Licensure Model Exam for Pharmacy degree graduating candidates (Areas: including General Pharmacy, Pharmaceutical Manufacturing/Compounding, and Dispensing)

I. Provide the letter of your best choice for the following questions in BOLD letters.

1. Most medicines are made up of the active pharmaceutical ingredient (API) and various excipients. Which one of the following is NOT a possible justification for formulating medicines in this way?
    A. The excipients stabilize the API so that it does not degrade before administration
    B. The excipients reduce the possibility of the API irritating the body
    C. The API and the excipients each exert a pharmacological effect
    D. The API is too potent to use undiluted
2. Belonging to a profession brings a range of benefits but it also attracts a range of obligations. Which of the following is not an obligation associated with being a professional?
    A. To act in the best interests of patients.
    B. To apply a high degree of skill and knowledge to their work.
    C. To be objective and non-judgemental.
    D. To use specialized information and operate under a monopoly.
3. Which of the following auxiliary labels requires before dispensing an Oral Suspension of Posaconazole?
    A. Take on an empty stomach.
    B. May cause drowsiness.
    C. For ear use only.
    D. Shake well before use.
4. A pharmacist receives a new prescription for amoxicillin/clavulanate potassium 500 mg. The prescription reads 1 tab po bid for 10 days. A technician in the pharmacy fills and processes the prescription using 250 mg of amoxicillin/clavulanate potassium instead, since the pharmacy is out of stock of 500 mg amoxicillin/clavulanate potassium tablets. The pharmacist who is doing the final check of the prescription should:
    A. Fill the prescription as it is.
    B. Call the physician and get approval regarding this switch.
    C. Not fill the prescription.
    D. Fill the prescription but counsel and inform the patient about this switch.
5. Which of these is not a reason why a knowledge of behavioral and social sciences is important to pharmacists?

A. It can help us to understand patients better
B. It can improve adherence to medication
C. It can help to build a concordant relationship with patients
D. Knowing what people are thinking is more important than knowledge of medicines

6. What will be the primarily concern regarding a patient when you dispense a lactose based formulation?
   A. Patient's hypersensitivity for lactose
   B. Lactose stability in the formulation
   C. Possible occurrence of lactic acidosis
   D. Patient acceptance of the formulation
7. A hood is often used during the drug compounding process. Which of the following describes the main function of a compounding hood?
   A. Maintains a specific air temperature
   B. Prevent a pharmacist from adding too little or too much of a material
   C. Prevents particles from entering or leaving the area
   D. Sterilizes all materials in the area
8. You receive a prescription in your pharmacy with the following details for extemporaneous compounding:

   Patient: MrAG, Wereda 8, Bole sub city, AA
   Age: 35
   Weight: 65Kg
   Prescription: Potassium Bromide 30mg/kg/day (dry powder) for 5 days
   Directions: xxx
   Mitte: xxx

   Answer questions 9 to 11 based on the above information.
9. How much Potassium Bromide powder you should dispense to the patient?
   A. About 1 g
   B. 2.31 g
   C. 390 mg
   D. 9750 g
10. How do you advice your patient in administration of the preparation?
   A. To take the dry powder as it is (as KBr is susceptible for hydrolysis)
   B. To mix it with dry food before administration
   C. To take plenty of water before and after taking the powder
   D. To mix it with water before administration
11. The three most major activities of full-service pharmaceutical companies include: _____?
   A. Research and Development, Manufacturing and Operations, and Marketing and Sales.
   B. Research and Development, Business Development, and Marketing and Sales

C. Regulatory, Manufacturing and Operations, and Business Development
D. Marketing and Sales, Corporate and Administrative, and Research and Development

12. True or false: API manufacturing and drug product manufacturing are housed at the same manufacturing facility.
    A. True
    B. False
13. Manufacturing operations ends with product packaging. Which of the following is NOT included in the purposes that packaging serves?
    A. Protecting the product
    B. Identifying the product in the eyes of customers
    C. Assuring the product maintains efficacy during its shelf life.
    D. Tracking the product
14. Sunscreens should generally not be used in children <6 months of age because
    A. Infants produce too much sweat, which can dilute the sunscreen.
    B. The metabolic and excretory systems of infants are not fully developed.
    C. Overexposure to the sun can interfere with vitamin D production.
    D. Infants have a lot of dermal melanin, which causes them to burn more easily.
15. How many milliliters of gentamicin injection (40 mg/mL) would you need to give a 7 mg/kg of body weight dose via an intravenous infusion to a 200-lb adult patient?
    A. 1.6 mL
    B. 8.0 mL
    C. 15.9 mL
    D. 32.0 mL
    E. 35.0 mL
16. How many grams of hydrocortisone and how many grams of Vaseline are required to make 120 g of 3% hydrocortisone ointment?
    A. 3.6 g hydrocortisone, 120.0 g Vaseline
    B. 3.0 g hydrocortisone, 97.0 g Vaseline
    C. 3.7 g hydrocortisone, 120.0 g Vaseline
    D. 3.6 g hydrocortisone, 116.4 g Vaseline
17. A prescription calls for 4 mg of atropine on a balance where 180 mg is the least weighable quantity with the precision desired. Which of the following choices will provide the 4 mg correctly, using lactose as the diluent?
    A. weigh 180 mg drug, dilute with 8100 mg of lactose, and weigh 180 mg of mixture
    B. weigh 100 mg drug, dilute with 2400 mg of lactose, and weigh 100 mg of mixture

C. weigh 180 mg drug, dilute with 8820 mg of lactose, and weigh 200 mg of mixture
D. weigh 180 mg drug, dilute with 4320 mg of lactose, and weigh 100 mg of mixture

Answer questions 18and19 based on the following prescriptions (Rx):

Rx I: tab ii stat; i q4h prn pain

Rx II: cap i w/gl H_2O qd a.m. for CHD

18. How do you interpret “Rx I” for your patient?
    A. Take 2 tablets to start, then 1 tablet every 4 hours as needed for pain.
    B. Take 2 tablets to start, then 1 tablet every 4 hours for your pain.
    C. Start with the second tablet, then 1 tablet every 4 hours as needed for pain.
    D. Start with the second tablet, then 1 tablet every 4 hours for your pain.
19. How do you interpret “Rx II” for your patient?
    A. Dissolve 1 capsule in a glass of water and take every morning for congestive heart disease.
    B. Take 1 capsule with a glass of water every eight hour for congestive heart disease.
    C. Take 1 capsule dissolved in a glass of water every night for congestive heart disease.
    D. Take 1 capsule with a glass of water every morning for congestive heart disease.
20. What is best required from a pharmaceutical excipient?
    A. It has its own pharmacological effect
    B. It does not irritate, and does not cause allergy
    C. It entirely influences the effect of the drug
    D. Compatibility with the active agent
21. Which of the following investigations are performed during preformulation investigations of pharmaceuticals?
    A. Solubility investigations
    B. Melting point investigations
    C. Stability investigations
    D. Relative harmlessness investigations
22. Which of the following statements relating to the requirements of GMP are correct?
    A. Requirements are listed for the necessary fields of carrying out all work processes safely
    B. Guidelines are listed for avoiding changes and cross-contamination
    C. Requirements are listed for personal and production hygiene

D. Requirements are listed for the control and documentation of production and production related operations

23. Which of the following statements relating to industrial pharmaceutical production are correct?
    A. Intermittent operations are preferred in pharmaceutical production
    B. In industrial pharmaceutical production, the quantity of raw materials is always equal to the quantity of products
    C. In continuous operations, the state functions remain constant
    D. Production procedures can be intermittent, continuous or both
24. Which of the following statements are true for solutions for oral use?
    A. There is an opportunity for immediate absorption of the active agent
    B. Perfect protection can be provided against micro-organisms
    C. Easier administration for children is possible
    D. Dosing accuracy is high
25. A patient comes to your pharmacy counter and complains about a frequent irritation from a suppository he has been taking. You noticed that the suppository the patient was taking is based on a TBO suppository base. What will be the most probable cause for the irritation?
    A. Because of osmotic withdrawal of rectal mucosal fluid due to the suppository base
    B. Because the patient forgets to deep the suppository in clean water before insertion
    C. Because of crystallization of the drug on the suppository surface
    D. Because the suppository melts and do not mix in the rectal fluid
26. Which of the following can be uses of HEPA filters in a pharmaceutical industry?
    A. The elimination of filaments from large volumes of parenteral solutions
    B. The elimination of pyrogens
    C. The filtration of solutions of products which cannot be sterilized by heat
    D. Purification of the air of aseptic workplaces
27. Which of the following are aims of the use of lubricants in the manufacturing of tablets?
    A. To improve disintegration of the tablet
    B. To decrease the friction arising between tablet and the die wall
    C. To improve flowability of powders during compression
    D. To exert their best effect when the compressed material emerges from the dies

EXAMINATION QUESTIONS on DSM

Multiple Choice Questions

1. Two Pharmacist working a referral hospitals was arguing about expiry dates. They did not agree on the Expiry dates of drugs.
   What is the most appropriate definition of an expiration date of medication?

   A. The date on which the drug was manufactured
   B. The date that one may not use the drug again
   C. The period when the manufacture can no longer guarantee the quality, safety and potency of a drug.
   D. The date before which drugs become ineffective.
2. In the warehouse of drugs, inventory management is done with the recently expire drugs should be distrusted to the wards first.
   What is the most appropriate methods of management the store follows?

