

## Antimicrobial I, II, III, IV

Test your knowledge!

**Q1:** A 24-year-old pregnant female presents to the urgent care clinic with fever, frequency, and urgency. She is diagnosed with a urinary tract infection (UTI). Based on potential harm to the fetus, which of the following medications should be avoided in treating her UTI?

- A. Nitrofurantoin.
- B. Amoxicillin.
- C. Cephalexin
- D. Tobramycin or doxycycline**

**Q2:** Which of the following is the primary method of B-lactam Resistance with *Streptococcus pneumoniae*?

- A. Modification of target site.**
- B. Decreased drug levels due to changes in permeability.
- C. Decreased drug levels due to an efflux pump.
- D. Enzymatic inactivation.

**Q3:** Q: In a patient suffering from pseudomembranous colitis due to *C difficile* with established hypersensitivity to metronidazole the most likely drug to be of clinical value is?

- A) Amoxicillin
- B) Chloramphenicol
- C) Doxycycline
- D) Vancomycin**

**Q4:** A woman has a sexually transmitted disease, and the decision is made to treat her with antibiotics as an outpatient. She is warned that unpleasant reactions may occur if she consumes alcoholic beverages while taking this drug. The antibiotic can be identified as which of the following?

- A. Sulfamethoxazole
- B. Doxycycline
- C. Metronidazole**
- D. Ofloxacin

**Q5:** A 58-year-old male with a history of hepatitis C, cirrhosis, and ascites presents with spontaneous bacterial peritonitis. Which of the following antibiotics requires close monitoring and dosing adjustment in this patient given his liver disease?

- A. Penicillin G.
- B. Tobramycin.
- C. Erythromycin.**
- D. Vancomycin.

**Q6:** Which of the following antibiotics is considered safe to use in neonates?

- A. Chloramphenicol.
- B. Sulfamethoxazole/trimethoprim.
- C. Tetracycline.
- D. Penicillin G.**

**Q7:** Which of the following adverse drug reactions precludes a patient from being rechallenged with that drug in the future?

- A. Itching/rash from penicillin.
- B. Stevens-Johnson syndrome from sulfamethoxazole–trimethoprim.**
- C. Gastrointestinal (GI) upset from clarithromycin.
- D. *Clostridium difficile* superinfection from moxifloxacin.

**Q8:** A 45-year-old male presented to the hospital 3 day ago with severe cellulitis and a large abscess on his left leg. Incision and drainage were performed on the abscess, and cultures revealed methicillin-resistant *Staphylococcus aureus*. Which of the following would be the most appropriate treatment option for once daily outpatient intravenous therapy?

- A. Ertapenem.
- B. Nafcillin.
- C. Daptomycin.**
- D. Piperacillin/tazobactam.

**Q9:** Which anti microbial could be given as the drug of choice in treatment and prophylaxis of cholera?

- A. Penicillin G
- B. Chloramphenicol
- C. Amikacin
- D. Tetracycline D**

**Q10:** In which of the following cases would it be appropriate to use vanomycin?

- A. A 29-year-old pregnant female with ventilator associated pneumonia.
- B. A 76-year-old male with hospital-acquired pneumonia also receiving amiodarone for atrial fibrillation.
- C. A 36-year-old male with cellulitis and abscess growing MRSA.**
- D. A 72-year-old female with a diabetic foot infection growing MRSA who has moderate renal dysfunction.

**Q11:** A 72-year-old male is admitted to the hospital from a nursing home with severe pneumonia. He was recently discharged from the hospital 1 week ago after open heart surgery. The patient has no known allergies. Which of the following regimens is most appropriate for empiric coverage of methicillin-resistant *Staphylococcus aureus* and *Pseudomonas aeruginosa* in this patient?

- A. Vancomycin + cefepime + ciprofloxacin.**
- B. Vancomycin + ceftazidime + ciprofloxacin.
- C. Telavancin + cefepime + ciprofloxacin.
- D. Daptomycin + cefepime + ciprofloxacin.

