

ACCP Clinical Pharmacy Challenge Sample Questions

Trivia/Lightning Segment

(Please note during the Online Rounds each question will appear sequentially and must be answered before proceeding to the next item. During the online rounds of the competition you may not skip an item or return to the item later.)

1. True or False. Red-man syndrome is a potential side-effect of rapidly infused gentamicin.
2. Which of the following drugs does NOT require routine monitoring for efficacy?
 - a. Arbatroban
 - b. Heparin
 - c. Fondaparinux
 - d. Warfarin
3. Which of the following medications would be expected to cause the largest increase in the INR in a patient receiving warfarin?
 - a. Drugs inhibiting CYP 1A2
 - b. Drugs inhibiting CYP 2C9
 - c. Drugs inhibiting CYP 2C19
 - d. Drugs inhibiting CYP 3A4
4. True or False: The power of a statistical test is the probability that the test will reject a false null hypothesis.
5. True or False. Patients initiated on carbamazepine therapy frequently require a decrease in dosage in the initial 3 months of therapy due to the auto-induction of carbamazepine metabolism.
6. Which of the following statements characterizes the mechanism of action of low molecular weight heparins (LMWH)?
 - a. Indirect thrombin inhibitor
 - b. Direct thrombin inhibitor
 - c. Vitamin K antagonist
 - d. CYP 2C9 inhibitor
7. True or False: Dalteparin 14,000 IU/daily is safe for use in a patient with a heparin induced thrombocytopenia (HIT)?

Answer: False
8. The dose limiting toxicity of doxorubicin is
 - a. Neurologic Toxicity
 - b. Renal Toxicity
 - c. Hepatotoxicity
 - d. Cardiotoxicity
9. Pregabalin (Lyrica) is correctly categorized as which of the following?
 - a. Schedule II Controlled Substance
 - b. Schedule III Controlled Substance
 - c. Schedule V Controlled Substance
 - d. Non-Controlled Substance

10. The Board of Pharmacy Specialties (BPS) offers a Specialty Certification Examination in which of the following areas?
 - a. Critical Care
 - b. Oncology
 - c. Geriatrics
 - d. Pediatrics

11. True or False. The recommended Vitamin D intake for a 65 y/o female with a T-score of -2.8 at the hip is 400 IU daily
False: Answer 800-1000 IU daily

12. Which of the following has been linked with an increased rate of serious rash associated with lamotrigine use?
 - a. Use in pediatric patients
 - b. Coadministration of phenytoin
 - c. Use in males
 - d. Use in patients with Bipolar Disorder

13. The tetracyclines have activity against which organism?
 - a. *Mycoplasma pneumoniae*
 - b. *Bacteroides fragilis*
 - c. *Escherichia coli*
 - d. *Pseudomonas aeruginosa*

14. Drug X, a novel antihypertensive, will be evaluated in 150 study subjects to assess its efficacy and side effect profile. This is an example of which type of clinical trial?
 - a. Pre-clinical
 - b. Phase I
 - c. Phase II
 - d. Phase III

15. Osteonecrosis of the jaw has been associated with which of the following drug classes?
 - a. Thioxanthines
 - b. Biguanides
 - c. Bisphosphonates
 - d. Monoamine Oxidase Inhibitors

Clinical Case Segment

(Please note during the Online Rounds of the competition you will be able to view the case vignette and any laboratory information during the entire Clinical Case segment. Each question in this segment will appear sequentially and must be answered before proceeding to the next item. You may not skip an item or return to it at a later time)

Case Vignette:

IPF is a 2-and-a-half-year old African American female who attends day care five days a week. One week ago she experienced a low-grade fever and cold symptoms, which subsided upon treatment with acetaminophen used PRN. Her mother brings her to pediatrics clinic today due to concern over increasing irritability, loss of appetite and fever. She has also noticed that IPF is tugging on her right earlobe. Otoscopic examination shows right tympanic membrane redness, bulging, and non-mobility with drainage. The left tympanic membrane is red but otherwise unremarkable. The rest of her physical exam is normal. She lives at home with her parents and one older sibling. There is no smoking in the household and no pets. She is up-to-date on her childhood required immunizations and has no known allergies.

Question 1- 100 points

The most likely bacterial cause of IPF's otitis media is?

- a. Hemophilus influenza
- b. Streptococcus pneumonia
- c. Moraxella catarrhalis
- d. Streptococcus pyogenes

Question 2 – 200 points

Which antibiotic product would be considered appropriate empiric therapy for the treatment of IPF's infection if we assume that there is not a high incidence of bacteria that produce beta-lactamase in the area?

- a. Amoxicillin
- b. Amoxicillin plus clavulanate
- c. Trimethoprim/sulfamethoxazole
- d. Azithromycin

Question 3 – 300 points

IPF has sickle cell disease (HbSS) diagnosed at birth. In addition to the required childhood vaccines, what additional vaccine and oral medication should she receive to significantly reduce her morbidity and mortality?

- a. Meningococcal conjugate vaccine and folic acid
- b. Meningococcal polysaccharide vaccine and penicillin
- c. Pneumococcal polysaccharide vaccine and penicillin
- d. Pneumococcal conjugate vaccine and folic acid

Jeopardy Segment

(Please note during the Online Rounds of the competition you will be presented with an onscreen grid displaying the 5 item content categories, each containing three items of differing point value. In this segment only, you may choose to answer the items in any order. However, you must enter an answer for the item selected before proceeding to another item. You may not skip a question or return to it at a later time.)