   A. FIFO
   B. FEFO
   C. LEFO
   D. FILO
3. Internal drug return is the:
   A. Internal return of drugs to the patient
   B. Internal return of drugs to another pharmacy
   C. Return of drugs to the central store in case of expiration, damage or spoiled items
   D. Return of surplus items only.
4. The five “right objectives” of purchasing are:
   A. Quality, Quantity, Price, Time, Place

   B. Cost, Service, Specs, Time, Quantity

   C. Place, Time, Price, Ethics, Contract

   D. Agent, Supplier, Contract, Price, Quantity

5. The term supply management is broader than the purchasing function because it::
    A. includes marketing
    B. includes operations/production
    C. includes managing relationships with suppliers
    D. includes negotiating enforceable contracts
6. Supply management's impact on the bottom line includes the ability to increase sales by:
    A. reducing the development time of new products by using cross functional teams including suppliers
    B. obtaining the lowest possible prices
    C. finding suppliers with the fastest delivery times
    D. Obtaining the highest possible prices
7. "Lean Thinking" can help reduce total cost of ownership (TCO), this means the supply team in the entire "chain" must work to:
    A. lower conversion cost
    B. reduce cycle time cost
    C. reduce risk cost
    D. reduce non-value costs
8. The major reason supply management can greatly improve a firm's return on investment (ROI) is:
    A. The reduction of post ownership costs
    B. The reduction of quality costs
    C. The reduction of acquisition cost
    D. Every birr saved in purchasing is = to a new birr of profit
9. The concept of a supply chain means we analyze and manage:
    A. a chain or network of upstream suppliers
    B. converters
    C. original equipment manufacturers (OEM)
    D. extractors

10. The term <u>value chain</u> means we include the supply chain in our analysis and

management with:

A. end consumer

B. the downstream portion of the chain and distribution, such as marketing

C. channels of distribution

D. financial impact studies

11. The term extended enterprise is an extension of supply networks, we now have:

A. true value creation

B. real value maintenance

C. innovative and virtual integration

D. a network of firms collaborating in partnership

12. Which statement about supply management is not true?

A. SM recognizes the global environment

B. SM is a philosophy

C. SM is synonymous with logistics

D. SM is proactive

13. Which action is not necessary in implementing SM?

A. Senior management must support the required transformation of supply management to world class

B. Firms must know where they are in relation to where they want to be

C. Firms must benchmark best-in-class practices and develop metrics

D. Firms must force their suppliers into world-class compliance

14. Which bullet is not true of the clerical stage of SM?

A. Relationships: personal

B. Design: suppliers are involved

C. Bottom line impact: overhead

D. Reporting: very low level

15. Which of the following is generally not true about supply management and the bottom line?

A. Purchased items account for a large percentage of the cost of goods sold. Hence, a reduction in cost of purchased goods has a major impact on the bottom line

B. A birr increase in sales is equivalent to a birr decrease in materials cost in impacting the bottom line

C. Outsourcing allows firms to focus on their core competencies, which reduced potential for waste, which then can improve the bottom line

D. A birr saved in materials cost is usually considered a birr increase in profit, which directly translates into bottom line savings

16. The most significant advantage of the drug supply chain management structure is:

: A. it facilitated a total systems approach to stimulate integration

B. it uses the internet to extract key information

C. it increases the visibility of the purchasing department

D. it focuses management attention on quality

17. A pharmacist working at a health institution wants to order a paracetamol tablet from supplier. The average monthly consumption is 450 units. This product is ordered every two weeks with a leading time of four weeks. The current stock is 600. If the pharmacist is going to order, what should be the appropriate amount of paracetamol tablet?

A. 1,050
B. 150
C. 300
D. 450

18. A primary care hospital received medication from an international donor. However, the products received do not have special instruction regarding storage condition. The store man who is a pharmacist working there is confused with the storge condition. He approached a senior pharmacist working there to help him identify the storage condition.

What would be the most appropriate storage condition the senior pharmacist

offer as an advice?

A. Store in a dry clean, ventilated area and at a temperature of +15°C- +25°C
B. Store in a dry clean, ventilated area and a temperature of +2°C- 8°C
C. Store in a dry clean, ventilated area and a temperature of +2°C- 8°C
D. Store in a cold, ventilated area and a temperature of +2°C- 8°C

19. In warehouse of a tertiarty care hospital, Mrs XM, head of the warehouse received the following items which will be used in the hospital. Blood typing sera 2–8°C Bacteriological media 36 months 21–30°C, Chemistry reagent kits 12 months 2–8°C CD4 antibody reagent 2–8°C Testing controls 3 months 2–8°C 50 .
What would be the most appropriate storgage temperature for Blood typing sera, Chemistry reagent kits, CD4 antibody reagent 2–8°C Testing controls 3 months

A. 8°C –15°C
B. 15°C –25°C
C. 2°C –8°C
D. < 2°C

20. A referral hospital wants to establish an institutional formulary.
Who do you think is the most appropriate right body tot establishes the formulary for the hospital?

A. Food and Drug Administration
B. Pharmacist in charge
C. Pharmacy and therapeutics committee
D. Pharmacy Associations

21. In a district hospital, the medical stroe undergo inventory management in different ways.

Which type of inventory indicates the actual quantity of a specific quantity of medication on hand at a particular moment in time?

A. Biannual inventory
B. Biennial inventory
C. Initial inventory
D. Perpetual Inventory

22. A private owned hospital pharmacy directorate is asked to calculate the annual quantity of medicines and medical supplies. Head of the pharmacy has reliable inventory records, records of supplies lead time and projected pharmaceutical costs.

Which of the mentioned appropriate method of quantification the pharmacy head should use?

A. Morbidity Method
B. Consumption Method
C. Proxy Consumption Method
D. Service-Level Projection

23. Mr. T, a junior pharmacist, is recently recruited in a zonal hospital where malaria is a prevalent case. Mr T advised by the CEO of the hospital to have the minimum stock level of coartem®. Mr T has a data of monthly consumption of 1000 coartem® tablets and a lead time is 90 days. What will be the safety stock of coartem® that Mr T reserves?

A. 9,000 tablets
B. 27, 000 tablets
C. 1090 tablets
D. 11 tablets

24. Mr K, warehouse head a privately owned pharmacy, found a burglary in the warehouse.
What is the most appropriate measure Mr K should carry out?

A. Do not enter the pharmacy
B. Make a written report to the head of the health facility
C. Do not inform the police because this is an internal matter
D. An inventory of the store is undertaken.

25. Ms L is a junior pharmacist recently recruited to a primary care hospital. She is new to actual dispensing of medication to the pateints. She seeks advice from her colleage on the knowhow. What is the appropriate advice her colleague should provide to Ms L while dispensing medication to her patients?
A. When and how to take the drug
B. To share the drug(s) with the immediate members of the family to prevent the spread of disease in the family
C. To take all drugs on an empty stomach
D. To take all drugs after food

26. When receiving drugs at the health institution, one should ensure that:
A. All the drugs are coming from district hospital stores.
B. Drugs received are expired.
C. Quantity issued corresponds to quantity indicated on the stores requisition/delivery form

D. The drug box is opened when those delivering are gone

27. In the push system of distribution:
    A. No ordering of drugs is done
    B. No inventory is taken
    C. No expiration dates are checked
    D. No management skills are required
28. The following measures will ensure that temperatures in the drug store remain favourable for the storage of drugs.
    A. Painting walls with black paint
    B. Installing heaters at regular intervals
    C. Leaving windows open over night to allow air circulation
    D. Installing air conditioners that will maintain a temperature below 245 degrees C
29. In January 2018, a Hospital phmaracy received from the XYZ aid organization 60 tins of a new item in the store called Niverapine 60 mg tablets. During January, two tins of 500 tablets were issued to the dispensing area. In February, five tins were issued, and in the next two successive months, six and seven tins were issued respectively. Finally during the last four months, six, eight, nine and ten tins were issued, respectively.

    What is the average monthly consumption of niverapine?

    A. 9.55 tins
    B. 6.63 tins
    C. 7.43 tins
    D. 5.24 tins
30. Efficient management of drugs will
    A. Ensure constant supply
    B. Maximize wastage of resources
    C. Increase prices of drugs
    D. Maximize adverse effects of drugs

Ethics and Professionalism

1. Which one of the following is true about Ethics?
   A. It is concerned what ought to be, what is right, or wrong, good or bad.
   B. It is the base on moral reasoning and reflects set of values
   C. It is process of questioning, and perhaps changing, one's morals.
   D. All
2. One of the following is different from the others. Which one?
   A. Individual Patient-Provider Interaction
   B. Patient Consent
   C. Independence of People
   D. Beneficence
3. What makes pharmacists unique in the health care team?
   A. Pharmacists advise patients on how take their medicines.
   B. Pharmacists are experts on communicating with patients and other health care professionals.
   C. Pharmacists have access to a vast amount of knowledge on medicines and the actions of drugs.
   D. Pharmacists are experts on medicine formulation and use and can apply this to patient care.
4. All new prescription only medicines medicine must be issued with a marketing authorization from the EFDA before they can:
   A. Undergo phase I clinical trials
   B. Undergo phase III clinical trials
   C. Be advertised to the public
   D. Be advertised to prescribers
5. To compare the safety of one medicine with another medicine it would be necessary to:
   A. Review the evidence from Phase I clinical trials.
   B. Review the evidence from Phase II clinical trials.
   C. Review the evidence from a post marking clinical trial.

D. Review the number of reports obtained from the yellow card adverse drug reaction reporting scheme.

6. _____a study of human activities in a broad sense in an attempt to identify human actions that are right or wrong and good and bad qualities

A. Descriptive B. Normative C. Analytical D. All

7. A profession can be distinguished from other occupations in terms of their use of knowledge.
   A. Professions have access to a body of specialized knowledge that is not available to by those outside the profession.
   B. Professions rely on a body of specialized knowledge which is not accessible to by those outside the profession.
   C. Professions rely on a body of specialized knowledge which is not easily understood by those outside the profession.
   D. Professions apply specialized knowledge which is not available to those outside the profession.

