

※ 注意：全部題目均請作答於試卷內之「非選擇題作答區」，請標明題號依序作答。

一、選擇題 I (18%) 請於試卷內之「非選擇題作答區」標明題號依序作答。

1. 欲增加酸性藥物的穩定血中濃度 (steady state concentration)，可採用何種方式？(1.5%)
  - (A) 將每日固定的口服劑量分成多次給予
  - (B) 增加單位時間內的投藥劑量
  - (C) 與NaHCO<sub>3</sub>一起合用
  - (D) 將肌肉注射改成皮下注射
2. 下列何種因素會影響藥物的腎絲球過濾率 (Glomerular filtration)？(1.5%)
  - (A) 脂溶性
  - (B) 帶電性
  - (C) 尿液酸鹼值
  - (D) 與白蛋白結合比率
3. 下列敘述何者正確？(1.5%)
  - (A) allosteric agonist 對 spare receptor 有較佳的訊息傳遞能力
  - (B) spare receptor 對拮抗劑的結合大於致活劑的結合
  - (C) spare receptor 與致活劑結合後較易產生 desensitization
  - (D) 在有 spare receptor 存在時，致活劑的 potency 較高
4. Tripelennamine 具有下列何種作用？(1.5%)
  - (A) 抑制胃酸分泌
  - (B) 產生疼痛
  - (C) 抑制紅腫反應
  - (D) 失眠
5. 用於治療化療所引發之嘔吐的藥物 ondansetron，主要作用在中樞之何種受體？(1.5%)
  - (A) H<sub>3</sub> 受體
  - (B) 5HT<sub>3</sub> 受體
  - (C) EP<sub>3</sub> 受體
  - (D) Dopamin 受體
6. 下列有關 ACE inhibitor 及 Losartan 的作用何者有誤？(1.5%)
  - (A) 均用於治療心衰竭
  - (B) 均會產生乾咳的副作用
  - (C) 均可口服使用
  - (D) 均會抑制 aldosterone 釋放
7. 下列嗎啡的藥理作用均有很高的 tolerance 作用，何者例外？(1.5%)
  - (A) 止痛
  - (B) 便秘
  - (C) 噁心、嘔吐
  - (D) 呼吸抑制

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8. 下列何者不是 muscarinic antagonists 的臨床治療用途 (1.5%)
- (A) 有機磷中毒
  - (B) 青光眼
  - (C) 尿失禁
  - (D) 暈車暈船
9. 下列何種局部麻醉藥容易產生過敏反應? (1.5%)
- (A) Lidocaine
  - (B) Procaine
  - (C) Mepivacaine
  - (D) Etidocaine
10. 何項靜脈注射式麻醉藥具有止痛作用? (1.5%)
- (A) Thiopental
  - (B) Ketamine
  - (C) Midazolam
  - (D) Etomidate
11. 下列有關 aspirin 之敘述何者為誤? (1.5%)
- (A) 抑制 COX-1 之作用大於 COX-2
  - (B) 由於作用不可逆，低劑量可以預防中風及心肌梗塞之產生
  - (C) 氣喘患者盡量避免使用
  - (D) 吸收入胃黏膜，即可以迅速進入血流
12. 下列何種受體的訊息傳遞是經 Gi 蛋白，抑制 cAMP 合成? (1.5%)
- (A) 5HT<sub>1</sub>
  - (B) FP
  - (C) CysLTR
  - (D) H<sub>2</sub>

二、選擇題 II (20%) 請於試卷內之「非選擇題作答區」標明題號依序作答。

1. All of the following statements about the clinical uses of the aminoglycosides are accurate except (2%)
- (A) Effective in the treatment of infections caused by anaerobes such as *Bacteroides fragilis*
  - (B) Gentamycin is used with ampicillin for synergistic effects in the treatment of enterococcal endocarditis
  - (C) Often used with cephalosporins in the empiric treatment of life-threatening bacterial infections
  - (D) Aminoglycosides are not absorbed after oral administration
  - (E) Nephrotoxicity and ototoxicity are common clinical problems
2. Which of the following best describes the mechanism of antibacterial action of Clindamycin? (2%)
- (A) Antagonizes beta-lactamase

