types of hypersensitivity reactions (4%) and their immune mechanisms? (6%)
8. What are the characteristics of benign and malignant tumors? (10%)
9. Name one example of oncogene and its mechanism (5%) and one example of tumor suppressor gene and its mechanism. (5%)