8. The professions can be distinguished from other occupations in terms of their work and source of income.
   A. Professions put the interests of their clients/patients first. They manage their own work and do not need to have it reviewed and approved. Their income comes from the professional fees they charge.
   B. Professions put the interests of their clients/patients first. They manage their own work but this should be reviewed and approved. Their income comes from the professional fees they charge.
   C. Professions put the interests of their profession first. They manage their own work and do not need to have it reviewed and approved. Their income comes from the professional fees they charge.
   D. Professions put the interests of their profession first. They manage their own work and do not need to have it reviewed and approved. Their income comes from the profit they generate.

9. Which one of the teleology's suggests that people choose actions that will in any given circumstances increase the overall-good?

A. Good B. Rule C. Act D. None

10. Belonging to a profession brings a range of benefits but it also attracts a range of obligations. Which of the following is not an obligation associated with being a professional?
   A. To act in the best interests of patients.
   B. To apply a high degree of skill and knowledge to their work.
   C. To be objective and non-judgemental.
   D. To use specialized information and operate under a monopoly.

11. The role of the pharmacy regulatory agency is:

A. To protect, promote and maintain the health, safety and wellbeing of members of the public in order to uphold standards and public trust in pharmacy.
B. To raise the standing of the profession and to protect the interests of its members.
C. To promote pharmacy and to advance science, practice, and education in pharmacy.
D. To protect the interests and rights of members of the pharmacy profession.

12. Which of the following may result in a criminal prosecution?
A. Beach of confidence
B. Breach of duty of care resulting in minor injury
C. Defamation
D. Sale of pharmacy prescription only medicines by a pharmacy student from a pharmacy where there is no pharmacist working that day

13. Which of these is not a reason why a knowledge of behavioural and social sciences is important to pharmacists?
A. It can help us to understand patients better
B. It can improve adherence to medication
C. It can help to build a concordant relationship with patients
D. Knowing what people are thinking is more important than knowledge of medicines

14. Your 36-year-old patient has just tested positive for HIV. He asks that you not inform his wife of the results and claims he is not ready to tell her yet.
What would you say to your patient?
A. Encourage the patient to share the information with his wife on his own, giving him a bit more time if necessary.
B. Tell the patient that his wife is at serious risk for being infected with HIV, and that you have a duty to ensure that she knows of the risk.
C. Tell the patient that public health law requires reporting both the patient and any known sexual partners to local health officers.
D. All the above.

15. Which of the following is NOT an underlying goal of ethics committees?
A. To promote the rights of patients
B. To promote shared decision making between patients (or their surrogates if decisionally incapacitated) and their clinicians
C. To promote fair policies and procedures that maximize the likelihood of achieving good, patient-centered outcomes; and

D. To improve the public perception of health care professionals and health care institutions.

16. An elderly man who lives in a nursing home is admitted to the medical ward with pneumonia. He is awake but severely demented. He can only mumble, but interacts and acknowledges family members. The admitting resident says that treating his pneumonia with antibiotics would be "futile" and suggests approaching the family with this stance.
Do you agree?

A. No I disagree because for this patient, treating pneumonia with antibiotics stands a reasonable chance of success.
B. Yes I agree that because the patient is severely demented, treating his pneumonia with antibiotics would be "futile".
C. Yes I agree that the treatment of pneumonia in this severely demented patient is futile because antibiotics may be ineffective, especially if the etiology is non-bacterial.
D. None of the above.

17. A 55-year-old man has a 3-month history of chest pain and fainting spells. You feel his symptoms merit cardiac catheterization. You explain the risks and potential benefits to him, and include your assessment of his likely prognosis without the intervention. He is able to demonstrate that he understands all of this, but refuses the intervention.
Can the refuse the intervention, legally?

A. No, because the patient does not comprehend the severity of his cardiovascular condition.
B. No, because the patient has a documented life threatening cardiac condition.
C. Yes, because he is competent to make this decision, and the doctor has a duty to respect his choice.
D. The doctor can perform the cardiac catheterization after obtaining a court order.

18. A 32 year old woman was admitted to the Trauma Intensive Care Unit following a motor vehicle accident; she had multiple injuries and fractures, with several complications which continued to develop over the first couple of weeks. The patient rapidly developed Adult Respiratory Distress Syndrome, was on a ventilator, and was continuously sedated. Shortly after the patient's admission, her parents were contacted and remained vigilant at her bedside. The

parents reported that the patient was one month away from having her divorce finalized. The patient's husband was reportedly physically and emotionally abusive to her throughout their five years of marriage. The parents had not notified this man of the patient's hospitalization, and reported that visit by him would be distressing to the patient if she were aware of it. The patient's soon to be ex-husband is her legal next of kin.
Should the husband be responsible for treatment decisions which the patient cannot make?

A. No, because there is an implied consent by law for provision of "emergency" medical treatment in such cases.
B. Yes because there is a divorce proceeding.
C. Yes because the law sets an explicit time limitation on implied consent based on an "emergency."
D. Yes because the father is the surrogate decision-makers for the patient.

19. An 18-month-old child presents to the clinic with a runny nose. Since she is otherwise well, the immunizations due at 18 months are administered. After she and her mother leave the clinic, you realize that the patient was in the clinic the week before and had also received immunizations then.
Should you tell the parents about your mistake?

A. No because the error is a trivial one.
B. No because no harm is done.
C. No because the mother will never find out.
D. Yes because an open and honest approach to errors is most appropriate.

20. A 3-month-old has been admitted to the hospital with a newly diagnosed ventricular septal defect. She is in early congestive heart failure and digoxin is indicated. After discussing the proper dose with the attending physician, you write an order for the drug. Thirty minutes later the baby vomits and then has a cardiac arrest and dies. You discover that in writing the digoxin order you misplaced the decimal point and the child got 10 times too much digoxin.
What is your duty here?

A. Inform the parents about the mistake and say you are sorry
B. Do not inform the parents
C. Do not say sorry
D. Let the liability insurance company handle everything, because a malpractice lawsuit may follow

21. A 3-year-old presents to the emergency department. She was diagnosed with pyelonephritis by her physician yesterday, treated with an intramuscular injection of antibiotic and sent home on an oral

antibiotic. She is vomiting today and unable to keep the antibiotic down. As you prepare to admit her, you feel she should have been admitted yesterday.

Should you tell the parents that their physician made a mistake?

A. Yes the parents should be told.
B. The parents should not be told.
C. Discuss the case first with the other treating physician, then tell the parents.
D. Report the incident to the risk manager and not the parents.

22. An ill-appearing 2-year-old with a fever and stiff neck appears to have meningitis. His parents refuse a lumbar puncture on the grounds that they have heard spinal taps are extremely dangerous and painful. What are the clinical pharmacist's legal-ethical obligations in this case?47

A. Obtain an ethics consultation.
B. Fully inform the parents, and should they refuse to give permission, the pharmacist is justified in proceeding with the procedure and treatment of the child.
C. Obtain a court order to perform the lumbar puncture and treat the child.
D. Be sure the parents' refusal is fully informed, document the refusal in the chart, and do not perform the lumbar puncture.

23. _____is the promotion of independent choice, self- determination and freedom of action.

A. Autonomy B. Beneficence B. Integrity D. Justice

24. A 5-year-old child has just had his second generalized tonic-clonic seizure in a 4 month period. You have recommended starting an anticonvulsant. The parents have concerns about the recommended medication and would prefer to wait and see if their son has more seizures.

How should you respond to the parents' request?

A. Obtain an ethics consultation.
B. Obtain a court order to treat the child.
C. Report the case as child abuse.
D. Fully inform the parents, and should they refuse to give anticonvulsants to the child, the physician should abide by the parents' decision.

25. Mrs. Aklesiya, an 81-year-old Alzheimer's patient hospitalized under your care has been asked to participate in a clinical trial testing a new drug designed to help improve memory. You were present when the clinical investigator obtained a signed informed consent from Mrs. Aklesiya a few days ago. However, when you visit Mrs. Aklesiya today

and ask her if she is ready to begin the study tomorrow, she looks at you blankly and seems to have no idea what you are talking about. What should you do?

A. The signed informed consent for the clinical drug testing is in doubt, and should not be done.
B. The primary investigator should be contacted to discuss Mrs. Franklin's participation in the trial.
C. A surrogate who can give consent for her participation may be contacted if the clinical trial is deemed to be in her best interests.
D. All are correct

26. Mr. Steven is a 70-year-old man with end-stage COPD, admitted last month with pneumonia. His course was complicated by respiratory failure needing mechanical ventilation, and multiple efforts to wean him have been unsuccessful. Awake and alert, he now communicates through written notes that he wants the ventilator taken off.

Will you honor his request?

A. If the patient’s decision making capacity is intact, his request should be honored.
B. His request should not be honored.
C. The surrogate decision maker should make the final decision.
D. A court order is necessary because the outcome of taking him off the respirator is death certain.