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- (B) Binds to a component of the 50S ribosomal subunit and inhibits translocation  
(C) Inhibits DNA-dependent RNA polymerase  
(D) Interferes the binding of aminoacyl-tRNA to bacterial ribosomes  
(E) Inhibits the synthesis of peptidoglycan
3. Which drug is effective in the treatment of nocardiosis and, in combination with pyrimethamine, is prophylactic against *Pneumocystis jiroveci* infections in AIDS patients? (2%)  
(A) Sulfadiazine  
(B) Erythromycin  
(C) Trimethoprim  
(D) Amoxicillin  
(E) Levofloxacin
4. A 24-year-old woman comes to a clinic with complaints of dry cough, headache, fever, and malaise, which have lasted 3 days. She takes loratadine for allergies and supplementary iron tablets, and she drinks at least 4 cups of caffeinated coffee per day. If a patient were to be treated with erythromycin, she should (2%)  
(A) Avoid exposure to sunlight  
(B) Avoid taking supplementary iron tablets  
(C) Decrease her intake of caffeinated beverages  
(D) Have her plasma urea nitrogen or creatinine checked before treatment  
(E) Temporarily stop taking loratadine
5. A 30-year-old pregnant female has cellulitis caused by MRSA. Which of the following antibiotics would be the most appropriate option for outpatient therapy? (2%)  
(A) Doxycycline  
(B) Amoxicillin  
(C) Clindamycin  
(D) Quinupristin/dalfopristin  
(E) Tigecycline
6. Which statement about ciprofloxacin is accurate? (2%)  
(A) Antagonism occurs if used with dihydrofolate reductase inhibitors  
(B) Tendinitis may occur during treatment  
(C) Organisms that commonly cause ear infections are highly resistant  
(D) Most "first-time" urinary tract infections are resistant to ciprofloxacin  
(E) Ciprofloxacin is active against MRSA strains of staphylococci
7. Glucocorticoids have proved useful in the treatment of which of the following medical conditions? (2%)  
(A) Essential hypertension  
(B) Chemotherapy-induced vomiting

- (C) Type II diabetes  
(D) Parkinson's disease  
(E) Hyperprolactinemia
8. A 48-year-old male patient has Cushing's syndrome due to an adrenal tumor. Which of the following drugs would be expected to reduce the signs and symptoms of this disease? (2%)  
(A) Betamethasone  
(B) Triamcinolone  
(C) Fludrocortisone  
(D) Cortisol  
(E) Ketoconazole
9. A patient presents with pain and stiffness in his wrists and knees. The stiffness is worse first thing in the morning. A blood test confirms rheumatoid arthritis. Which one of the following is the most potent anti-inflammatory steroid for the patient? (2%)  
(A) Cortisol  
(B) Triamcinolone  
(C) Fludrocortisone  
(D) Dexamethasone  
(E) Prednisone
10. A 62-year-old male has COPD with moderate airway obstruction. Despite using salmeterol twice daily as prescribed, he reports continued symptoms of shortness of breath with mild exertion. Which one of the following agents would be an appropriate addition to his current therapy? (2%)  
(A) Cromolyn  
(B) Systemic corticosteroids  
(C) Theophylline  
(D) Tiotropium  
(E) Albuterol

三、簡答題 (22%)

1. 試述 nitroglycerin 治療狹心痛之機轉及產生快速耐藥性之原因? (2%)
2. 為何新生兒由肛門給藥時，藥效反應會遠大於口服給藥? (4%)
3. ACE inhibitor 與高鉀的食物併用時，會產生不良反應，機轉為何? (4%)
4. 請簡述 acetaminophen 造成肝毒性的原因? (4%)
5. 簡述 Thalidomide 作用機轉 (4%)
6. Warfarin 合併有 fluvastatin 使用時，會造成不良反應，其機轉為何? (4%)

四、請簡要敘述以下藥物作用的藥理機轉 (20%)

1. Digoxin 治療心衰竭的作用機制 (4%)
2. Loop diuretics 利尿的作用機制 (4%)
3. 請試舉一例口服降血糖用藥(學名)，並說明其降低血糖的作用機制 (4%)
4. 請試舉一例降低血液膽固醇用藥(學名)，並說明其治療高膽固醇血症的作用機轉 (4%)
5. 試說明 Timolol 用以治療青光眼的藥物作用機轉 (4%)

五、試述下列藥物之作用機轉與臨床用途 (20%)

1. Oseltamivir (Tamiflu) (2%)
2. Trastuzumab (2%)
3. Caspofungin (2%)
4. Raloxifene (2%)
5. Ritonavir (2%)
6. Oxaliplatin (2%)
7. Terbinafine (2%)
8. Imatinib (2%)
9. Raltegravir (2%)
10. Ipilimumab (2%)

試題隨卷繳回