

國立成功大學
111學年度碩士班招生考試試題

編 號： 276

系 所： 臨床藥學與藥物科技研究所

科 目： 調劑學

日 期： 0220

節 次： 第 1 節

備 註： 不可使用計算機

※ 考生請注意：本試題不可使用計算機。請於答案卷(卡)作答，於本試題紙上作答者，不予計分。

I. Select one optimal answer. (30 points)

- 1. About the prevent and treatment of infective endocarditis, which of followings is INCORRECT?**
 - (A) The most important approach in the treatment of infective endocarditis is isolation of the infecting pathogen and determination of antimicrobial susceptibilities.
 - (B) Antimicrobial should choose that high-dose, parenteral, and bacteriostatic antibiotics for an extended period.
 - (C) In most cases, vancomycin should be included in the empirical regimen to cover the most common causes of infective endocarditis, *staphylococci*, *streptococci*, and *enterococci*.
 - (D) Antimicrobial prophylaxis is used as an attempt to prevent infective endocarditis for patients who are at the highest risk.
 - (E) A single 2-g dose of amoxicillin is prophylaxis recommended for adult patients at risk, given 30 to 60 minutes before undergoing procedures associated with bacteremia.

- 2. Which of the following medication classes is utilized in the treatment of an acute exacerbation of COPD?**
 - (A) Short-acting beta agonists
 - (B) Long-acting beta agonists
 - (C) Inhaled corticosteroids
 - (D) Pulse therapy dose of corticosteroids
 - (E) Long-acting muscarinic antagonists

- 3. Which prescription medication approved to treat Alzheimer's disease is also approved to treat dementia associated with Parkinson disease?**
 - (A) Donepezil
 - (B) Galantamine
 - (C) Memantine
 - (D) Rivastigmine
 - (E) Pramipexole

- 4. Which one of the following drug or drug classes is not used in the acute treatment of migraine headaches?**
 - (A) Ergot Alkaloids
 - (B) Antidepressants
 - (C) NSAIDs

- (D) Serotonin Agonists
(E) Triptans
5. Which medication may induce infertility in male patients with inflammatory bowel disease?
(A) Mesalamine
(B) Sulfasalazine
(C) Infliximab
(D) Certolizumab
(E) Golimumab
6. About the expiration date and beyond-use date (BUD), which of the followings is INCORRECT?
(A) The BUD is the date put on dispensing container by the pharmacists.
(B) The expiration date is the date put on the label of a drug product by the manufacturer.
(C) The BUD shall not be later than the expiration date on the label of the products.
(D) When determine the BUD, pharmacists should follow the manufactures' recommendations on the product labeling.
(E) If the expiration date is stated only in terms of the month and the year, it means that this product should be used before the first day of the stated month.
7. Which of the following compounded sterile preparation (CSP) should be categorized as high-risk level based on the likelihood of contamination according the USP Chapter <797>?
(A) Ceftriaxone reconstitution solution.
(B) Compounding total parenteral nutrition fluid.
(C) Multivitamin additives within normal saline solution.
(D) Autologous serum eye drops.
(E) Compounding cytotoxic drug solution.
8. When converting from one opioid to another using equianalgesic dosing tables, the target drug dose should be decreased by _____ to account for lack of cross-tolerance between opioids.
(A) 0%
(B) 10%
(C) 25%
(D) 75%
(E) 90%
9. Which of the following scenarios is considered a pharmacokinetic drug interaction, instead of a pharmacodynamic drug interaction?

- (A) Fluoxetine taken with tamoxifen decreases active metabolite levels
- (B) Fluoxetine taken with phenelzine leads to serotonin syndrome
- (C) Fluoxetine taken with ibuprofen increases risk of bleeding
- (D) Fluoxetine taken with hydrochlorothiazide increases risk of hyponatremia
- (E) Fluoxetine taken with linezolid increases risk of serotonin syndrome.

10. Which of the following descriptions about suspensions is INCORRECT?

- (A) Suspensions are liquid preparations that consist of solid particles dispersed throughout a liquid phase in which the particles are not soluble.
- (B) This preparation is not suitable for injection.
- (C) A maximum 14-day beyond-use date is recommended by USP Chapter <795> for water-containing liquid preparations made with solid ingredients when the stability is unknown.
- (D) All suspensions require a "SHAKE WELL" label on the container.
- (E) If antimicrobial ingredients are part of the prescribed formulation, extra preservatives are not needed.