27. According to ethics which one of the following best describe being faithful to one's commitments and promises

A. Non Compliance B. Veracity C. Fidelity D. Justice

Pharmaceutical Care

Choose the best alternative to each question and write the answer of your choice on the separate answer sheet

1. The National Kidney Foundation Hypertension and Diabetes Executive Committee Working Group recommends that patients with diabetes have a target blood pressure of less than:

A. 130/80 mm Hg
B. 160/90 mm Hg
C. 140/85 mm Hg
D. 130/85 mm Hg

2. M.L. is a 63-year-old patient with stage 3 CKD with the following results from his fasting lipid profile: Triglycerides (TG) 120 mg/dL, low-density lipoprotein (LDL) 160 mg/dL, high-density lipoprotein (HDL) 40 mg/dL. Which of the following LDL goals and choices for initial drug therapy are most appropriate for M.L.?
   A. LDL <100 mg/dL; cholestyramine
   B. LDL <100 mg/dL; simvastatin
   C. LDL <130 mg/dL; cholestyramine
   D. LDL <130 mg/dL; simvastatin
3. L.J., a 58-year-old man, is discharged from the hospital after an NSTEMI. His medical history is significant for HTN. He was taking hydrochlorothiazide 12.5 mg/day before hospitalization. His drug regimen consists of aspirin 81 mg/day, atenolol 50 mg/day, hydrochlorothiazide 25 mg/day, atorvastatin 80 mg/day, and sublingual nitroglycerin 0.4 mg as needed for chest pain. Which represents the best action to take in response to this discharge regimen?
   A. Discontinue hydrochlorothiazide; add diltiazem extended release 240 mg/day.
   B. Continue hydrochlorothiazide; add amlodipine 5 mg/day.
   C. Discontinue hydrochlorothiazide; add ramipril 5 mg/day.
   D. Continue hydrochlorothiazide; add vitamin E 400 international units/day.
4. You are the pharmacist at a community pharmacy and receive a call from M.W., a 64-year-old man recently given a diagnosis of atrial fibrillation. He is concerned about his risk of having a stroke because his friend, who also has atrial fibrillation, asked him which dose of warfarin he is taking. M.W. called you because he is not taking warfarin and wants to know whether he should. He has no other medical conditions and takes atenolol 50 mg/day orally for ventricular rate control. After encouraging

M.W. to discuss this with his physician, which choice best describes what you should tell him?

A. You need warfarin treatment to prevent a stroke.
B. You do not need warfarin, but you should take aspirin and clopidogrel.
C. You do not need drug therapy at this time.
D. Because you have atrial fibrillation, nothing can reduce your risk of stroke

5. In the management of coronary heart disease, Aspirin is recommended for all patients except for those contraindicated.

A. True B. False

6. One is not true about unstable Angina

A. ST-Segment depression
B. No positive biomarker for cardiac necrosis
C. No myocardial injury
D. None
E. All

Question No 7-11 Pertains to the Following Case Scenario.

L.S. is a 48-year-old woman with alcohol-induced cardiomyopathy. Her most recent LVEF is 20%; her daily activities are limited by dyspnea and fatigue. Her medications include lisinopril 20 mg/day, furosemide 40 mg twice daily, carvedilol 12.5 mg twice daily, spironolactone 25 mg/day, and digoxin 0.125 mg/day. She has been stable on these doses for the past month. Her most recent laboratory results include the following: sodium (Na) 140 mEq/L, potassium (K) 4.0 mEq/L, chloride 105 mEq/L, bicarbonate 26 mEq/L, blood urea nitrogen (BUN) 12 mg/dL, SCr 0.8 mg/dL, glucose 98 mg/dL, calcium 9.0 mg/dL, phosphorus 2.8 mg/dL, magnesium (Mg) 2.0 mEq/L, and digoxin 0.7 ng/mL. Her vital signs today include BP 112/70 mm Hg and HR 68 beats/minute.

7. Which probably stage of Heart Failure is this patient case?

A. NYHA Class II C. NYHA Class IV
B. NYHA Class III D. NYHA Class I

8. Which type of heart failure observed in this patient case?
   A. HFrEF
   B. HFpEF
   C. Mixed type of HFrEF & HFpEF
   D. All
9. Which is the best approach to maximize the management of HF in this patient?
   A. Increase carvedilol to 25 mg twice daily.
   B. Increase lisinopril to 40 mg/day.
   C. Increase spironolactone to 50 mg/day.
   D. Increase digoxin to 0.25 mg/day.
10. How you interpret the serum level of digoxin value (0.7ng/Ml)?
   A. Supratherapeutic level
   B. Subtherapeutic level
   C. Therapeutic level
   D. Undetermined
11. All are the importance of Digoxin for this Patient, Except:
   A. Improved exercise tolerance
   B. Decreased hospitalizations
   C. Decrease Mortality
   D. Improved Symptoms
12. D.W. is a 50-year-old man being discharged from the hospital after an acute MI. His medical history is significant for HTN. He was taking hydrochlorothiazide 25 mg/day before hospitalization. An echocardiogram before discharge showed an LVEF of more than 60%. His vital signs include BP 150/94 mm Hg and HR 80 beats/minute.Which is the best approach for managing his HTN?
   A. Discontinue hydrochlorothiazide and add diltiazem.
   B. Continue hydrochlorothiazide and add metoprolol.
   C. Discontinue hydrochlorothiazide and add losartan.
   D. Continue hydrochlorothiazide and add losartan.

Question 13-15 pertains to the following case.

T.J. is a 45-year-old woman with a history of type 2 diabetes mellitus treated with Glibenclamide 5 mg/day. She presents to the clinic for a routine follow-up of her diabetes. Her vital signs today include BP (average of two readings) 138/88 mm Hg and HR 70 beats/minute. Her laboratory results

are as follows: Na 140 mEq/L, K 4.0 mEq/L, chloride 102 mEq/L, bicarbonate 28 mEq/L, BUN 14 mg/dL, SCr 1.0 mg/dL, 24-hour urine albumin 36 mg. Of note, at her last visit, her BP was 136/85 mm Hg.

13. Which is the best approach for managing her HTN at this time?
    A. Begin lifestyle modifications only.
    B. Begin lifestyle modifications and add amlodipine 5 mg/day.
    C. Begin lifestyle modifications and add lisinopril 2.5 mg/day.
    D. Begin lifestyle modifications and add atenolol 25 mg/day.
14. Which laboratory value is/are in the abnormal range?
    A. Potassium
    B. Chloride
    C. Blood Urea Nitrogen
    D. All
    E. None
15. What is the most important goal of therapy for this patient?
    A. To reduce the risk of cardiovascular complication
    B. To delay the progression of the disease
    C. To prevent reoccurrence of the symptoms
    D. No need of setting goal of therapy for this patient.

Question 16-18 pertains to the following case.

M.M. is a 63-year-old woman who just finished 6 months of diet and exercise for dyslipidemia. She has a history of gout, chronic nonischemic HF (LVEF 26%), diet-controlled diabetes, and asthma, as well as a 15 pack-year history of tobacco (quit 3 years ago); she drinks 3 beers a day. Because she was adopted, no family history records are available. Her medications are albuterol metered dose inhaler, lisinopril and furosemide. Her vital signs include BP 124/80 mm Hg and HR 75 beats/minute. Her laboratory results are as follows: HDL-C 64 mg/dL, LDL-C 101 mg/dL, TG 98 mg/dL, and TC 185 mg/dL. Her Pooled Cohort Equation estimates a 10-year ASCVD risk of 7.1%.

16. Which is the most appropriate next step for M.M.?
    A. Initiate moderate-intensity statin because her 10-year risk is less than 7.5%.

B. Initiate high-intensity statin because her 10-year risk is less than 7.5%.
C. Continue lifestyle modifications and recalculate 10-year risk in 2 years.
D. Continue lifestyle modifications and do not initiate statin therapy.

17. Which is the best specific drug for this patient case, M.M?
A. Simvastatin 40 mg po daily
B. Simvastatin 10 mg po daily
C. Pravastatin 10 mg po daily
D. Atorvastatin 40mg po daily

18. Which is/ are non-modifiable risk factors contributing for having cardiac case?
A. Alcohol use, Smoking, Age
B. Age, Gender, Family history
C. Alcohol use, Smoking, Age, Family History, Gender
D. Age, Gender

19. L.J., a 58-year-old, is discharged from the hospital after an NSTEMI. His medical history is significant for HTN. He was taking hydrochlorothiazide 12.5 mg/day before hospitalization. An echocardiogram shows an LVEF greater than 60%. His vital signs include BP 130/65 mm Hg and HR 64 beats/ minute, and he states that he feels great. His drug regimen consists of aspirin 81 mg/day, atenolol 50 mg/day, hydrochlorothiazide 25 mg/day, atorvastatin 80 mg/day, and sublingual nitroglycerin 0.4 mg as needed for chest pain. Which represents the least action to take in response to this discharge regimen?
A. Discontinue hydrochlorothiazide; add diltiazem extended release 240 mg/day.
B. Continue hydrochlorothiazide; add amlodipine 5 mg/day.
C. Discontinue hydrochlorothiazide; add ramipril 5 mg/day.
D. Continue hydrochlorothiazide; add vitamin E 400 international units/day.

20. L.W. is a 64-year-old woman with a significant history of CHD, having had two MIs and three stent placements in the past 10 years. Her LVEF

is more than 60%. She has developed shortness of breath and chest heaviness with activity during the past several months, despite being adherent to her medications. She says she is requiring up to three doses of her sublingual nitroglycerin per day; however, she has severely curtailed her activity to avoid the discomfort. She takes aspirin 81 mg/day, simvastatin 40 mg every night, enalapril 10 mg twice daily, and metoprolol tartrate 50 mg twice daily. Her vital signs include BP 132/80 mm Hg and HR 72 beats/ minute. Which regimen is best to improve her stable angina symptoms and increase her activity level?

A. Discontinue metoprolol tartrate, and begin diltiazem extended release 240 mg/day.
B. Add ranolazine 500 mg twice daily.
C. Add isosorbide mononitrate 30 mg every morning.
D. Increase metoprolol tartrate to 100 mg twice daily, and add isosorbide mononitrate 30 mg every morning

21. A 66-year-old, 70-kg woman with a history of MI, HTN, hyperlipidemia, and DM presents with sudden-onset diaphoresis, nausea, vomiting, and dyspnea, followed by a bandlike upper chest pain (8/10) radiating to her left arm. She had felt well until 1 month ago, when she noticed her typical angina was occurring with less exertion. Electrocardiography showed ST-segment depression in leads II, III, and aVF and hyperdynamic T waves and positive cardiac enzymes. Home medications are ASA 81 mg/day, simvastatin 40 mg every night, metoprolol 50 mg twice daily, and metformin 1 g twice daily. Which regimen is the best treatment strategy for this patient?