Anticoagulation – 100 points

JT is a 62 year old male with a history of recurrent pulmonary embolism (PE), hypertension, osteoarthritis and benign prostatic hyperplasia. His current medications include warfarin 5 mg daily, amlodipine 5 mg daily, naproxen 500 mg BID, lisinopril 10 mg daily, finasteride 5 mg daily, and acetaminophen 500 mg prn. Which of the medications he is currently taking increases the risk of bleeding with warfarin?

- a. Acetaminophen
- b. Amlodipine
- c. Finasteride
- d. Naproxen

Anticoagulation – 200 points

JC is a 36 year old pregnant female with an active DVT. She takes no other medications and has no significant past medical history. Which of the following agents would be the best choice for the initial treatment of her DVT?

- a. Aspirin
- b. Clopidogrel
- c. Enoxaparin
- d. Warfarin

Anticoagulation – 300 points

ML is a 62 year old male who was recently diagnosed with heparin induced thrombocytopenia (HIT) while receiving warfarin therapy. His estimated creatinine clearance is 15 ml/min. Which of the following drugs can be used safely for this patient?

- a. Argatroban
- b. Lepirudin
- c. Dalteparin
- d. Fondaparinux

Biostatistics - 100 points

Which of the following clinical trial designs involves randomization?

- a. Cross-sectional
- b. Case control
- c. Cohort
- d. Cross-over

Biostatistics - 200 points

A group of investigators wishes to measure the degree of patient satisfaction in the management of post-operative pain in patients who received patient controlled analgesia (PCA) and those who received standard care. Patients are asked to indicate his/her agreement with pain control at discharge using a Likert scale (1=strongly disagree through 5 = strongly agree). These data should be compared using which one of the following statistical tests?

- a. Two sample t test
- b. Chi square test
- c. Wilcoxon signed rank test
- d. Mann-Whitney U test

Biostatistics – 300 points

Researchers determined that the sensitivity for predicting cardiac complications within 24 hours was 97% and specificity was 92%. What is the expected false-negative rate?

- a. 10%
- b. 8%
- c. 5%
- d. 3%

Critical Care – 100 points

A patient in cardiogenic shock typically exhibits which of the following hemodynamic characteristics?

- a. Increased Cardiac Output (CO); Increased Systemic Vascular Resistance (SVR)
- b. Decreased CO; Increased SVR
- c. Decreased CO; Decreased SVR
- d. Increased CO; Decreased SVR

Critical Care – 200 points

The initial therapy for a patient with “Cool and Dry” heart failure should be:

- a. Dobutamine as an inotropic agent
- b. A fluid bolus to increase preload
- c. An intravenous ACE inhibitor to decrease afterload
- d. An intravenous loop diuretic to decrease preload

Critical Care – 300 points

You are responding as the pharmacy member of the code team to a patient who is unresponsive on the medical floor. Asystole is confirmed in two leads. According to the ACLS guidelines, the first-line treatment for this condition is to administer:

- a. One shock of 180 J
- b. Epinephrine 1mg IV
- c. Vasopressin 80 U IV
- d. Lidocaine 1mg/kg/min

Endocrinology - 100 points

Which of the following is a microvascular complication of diabetes?

- a. Coronary Artery Disease
- b. Retinopathy
- c. Peripheral Artery Disease
- d. Stroke

Endocrinology - 200 points

PD is a 49 year old female with hypothyroidism who has been treated with levothyroxine and euthyroid for the past 4 years. Her most recent TSH was elevated at 7.10 (0.3 – 5.0 mIU/L). Which one of the following medications could have contributed to the increase in her TSH?

- a. Ferrous sulfate
- b. Omeprazole
- c. Tetracycline
- d. Warfarin

Endocrinology - 300 points

RS is a 75 y/o woman with a history of HTN and type 2 DM. Recent laboratory values include HgbA1c 7.0%, FBG 109, Scr 1.7 mg/dL and estimated creatinine clearance of 30 ml/min. A recent DXA scan showed a T-score of -2.8 in the lumbar spine and – 2.1 in the left hip. Which of the following therapies is an appropriate choice for RS?

- a. Alendronate 70 mg once weekly
- b. Calcitonin 200 IU 1 spray daily in alternating nostrils
- c. Raloxifene 60mg daily
- d. Conjugated Estrogens 0.625mg/daily

Hematology/Oncology - 100 points

Which of the following agents should not be administered intrathecally (IT)?

- a. Vincristine
- b. Methotrexate
- c. Cytarabine
- d. Thiotepa

Hematology/Oncology - 200 points

When dosing the Calvert Formula, what serum laboratory parameter is needed to perform the final calculation?

- a. Calcium
- b. Albumin
- c. Creatinine
- d. Total bilirubin

Hematology/Oncology - 300 points

When treating a patient with fludarabine therapy, it is important to:

- a. use PCP prophylaxis
- b. use DVT prophylaxis
- c. use cefepine prophylaxis
- d. use allopurinol prophylaxis