11. A woman diagnosed with gestational diabetes has failed first-line treatment with dietary and lifestyle modifications. Which of the following is most appropriate to use in a woman who refuses insulin?

- (A) Sitagliptin
- (B) Pioglitazone
- (C) Glyburide
- (D) Metformin
- (E) Semaglutide

12. Which of the following drugs is the choice for patient with NG (nasogastric) tube?

- (A) Pradaxa®
- (B) Adalat® OROS
- (C) Madopar® HBS
- (D) FOSAMAX PLUS®
- (E) Nexium®

13. Water is the most commonly used and most desirable solvent-vehicle for liquid drug products and preparations for all use. Which of the followings is the suitable solvent for parental injection?

- (A) Purified Water USP
- (B) Sterile Purified Water USP
- (C) Sterile Water for Inhalation USP

- (D) Water for Injection USP
- (E) Sterile Water for Irrigation USP

14. How many milliequivalents of K^+ are contained in 10%, 1 tablespoonful potassium chloride syrup? (MW of K=39, Cl=35.5)

- (A) 6.7 mEq
- (B) 20.1 mEq
- (C) 0.67 mEq
- (D) 2.01 mEq
- (E) 10.52 mEq

15. Which statement regarding hypertension and its treatment is INCORRECT?

- (A) The overall goal of treating hypertension is to reduce associated morbidity and mortality from CV events.
- (B) The desired blood pressure goal for most patients is <130/80 mmHg.
- (C) An ACEi or ARB was considered as a preferred antihypertensive agent for patients with diabetes given its evidence in reducing risk of progressive kidney dysfunction and risk of cardiovascular events.
- (D) An ACE inhibitor/ARB is recommended as first-line antihypertensive agent for pregnant women.
- (E) α 1-blockers should generally be avoided or used with caution in older patients because they are frequently associated with dizziness and orthostatic hypotension.

II. For each drug in column A, match most relevant description. (10 points)

Column A

A1. Dapagliflozin	A2. Ivabradine	A3. Dupilumab
A4. Semaglutide	A5. Dacomitinib	A6. Nivolumab
A7. Blinatumomab	A8. Crizotinib	A9. Imatinib
A10. Doxorubicin and cyclophosphamide		

1. Tyrosin kinase receptor inhibitor which inhibits ALK, and ROS1 gene
2. Use is contraindicated in hemodialysis patients
3. As adjuvant therapy for early-stage and locally advanced breast cancer
4. Treatment for Philadelphia chromosome-positive chronic myeloid leukemia
5. May occur life-threatening or fata cytokine release syndrome

6. Administer by Subcutaneous injection into the abdomen, thigh, or upper arm
7. First-line therapy for metastatic non-small cell lung cancer, which exon 21 L858R substitution mutation-positive
8. Combination use with ipilimumab for metastatic colorectal cancer
9. To reduce the risk of hospitalization in adult patients with stable, symptomatic (NYHA class II to III) heart failure
10. Human monoclonal IgG4 antibody that inhibits interleukin-4 (IL-4) and interleukin-13

III. Answer the questions (60 points)

1. The most commonly available criteria used worldwide to evaluate adverse drug reaction are the Naranjo algorithm. Write the 10 items in the Naranjo score. (10 points)
2. There are numerous medications that should not be crushed. These medications also should not be chewed, either, usually due to their specific formulations and their pharmacokinetic properties. Describe what kinds of medications should not be crushed, and give at least one drug as example. (15 points)
3. This 78 y/o male was nursing home resident with a history of left tongue cancer post tumor wide excision, ESRD s/p HD QW135 for years, DM, HTN, hyperlipidemia. This time, he visited emergency room due to general weakness, and short of breath. The following lab data are found: Blood pressure: 150/90 mmHg ; LDL: 70 mg/dl ; TL: 150 mg/dL ; HbA1c: 6.8%; Calcium 12.5 mg/dl ; P=1.9 mg/dl ; PTHi: 7.2 (pg/mL). Medication history: Amlodipine (Norvasc 5mg/tab): 1# QD; Insulin aspart/Insulin aspart protamine (NovoMIX 30 FlexPen 30:70, 300U/3mL/pen): 12Units TIDAC; Pitavastatin (Zulitor 4mg/tab): 1# QD
Identify the drug-related problem and give the recommendation using SOAP format. (20 points)
4. Give the advice for the patients who ask for COVID-19 vaccination if they receiving following medications. (15 points)
(1) Methotrexate (2) Baricitinib (3) Rituximab (4) Secukinumab (5) Azathioprine