A. ASA 325 mg and clopidogrel 600 mg x 1; then 75 mg once daily, UFH 60-unit/kg bolus; then 12 units/kg/hour titrated to 50–70 seconds immediately plus eptifibatide 180-mcg/kg bolus x 2; then 2 mcg/kg/minute at the time of PCI.
B. ASA 325 mg and enoxaparin 70 mg subcutaneously twice daily plus cardiac catheterization for possible PCI.

C. Medical management with abciximab 0.25-mg/kg bolus; then 0.125 mg/kg/minute for 12 hours plus enoxaparin 80 mg subcutaneously twice daily, ASA 325 mg/day, and clopidogrel 300 mg x 1; then 75 mg once daily.

D. Medical management with ASA 325 mg

22. Which of the following would be the best regimen to initiate in a diabetic, hypertensive patient with stage 4 chronic kidney diseases?

A. ACEI plus loop diuretic
B. ACEI plus thiazide diuretic
C. CCB plus beta -blocker
D. ACEI plus beta -blocker

23. For a patient initiating angiotensin-converting enzyme inhibitor (ACEI) therapy, which of the following parameters should be frequently monitored?

A. Blood pressure and pulse
B. Sodium and potassium
C. Potassium and serum creatinine
D. WBC and proteinuria

24. The best option for a patient with severe pulmonary edema, who remains anuric after trials of 10 and 20 mg/h IV furosemide, is:

A. Increase the dose of furosemide to 40 mg/h
B. Change the furosemide to bolus dosing; start with 200 mg IV
C. Add metolazone 5 mg daily
D. Discontinue furosemide and begin metolazone 10 mg twice daily

25. A 37-years-old woman, BP 190/120 mm Hg at arrival for an examination. No previous history of HTN, and her previous BP was just 120/80 mm Hg. No signs of acute or chronic hypertension-associated target-organ damage. BP again 20 minutes later, was 142/92 mm Hg (140/90 mm Hg on repeat). According to AHA-2017, which of the following may be the most appropriate BP goal in this patient?

A. BP<120/80 mm Hg
B. BP<130/80 mm Hg
C. BP<140/80 mm Hg
D. BP<140/90 mm Hg

26. A 60-year-old woman with HTN and CHFpEF is seen 2 months after experiencing an acute myocardial infarction. PMH: dyslipidaemia and

present BP is 130/84 mm Hg (132/82 mm Hg when repeated) and heart rate is 60 beats/min. Serum creatinine is 1.1 mg/dL, K: 3.5 mEq/L, and spot urinalysis revealed UACR: 20 mg/g. Currently no peripheral or pulmonary oedema. MEDS: Furosemide 40 mg bid, carvedilol 25 mg bid, enalapril 20 mg bid, and pravastatin 20 mg daily. Which of the following medical conditions is/are a compelling indication(s) for the use of carvedilol?

A. HF
B. CKD
C. Recent MI
D. Dyslipidemia

27. In a patient with ST-segment elevation (STE) MI who presents to a hospital without the capacity to perform primary PCI and who is 2 hours since the onset of chest discomfort . BP 130/80 mm Hg, HR 88 beats/min, rales, S3 heart sound, ST-segment elevation, and positive troponin. The emergency department health care team has started managing the patient with ASA and IV nitroglycerin (NTG). What should be administered in the emergency department to treat symptoms, and prevent death, stroke, or reinfarction?

A. Clopidogrel, enoxaparin, ramipril, furosemide, reteplase
B. Clopidogrel, enoxaparin, eptifibatide, furosemide
C. Reteplase, UFH, metoprolol, enalapril
D. Alteplase, bivalirudin, furosemide, captopril

28. A 18-year-old marine recruit, who collapsed during basic training, was found to have a blood urea nitrogen (BUN) value of 51mg/dL; serum creatinine, 2.1 mg/dL; and a fractional excretion of sodium (FeNa) of 0.1%. The most likely etiology of his ARF is:

A. Acute tubular necrosis
B. Interstitial nephritis
C. Medullary ischemia
D. Prerenal

29. Which of the following patients is at highest risk for acute renal failure?

A. A 22-year-old with sickle cell trait
B. A 32-year-old with type 1 diabetes receiving contrast dye for a CT scan
C. A 72-year-old with heart failure (ejection fraction = 35%), taking lisinopril 5 mg daily
D. A 43-year-old dialysis-dependent social worker who misses a dialysis appointment

30. A 58-year-old male with unknown past medical history has prerenal acute renal failure from acute blood loss because of a limb amputation in an industrial accident, and aggressive fluid resuscitation is initiated. Which of the following set of monitoring parameters are most appropriate for the next 8 hours?
A. Urine output, rales, and blood pressure
B. Heart rate, blood pressure, and BUN
C. Bowel sounds, blood pressure, funduscopic findings
D. Blood pressure, serum potassium, and serum sodium
E. Blood pressure, weight, and blood glucose

31. A 76-year-old, 60-kg patient with a history of heart failure is admitted for severe nausea and fever of several days' duration, as well as acute onset of chest pain. There is a single serum creatinine value of 2.4 mg/dL, and several drugs eliminated primarily by the kidney are ordered. It is 2:00 in the afternoon. Choose the best consideration for those agents eliminated primarily by the kidney.
A. The creatinine clearance can be calculated to estimate a GFR, and then an adjusted dosing regimen should be implemented for the duration of this admission.
B. Send out the initially ordered doses immediately and do not check if any were administered in the emergency room.
C. Assess if any drugs were recently administered, and only recommend one day of new therapies if not already started; request a second serum creatinine value to assess if the patient's renal function is

stable; check to see if the patient is producing any urine as a additional assessment of renal function.

D. Assess if any drugs were recently administered, and send out one dose.

32. T.A. is a 25-year-old female with type 1 diabetes, hypertension, and a creatinine clearance (CLcr) of 38 mL/min. She would be classified as having what stage of chronic kidney disease?

A. Stage 1
B. Stage 2
C. Stage 3
D. Stage 4

33. In patients with diabetes and a glomerular filtration rate (GFR) <25 mL/min, Kidney Disease/Dialysis Outcome Quality Initiative (K/DOQI) guidelines on nutrition recommend a dietary protein intake of:

A. 0.20 g/protein/kg/day
B. 0.28 g/protein/kg/day
C. 0.60 g/protein/kg/day
D. 0.75 g/protein/kg/day
E. 1.00 g/protein/kg/day

34. N.T. is a 39-year-old female on hemodialysis (HD) started on an epoetin dose of 3,500 units intravenously three times weekly 4 weeks ago. The Hb at the time of initial dosing was 10 g/dL (Hct 30%). The current Hb is 10.3 g/dL (Hct 31.5%). Iron indices reveal the following: ferritin 180 ng/mL, transferrin saturation 35%. Which of the following options is most appropriate for NT?

A. Oral ferrous sulfate 325 mg three times per day
B. 1 g sodium ferric gluconate divided over eight hemodialysis sessions
C. Increasing the dose of epoetin alfa by 25% to achieve the target Hb/Hct
D. Withholding epoetin alfa therapy until hemoglobin decreases to 10 g/dL

35. R.B. is a 54-year-old female with ESRD and hyperlipidemia receiving peritoneal dialysis. The most recent laboratory analysis reveals the following: phosphorus 7.4 mg/dL, calcium 9.0 mg/dL, albumin 2.5 g/dL, iPTH 542 pg/mL. In addition to dietary restriction, which one of the

following agents is best for initial management of R.B.'s hyperphosphatemia?

A. Sevelamer
B. Aluminum hydroxide
C. Calcium carbonate
D. Calcium acetate

36. A patient with CKD on peritoneal dialysis presents with fever and abdominal pain. She also notes that her peritoneal dialysate has become cloudy. Laboratory evaluation of dialysate reveals many WBCs, primarily neutrophils. Gram stain and culture of the fluid are ordered. According to the 2010 recommendations for peritoneal dialysis–related peritonitis, which is the best empiric therapy for this patient?

A. Intravenous metronidazole plus gentamicin.
B. Cefazolin plus ceftazidime instilled intraperitoneally.
C. Intravenous clindamycin plus vancomycin.
D. Vancomycin instilled intraperitoneally

37. A patient has been taking ibuprofen (Advil) twice daily for 2 weeks after an ankle injury. The patient calls her health care provider and states she is bothered by shortness of breath and rapid breathing. What will the patient’s health care provider suspect?

A. The patient is having an anxiety attack.
B. The patient is having a hypersensitivity reaction.
C. The patient is experiencing hypoglycemia.
D. The patient is suffering from a myocardial infarction.

38. A 23-year-old woman has been coughing and wheezing about twice weekly, and she wakes up at night about three times per month. She has never been given a diagnosis of asthma, and she has not been to a doctor “in years.” She uses her boyfriend’s albuterol inhaler, but he recently ran out of refills, so she is seeking care. Her activities are not limited by her symptoms. Which is the best classification of her asthma?

A. Intermittent.
B. Mild persistent.
C. Moderate persistent.
D. Severe persistent.

39. An 8-year-old boy has been having daytime asthma symptoms once or twice weekly and is awakened twice weekly at night with coughing. In addition to albuterol MDI 1 or 2 puffs every 4–6 hours as needed, which is the best initial therapy for him?

A. Fluticasone 44 mcg/puff 1 puff twice daily.
B. Montelukast 10 mg/day.
C. Fluticasone/salmeterol 100/50 mcg 1 puff twice daily.
D. Fluticasone 110 mcg/puff 1 puff twice daily.

40. A 52-year-old woman with COPD reports a gradual worsening in shortness of breath during the past few years. She has not had a COPD exacerbation or received systemic corticosteroids in the past 2 years. Her current COPD medications are tiotropium inhaler once daily and albuterol puff as needed. Which is the most appropriate course of action?

A. Add salmeterol 1 puff twice daily.
B. Add long-term azithromycin 250 mg once daily.
C. Add fluticasone 110 mcg 2 puffs twice daily.
D. Discontinue tiotropium, and initiate salmeterol/fluticasone 250/50 1 puff twice daily.

41. A 64-year-old woman with COPD presents for a clinic visit. In the past few days, she has had a worsening in shortness of breath and a productive cough with more “cloudy” and more copious sputum than usual. She has a nebulizer at home. In addition to regular use of albuterol plus ipratropium by nebulizer every 1–4 hours, which is the best course of action?

A. No additional therapy is necessary.
B. Add oral prednisone 40 mg once daily for 10 days.
C. Add trimethoprim/sulfamethoxazole double strength 1 tablet twice daily for 7 days.
D. Add oral prednisone 40 mg once daily for 10 days and trimethoprim/sulfamethoxazole double strength 1 tablet twice daily for 7 days.

42. A 78-year-old man who presents to the emergency department for symptoms of right-sided paralysis. He also has hypertension, benign prostatic hypertrophy, diabetes mellitus, erectile dysfunction, and osteoarthritis. Which assessment is most accurate regarding risk factors for stroke?

A. Erectile dysfunction, age, osteoarthritis.
B. Sex, diabetes mellitus, osteoarthritis.
C. Benign prostatic hypertrophy, diabetes mellitus, age, sex.
D. Age, diabetes mellitus, sex, hypertension.

43. M.M. is a patient with pneumonia and a lung abscess. Staphylococcus aureus grew from a properly-obtained sample of the patient's sputum. Vancomycin therapy was started, but the patient has not responded to 7 days of therapy. Which of the following would be the least likely explanation for the failure?

A. The presence of vancomycin-resistant S. aureus (VRSA)
B. A peak vancomycin serum concentration less than 25 g/mL
C. Inadequate penetration of the vancomycin to the site of the infection
D. An undetectable vancomycin serum trough concentration

44. A 64-year-old man presents to the emergency department with chest pain, fever, fatigue, and arthralgias. His past medical history is significant for rheumatic heart disease and a dental procedure a few weeks before admission. He currently shows no "stigmata" of endocarditis on physical examination, although endocarditis is suspected. The most likely organism is:

A. Viridans streptococci
B. Staphylococcus aureus
C. Enterococcus faecalis
D. Pseudomonas species

45. A 45-year-old woman is scheduled for a major dental extraction in 3 days. She has a history of rheumatic heart disease with mitral regurgitation. She is allergic to penicillin. Her physician asks whether she should receive antibiotic prophylaxis before her procedure. The most appropriate response is:

A. Yes, ampicillin 2 g orally 1 hour before the procedure
B. Yes, clindamycin 600 mg orally 1 hour before the procedure
C. Yes, cephalexin 500 mg orally 2 hours before the procedure
D. No, the most recent guidelines do not recommend prophylaxis in this situation

46. A 74-year-old man with a history of endocarditis underwent prostate surgery 3 weeks ago. For the past week he has had persistent fever and weakness. Blood cultures are pending, but an echocardiogram suggests a potential change consistent with new endocarditis. If the patient is subsequently diagnosed with this infection, the most likely organism is:

A. Group A streptococci
B. Viridans streptococci
C. Staphylococcus epidermidis
D. Enterococcus faecalis

47. T.H. is a 60-year-old woman who has developed endocarditis with viridans streptococci (MIC 0.1 mcg/mL) on a native heart valve. The patient has no known drug allergies and normal renal function. Which of the following intravenous regimens is most appropriate?

A. Ceftriaxone 2 g once daily for 2 weeks
B. Penicillin G 12–18 million units every 24 hours for 4 weeks
C. Cefazolin 2 g every 8 hours for 2 weeks plus gentamicin 1 mg/kg every 8 hours for 2 weeks
D. Penicillin G 12–18 million units/24 hours for 4 weeks plus gentamicin 1 mg/kg every 8 hours for 2 weeks

48. A 41-year-old woman has prosthetic valve endocarditis because of coagulase-negative staphylococci that is methicillin-resistant. She has no known drug allergies, and her renal function is within normal limits. Which of the following regimens is most appropriate?

A. Nafcillin 2 g every 4 hours for 6 weeks and gentamicin 1 mg/kg every 8 hours for 6 weeks
B. Vancomycin 15 mg/kg intravenously every 12 hours for 6 weeks, plus gentamicin 1 mg/kg every 8 hours for the initial 2 weeks

C. Nafcillin 2 g every 4 hours and rifampin 300 mg orally every 8 hours for 6 weeks, plus gentamicin 1 mg/kg every 8 hours for the initial 2 weeks

D. Vancomycin 15 mg/kg intravenously every 12 hours and rifampin 300 mg orally every 8 hours for 6 weeks, plus gentamicin 1 mg/kg every 8 hours for the initial 2 weeks

49. Assuming that the patient becomes culture negative after 2 months of treatment, drug regimens that lack isoniazid and rifampin should be continued for:

A. 6 months
B. 9 months
C. 12 months
D. 24 months

50. A 65-year-old female patient with a significant history of cardiovascular disease is determined to have an abscess of the appendix, which was drained during an appendectomy. All but which of the following antimicrobial regimens would be reasonable for this patient?

A. Imipenem
B. Gentamicin plus clindamycin
C. Ciprofloxacin plus metronidazole
D. Aztreonam plus ciprofloxacin

51. A 38-year-old female patient is undergoing peritoneal dialysis for chronic renal failure. She reports to her doctor that she is experiencing abdominal cramping with a cloudy dialysis fluid on removal. She does not have a fever or chills, and her blood (not peritoneal) white blood cell (WBC) count is normal. Which statement below is most correct?

A. She should receive intraperitoneal and intravenous antibiotics to treat abdominal and systemic infection
B. She should receive IV antibiotics only as this will disperse to all tissues
C. She should receive intraperitoneal antibiotics only in the dialysis fluid
D. She should not receive any antimicrobial as she does not have a fever

52. A 46-year-old Ethiopian who lives in America and planning to visit his family in his country. He has a history of seizures following a serious motor vehicle accident and has been on phenytoin 300 mg daily for the last 8 months. The prophylactic antimalarial drug of choice in this patient is:

A. Azithromycin
B. Dapsone
C. Atovaquone/proguanil
D. Mefloqune
E. Primaquine

53. A 4-year-old girl is seen in the clinic with maceration of the interdigital folds of the hands and with a groin rash. The mother of the patient indicates that her daughter frequently plays in the sand box. Diagnostic workup identifies the infection as being caused by Sarcoptes scabei. The drug of choice for this is:

A. Hydrocortisone 2% cream
B. Selenium sulfide 5% lotion
C. Permethrin 5% cream
D. Salicylic acid 2% ointment

54. A 6-year-old elementary school student seen in the clinic is found to have lice infestation of the scalp. Measures to eradicate the infection in the patient and the rest of the family include:

A. Calamine lotion with 1% menthol and sterilization of all bedding and clothes
B. -Benzene hexachloride and sterilization of all bedding and clothes
C. Sulfur ointment and sterilization of all bedding and clothes
D. Permethrin 1% and sterilization of all bedding and clothes
E. Permethrin 5% and sterilization of all bedding and clothes

55. In which of the following patients would a urinary tract infection (UTI) be considered an uncomplicated infection?

A. A 25-year-old female, with a UTI, otherwise healthy
B. A 40-year-old male with a UTI and kidney stones
C. A 65-year-old female, with a UTI, otherwise healthy

D. A 15-year-old female, with a UTI and history of vesicoureteral reflux

56. A 21-year-old man is a full-time college student who also works 25 hours per week. Over the past 3months he has become increasingly anxious. He says he is tired most of the time and has trouble concentrating on his studies. Which of the following drugs would be the most appropriate initial pharmacologic treatment for his anxiety?

A. Phenobarbital
B. Alprazolam
C. Zolpidem
D. Propranolol

57. Mr. T.G is 28 years old and has no active medical problems. He has been treated with Lithium for manic depressive illness for 1 year, and his mood has been stable. He now reports the gradual onset of fatigue, weight gain, and cold intolerance. Which single laboratory test is most likely to lead to the correct diagnosis?

A. TSH
B. Hepatic function panel
C. Glucose tolerance test
D. Hematocrit

58. A 25-year-old woman has a long history of depressive symptoms accompanied by body aches. Physical and laboratory tests are unremarkable. Which of the following drugs might be useful in this patient?

A. Fluoxetine
B. Sertraline
C. Mirtazapine
D. Duloxetine

59. J.G. is a 34-year-old patient who has been maintained on carbamazepine extended release 400 mg orally twice daily for the past 2 years. She has had no seizures for the past 4 years. She presents to the emergency department in status epilepticus. Which drug is best to use first?

A. Diazepam.
B. Lorazepam.
C. Phenytoin.
D. Phenobarbital.

60. S.S. is a 22-year-old woman who has always had episodes of “zoning out.” Recently, one of these episodes occurred after an examination while she was driving home. She had a non-injury accident, but it

prompted a visit to a neurologist. She is given a diagnosis of absence seizures. Which drug is best to treat this type of epilepsy?

A. Phenytoin.
B. Tiagabine.
C. Carbamazepine.
D. Ethosuximide.

61. L.S. is taking carbidopa/levodopa 25 mg/100 mg orally four times daily and trihexyphenidyl 2 mg orally three times daily for Parkinson disease. L.S.'s wife reports that he is often confused and experiences constipation; he has trouble talking because of his dry mouth. Which change is best to resolve these symptoms?

A. Increase carbidopa/levodopa.
B. Increase trihexyphenidyl.
C. Decrease carbidopa/levodopa.
D. Decrease trihexyphenidyl.

62. M.R., a 34-year-old pharmacist, has throbbing right-sided headaches. She experiences nausea, phonophobia, and photophobia with these headaches, but no aura. She usually has headaches twice a month. She is hypertensive and morbidly obese. She takes an ethinyl estradiol/progestin combination oral contraceptive daily and hydrochlorothiazide 25 mg/day orally. She has a diagnosis of migraine headaches. Which medication is best for prophylaxis of her headaches?

A. Propranolol
B. Valproic acid
C. Amitriptyline
D. Lithium

63. D.S. is a 49-year-old male computer programmer who describes lancinating right-eye pain and tearing several times a day for 2–3 days in a row. He will have no episodes for 2–3 weeks but then will have recurrent episodes. In the office, he receives oxygen by nasal cannula during an episode, and his pain is relieved. He has a diagnosis of cluster headaches. Which drug is best for prophylaxis of his headaches?

A. Propranolol.
B. Valproic acid.
C. Amitriptyline.
D. Lithium.

64. S.R. is a 54-year-old female homemaker with squeezing, bandlike headaches that occur three or four times weekly. She rates the pain of these headaches as 7/10 and finds acetaminophen, aspirin, ibuprofen, , and piroxicam only partly effective. She wishes to take a prophylactic drug to prevent these tension headaches. Which drug is best for prophylaxis of her headaches?

A. Propranolol.
B. Valproic acid.
C. Amitriptyline.
D. Lithium

65. D.D. is a 66-year-old man with a diagnosis of schizophrenia. He also has diagnosis of benign prostatic hypertrophy, hypertension, and Gastroesophageal Reflux Disorder (GERD). His medication regimen includes olanzapine, hydrochlorothiazide, metoclopramide, and ranitidine. Over the past three months he has developed a shuffling gait, drooling, and a resting tremor. In screening the patient's patient profile, which of the following might represent a drug interaction?

A. Ranitidine is inhibiting the metabolism of olanzapine, causing the patient to develop Parkinsonian symptoms
B. Ranitidine's dopaminergic blockade in combination with olanzapine is producing Parkinsonian symptoms
C. Metoclopramide alteration of olanzapine metabolism is causing Parkinsonian symptoms
D. Metoclopramide's dopaminergic blockade in combination with olanzapine is producing Parkinsonian symptoms

66. Which of the following regimens would be the most appropriate treatment for seriously ill patient with acute pyelonephritis?

A. Trimethoprim-sulfamethoxazole double strength, 1 tablet orally twice daily for 3 days
B. Ciprofloxacin 500 mg orally twice daily for 3 days
C. Levofloxacin 500 mg orally, 1 dose
D. Ciprofloxacin 400 mg IV twice daily for 3 days, followed by 500 mg orally twice daily for 11 days

67. BM was admitted to medical ward of Menelik II Hospital before a week with a diagnosis of cirrhosis. Associated with this he developed ascites. Which of the following diuretic regimen is recommended initial for the management of ascites in AB?
    A. Furosemide 40mg daily
    B. Spironalctone 100mg daily + Furosemide 40mg daily
    C. Furosemide 100mg daily + Spironalctone 4mg daily
    D. It is difficult to recommend based provided information
68. TK is a 63-year old man 70 kg with intrinsic acute kidney injury (AKI) secondary to ischemia after cardiac surgery. Three days later, his urine output is 350 mL in the last 24 hours. His estimated creatinine clearance is 20 mL/min (0.33 mL/s). He has signs of volume overload including 2+ pedal edema, rales, weight gain, and increased jugular venous pressure. Which of the following would be a reasonable starting dose of furosemide for TK?
    A. 1 g IV
    B. 500 mg IV
    C. 80 mg IV
    D. 200 mg orally
69. MW is diagnosed with a left lower extremity deep vein thrombosis (DVT) and is initiated on enoxaparin and warfarin therapy. How long should enoxaparin and warfarin be overlapped?
    A. For at least 4 days as long as the International Normalized Ratio (INR) is greater than 2
    B. For at least 5 days and until the INR is greater than 2
    C. For at least 7 days and until the INR is greater than 2
    D. Enoxaparin therapy can be discontinued once INR is greater than 2, regardless of the length of therapy
70. A mainstay of therapy for virtually all forms of shock is:
    A. Intravenous fluids
    B. Epinephrine
    C. Phenylephrine
    D. Red blood cells
71. JA is a 42-year-old Ethiopian woman just returned from vacation in Europe. She presents to the emergency department with shortness of

breath and is subsequently diagnosed with pulmonary embolism (PE). She weighs 45 kg, body mass index: 19 kg/m2). Medications on admission include estrogen-containing oral contraceptives and ibuprofen po prn. She smokes one pack of cigarettes per day and drinks alcoholic beverages three times per week. Her sister died (age 41) of pulmonary embolism 4 years ago. The factors that most likely predisposed this patient for venous thromboembolism include:

A. Age, ibuprofen use, smoking
B. Female sex, foreign travel, weight
C. Recent immobility, estrogen use, inherited disorder of hypercoagulability
D. None

72. F.G. is a 27-year-old man who is HIV positive but asymptomatic. On further investigation his CD4 count is 815cells/mm^3, and his viral load is 60,000 copies/mL by reverse transcriptase polymerase chain reaction. Which is the best treatment for F.G.?

A. ART should not be given because his CD4 count is still above 500cells/mm^3.
B. Initiate zidovudine alone because his CD4 count is still above 500cells/mm^3.
C. Initiate combination therapy of zidovudine, lamivudine, and atazanavir/ritonavir.
D. Initiate combination therapy of tenofovir, lamivudine, and efavirenze

73. AB is a 38 year old male diagnosed with AIDS who has been taking AZT/3TC/NVP regimen regularly for the past 5 years without any problem at Zewditu Memorial Hospital. He has a history of bacterial pneumonia and herpes zoster 5 year ago at which time he began therapy. Baseline CD4 count was 74 cells/mm^3. VL was found to be 3000 copies/mL. His current CD4 count is 46 cells/mm^3. Which of the following is correct regarding AB’s ART?

A. The regimen should not be changed because the decrease in CD4 count is less than 50% of the baseline.
B. The regimen should only be changed when AB experiences WHO Stage 4 clinical condition
C. The current ART regimen should be changed as AB's viral load increased above 1000 copies/mL
D. For the treatment failure of AB, EFV can replace NVP while changing the previous regimen

74. A 76-year-old man with a past history of non– insulin-dependent diabetes mellitus and hypertension is seen in the office. His blood pressure is 140/85 mm Hg, and he has mild renal insufficiency (serum creatinine, 1.4 mg/dL). Urinalysis reveals 2+ protein on dipstick but no cylinduria. Blood pressure medications include hydrochlorothiazide and atenolol. What antihypertensive agent will best control blood pressure and preserve renal function in this patient?

A. Amlodipine
B. Furosemide
C. Lisinopril
D. Verapamil

75. A 79-year-old man with a past medical history of hypertension and dyslipidemia presents to OPD clinic complaining of dizziness and palpitations that have been occurring for the past 2–3 days. An ECG reveals that he is in atrial fibrillation (HR = 120 bpm). Which of the following drug regimens would be most appropriate for stroke prevention in this patient?

A. Aspirin 325 mg po daily
B. Warfarin (titrated to an INR of 2–3)
C. Low-dose warfarin (titrated to an INR 1.2–1.5) and aspirin 325 mg po daily
D. This patient does not need antithrombotic therapy and should be cardioverted immediately.

76. AB is a 2-years old male child admitted to pediatric emergency ward with chief complaint of 2- day's duration of watery diarrhea (6-times per

day). At admission he had also sunken eyes, tachycardic and tachypenic. The assessment was acute diarrhea with severe dehydration. Based on epidemiological study reports, which one of the following will be the major cause of his diarrhea?

A. Viral
B. Bacterial
C. Protozoan
D. Helminthic infestation

77. All are true about the management approaches for AB, except:
A. IV- fluids should be started immediately
B. Start empiric antibiotics
C. Give ORS once he starts oral feeding
D. Needs Zinc supplementation
E. Needs Vitamin A supplementation

78. S.C., a 5-year-old boy, is brought to the emergency department (ED) by his mother, who says her son has a temperature of 39°C, is irritable and lethargic, and has a rash. S.C. was in his usual state of good health until last night, when he awoke crying. Which of the following finding is characteristic of a CSF profile in S.C with bacterial meningitis?
A. Presence of red blood cells
B. Protein >50 mg/dl
C. WBC >10/mm3 all mononuclear
D. Elevated glucose (66% of serum glucose concentration)

79. CC is 11 months old female infant admitted to pediatric ward with diagnosis of sever acute malnutrition plus diarrhea with some dehydration. The residents decided to start zinc supplementation, but they didn't remember the dose and asked you, what the daily dose of zinc is for this infant?
A. 20mg PO daily B. 10mg PO daily C. 5mg PO daily D. 30mg PO daily.

80. FS is 11 years old child presents to pediatrics ward complaining of a productive cough (greenish/yellowish stuff sputum production) and high grade fever, and dyspnea with respiratory difficulty. The patients

diagnosed as severe community acquired pneumonia (SCAP). Which of the following is the appropriate empiric antibiotic therapy for FS?

A. Vancomycin + Cefipime
B. Azithromycin + Ceftriaxone
C. Ceftriaxone + Vamcomycin
D. Azithromycin alone

81. A 25 years old primigravida woman presented with complains of blurring of vision, headache and gross edema. On examination her BP was 170/115mmHg. She was admitted at 32 weeks of gestation with the assessment preeclampsia. Which of the following is not appropriate treatment for this patient?

A. Administering magnesium sulfate to prevent eclampsia
B. Giving hydralazine 5 mg to lower her BP
C. Administering oxytocin to induce labor and terminate pregnancy
D. Providing dexamethasone 6mg IV BID for 4 doses

82. Mrs AB is 30 years old G3P2 mother at her 24 weeks of gestation. She has history of preeclampsia associated preterm delivery during her previous pregnancies. She is highly concerned and seeking preventive measure. Which of the following is recommended for AB for prevention of preeclampsia?

A. Use of low dose of aspirin
B. Nifedipine
C. Magnesium sulfate
D. Methyldopa

83. Mrs N.K is at her 27 of weeks gestational admitted with the assessment of gestational diabetes mellitus (GDM). She has tried dietary modification and exercise but failed to control the hyperglycemia. The best drug therapy for management of her GDM is:

A. Metformin
B. Insulin
C. Glyburide
D. Pioglitazone

84. Among pre-conception preparation, which of the following is indicated for prevention of neural tube defect?

A. Iron supplementation
B. Folate supplementation
C. Smoking cessation
D. Calcium supplementation

85. Thirty years old young patient comes to OPD with chief compliant of abdominal pain. He also presented with anorexia and abdominal tenderness. After investigation, physician comes up with the diagnosis of perforated appendicitis. Laparoscopic surgery was done for the patient. But, there was a debate on which type of antibiotics should be used and even on surgery. Based on the above case scenario, which of the following is false statement?
    A. There is no place for antibiotics for this patient: surgery is enough
    B. Antibiotics should be started before the laparotomy surgery
    C. Antibiotics should continue after surgery till the patient shows normal laboratory value
    D. Antibiotics alone have no benefit for this patient: Surgery is must
86. A 60-year-old man seeks medical attention because of recurrent urinary tract infections. The patient also reports a history of increasing difficulty in urination (decreased flow, straining, and hesitancy) over the last several months. A prostate-specific antigen (PSA) level is mildly elevated and a prostate biopsy proves benign. Which of the following is the most appropriate initial management of this patient with benign prostatic hyperplasia (BPH)?
    A. α-Adrenergic blocker
    B. alpha reductase inhibitor
    C. α-Adrenergic blocker and 5-alpha reductase inhibitor
    D. Transurethral resection of the prostate (TURP)
    E. Open prostatectomy
87. A 17-year-old boy who is now 4 years of treatment for ALL presents with anemia, thrombocytopenia, and fatigue. On bone marrow biopsy, he is found to have secondary AML. His treatment for ALL included methotrexate, cyclophosphamide, vincristine, daunorubicin, etoposide, dexamethasone, and asparaginase. Which one of the following agents is most likely to have contributed to his secondary AML?
    A. Dexamethasone
    B. Daunorubicin

C. Asparaginase
D. Etoposide

88. GH is going to receive cyclophosphamide IV today and then go home. What is the most important thing to have the patient do during the next 24 hours?
A. Make sure to wash all linens at home to prevent infections.
B. Make sure to drink fluids and void every 4 to 6 hours.
C. Make sure to avoid eating fresh fruits and vegetables.
D. Make sure to avoid cold temperatures, foods, and drinks.

89. AB had completed 3rd cycle BEP regimen for germ cell tumor. But now he developed pulmonary fibrosis. Which one is commonly associated with this toxicity?
A. Bleomycin
C. Cisplatin
B. Etoposide
D. Vincristine

90. EJ. Is a 28-year-old woman admitted to Tikur Anbesa Specialized Hospital who presented with 2 months duration of swollen lymph nodes in her neck and right axilla. She states that the nodes in her neck “come and go” but are always somewhat swollen; she relates this to a sore throat. The node in the axilla has been consistently swollen and painful during this time. She also complains of new-onset fatigue and general low back pain for the last 4–5 months. To confirm diagnosis biopsy was sent and the result showed the presence of Reed Stenberg cells. The attending physician asked the pharmacist that what would be the most effective initial risk-adapted treatment for this patient. If you were the pharmacist what will be the best treatment for her?
A. Stanford V
C. R-CHOP
B. ABVD
D. MOPP

91. HK is a 55 years old male patient admitted to hematology ambulatory clinic of TASH with the assessment of Rai Stage I –Chronic lymphocytic leukemia (CLL). Which one of the following treatment approach is best for HK?
A. Watchful waiting/observation
B. Chlorambucil + Prednisolone

C. Chlorambucil only
D. Prednisolone only

92. The major side effect of Irinotecan in the management of colorectal cancer is:
A. Peripheral neuropathy
B. Hypersensitivity reaction
C. Diarrhea
D. Ototoxicity

93. JK is 5 years old newly diagnosed AML patient admitted to pediatric oncology/hematology ward to take 7+3 regimen, which stands for:
A. Daunorubicin or doxorubicin on days 1-3 with cytarabine on days 1-7
B. Daunorubicin or doxorubicin on days 1-7 with cytarabine on days 1-3
C. Daunorubicin or doxorubicin with cytarabine for a total of 10 days
D. Daunorubicin or doxorubicin given for 7 weeks and cytarabine given for 3 weeks

94. DF is 43 years old breast cancer patient and undergo complete mastectomy. Which of the following hormonal therapy is most appropriate for adjuvant treatment in this patient?
A. Anastrozole
B. Exemestane
C. Letrozole
D. Tamoxifen

95. AB is a 44 years old female patient admitted to TASH hospital a week back with the diagnosis of ovarian cancer, which was biopsy proven and the physicians decided to start neoadjuvant chemotherapy with cisplatin + Paclitaxel regimen. Regarding the sequence of administration, which one is true about AB's regimen?
A. Cisplatin should be infused first followed by Paclitaxel to minimize risk of hypersensitivity reaction.
B. Paclitaxel should be infused first followed by Cisplatin to minimize risk of hypersensitivity reaction.
C. Cisplatin should be infused first followed by Paclitaxel to minimize risk of bone marrow suppression.
D. Paclitaxel should be infused first followed by Cisplatin to minimize risk of bone marrow suppression.

96. Nonsteroidal anti-inflammatory drug (NSAID)- induced ulcers differ from Helicobacter pylori (HP)- associated ulcers in that an NSAID-induced ulcer is:
    A. Most likely located in the stomach
    B. Most likely associated with gastric acid hypersecretion
    C. Most likely associated with less severe upper gastrointestinal bleeding
    D. Most likely associated with a greater degree of ulcer-related epigastric pain
97. The preferred initial treatment option for a 45-year-old male presenting with a 3-month history of severe, continuous GERD symptoms is:
    A. Patient-directed therapy with OTC omeprazole
    B. Prescription strength H2-receptor antagonist
    C. Prescription strength proton pump inhibitor
    D. Antireflux therapy
98. The following type patient is more at risk for developing GERD:
    A. 50-year-old obese female smoker
    B. 24-year-old white female with Crohn's disease
    C. 18-year-old African American male athlete
    D. 35-year-old male with below the knee amputation
99. A 50-year-old male truck driver might be most concerned with which of the following side effects of proton pump inhibitors:
    A. Vitamin B12 deficiency
    B. Dizziness
    C. Headache
    D. Constipation
100. The preferred HP initial eradication regimen for a patient with an active ulcer who is admittedly noncompliant is:
    A. Amoxicillin plus omeprazole ×14 days
    B. Bismuth subsalicylate plus metronidazole plus tetracycline plus omeprazole ×7 days
    C. Lansoprazole plus amoxicillin plus clarithromycin ×10 days

D. Pantoprazole plus clarithromycin plus metronidazole ×14 days

101. The preferred drug treatment regimen for a penicillin-allergic, HP-positive 35-year-old man with epigastric pain and a duodenal ulcer documented by radiography is:

A. Lansoprazole plus clarithromycin
B. Rabeprazole plus clarithromycin plus furazolidone
C. Omeprazole plus metronidazole plus clarithromycin
D. Bismuth subsalicylate plus metronidazole plus tetracycline plus pantoprazole

102. The most important parameter to monitor to assess ulcer healing in a HP-positive 25-year-old patient who just completed eradication therapy for his first ulcer is:

A. Symptom relief 1–2 weeks after completion of drug treatment
B. Upper endoscopy on completion of drug treatment
C. Urea breath test 4–6 weeks after completion of drug treatment
D. In-office antibody detection 4 weeks after completion of drug treatment

103. C.U., a 58-year-old chronic alcoholic, was hospitalized after a barroom brawl. A CBC was ordered, and the following RBC indices were noted: Hgb: 10g; Hct: 30%; MCV, 108 μm^3; MCH, 38 pg; and MCHC, 34 g/dL(33-37g/dl). If the patient is anemic, what type of anemia is it?

A. Normocytic normochromic
B. Normochromic macrocytic
C. Hyeprchromic microcytic
D. Hypochromic macrocytic

104. If hyponatremia occurs in patients with no significant volume expansion (edema), then it is most likely due to:
    A. Heart failure and renal impairment
    B. Administration of exogenous albumin or mannitol
    C. Deficiency of aldosterone
    D. Excess of anti-diuretic hormone
105. BA. a 35-year-old woman was treated for 7 days with dicloxacillin for cellulitis of the left leg. On the eighth day, an allergic urticarial rash developed. The CBC showed a total leukocyte count of 10,000/mm3 (Normal: 3.2 to 9.8 × 10^3/mm^3 or 3.2 to 9.8 × 10^9/L) with 6% (Normal: 1% to 3% of WBC) eosinophils. What is the significance of this eosinophil count in this patient?
    A. It’s an indicative of bacterial infection in this case cellulitis
    B. It’s an indicative of the response to dicloxacillin antibiotic therapy
    C. It’s an indicative of the development of dicloxacillin adverse effect
    D. It’s an indicative of both the duration and severity of cellulitis