**Q12:** A 23-year-old male presents with acute appendicitis that ruptures shortly after admission. He is taken to the operating room for surgery, and postsurgical cultures reveal *Escherichia coli* and *Bacteroides fragilis*, susceptibilities pending. Which of the following provides adequate empiric coverage of these two pathogens?

- A. Cefepime.
- B. Piperacillin/tazobactam.**
- C. Aztreonam
- D. Ceftazidime

**Q13:** A 25-year-old male presents to the urgent care center with a painless sore on his genitals that started 1 to 2 weeks ago. He reports unprotected sex with a new partner about a month ago. A blood test confirms the patient has *Treponema pallidum*. Which of the following is the drug of choice for the treatment of this patient's infection as a single dose?

- A. Benzathine penicillin G.**
- B. Ceftriaxone.
- C. Aztreonam.
- D. Vancomycin.

**Q14:** 38.7 A 20-year-old female presents to the emergency room with headache, stiff neck, and fever for 2 days and is diagnosed with meningitis. Which of the following agents is the best choice for the treatment of meningitis in this patient?

- A. Cefazolin.
- B. Cefdinir.
- C. Cefotaxime.**
- D. Cefuroxime axetil.

**Q15:** An 18-year-old female presents to the urgent care clinic with urinary frequency, urgency, and fever for the past 3 days. Based on symptoms and a urinalysis, she is diagnosed with a urinary tract infection. Cultures reveal *Enterococcus faecalis* that is penicillin sensitive. Which of the following is an appropriate oral option to treat the urinary tract infection in this patient?

- A. Cephalexin.
- B. Vancomycin.
- C. Cefdinir.
- D. Amoxicillin.**

**Q16:** Which of the following antibiotic combinations is inappropriate based on antagonism at the same site of action?

- A. Clindamycin and erythromycin.**
- B. Doxycycline and amoxicillin.
- C. Tigecycline and azithromycin.
- D. Ciprofloxacin and amoxicillin.

**Q17:** Children younger than 8 years of age should not receive tetracyclines because these agents:

- A. Cause rupture of tendons.
- B. Deposit in tissues undergoing calcification.**
- C. Do not cross into the cerebrospinal fluid.
- D. Can cause aplastic anemia.

**Q18:** A 30-year-old pregnant female has cellulitis caused by MRSA. Which of the following antibiotics would be the most appropriate option for outpatient therapy?

- A. Doxycycline.
- B. Clindamycin.**
- C. Quinupristin/dalfopristin.
- D. Tigecycline.

**Q19:** A patient is being discharged from the hospital on a 3-week course of clindamycin. Which of the following potential adverse effects should be discussed with her?

- A. Hyperbilirubinemia.
- B. Nephrotoxicity.
- C. *Clostridium difficile* diarrhea.**
- D. Pseudotumor cerebri.

**Q20:** A 32-year-old male presents to an outpatient clinic with a 5-day history of productive cough, purulent sputum, and shortness of breath. He is diagnosed with community-acquired pneumonia (CAP). It is noted that this patient has a severe ampicillin allergy (anaphylaxis). Which of the following would be an acceptable treatment for this patient?

- A. **Levofloxacin.**
- B. Ciprofloxacin.
- C. Penicillin VK.
- D. Nitrofurantoin.

**Q21:** A 22-year-old female presents with a 2-day history of dysuria with increased urinary frequency and urgency. A urine culture and urinalysis are done. She is diagnosed with a urinary tract infection (UTI) caused by *E. coli*. All of the following would be considered appropriate therapy for this patient except:

- A. Levofloxacin.
- B. Cotrimoxazole.
- C. **Moxifloxacin.**
- D. Nitrofurantoin.

**Q22:** The primary mechanism of antibacterial action of the penicillins involves inhibition of

- A. Beta-lactamases
- B. N-acetylmuramic acid synthesis
- C. **Peptidoglycan cross-linking**
- D. Synthesis of cell membranes

**Q23:** A patient needs antibiotic treatment for native valve, culture-positive infective enterococcal endocarditis. His medical history includes a severe anaphylactic reaction to penicillin G during the last year. The best approach would be treatment with

- (A) Amoxicillin-clavulanate
- (B) Aztreonam
- (C) Cefazolin plus gentamicin
- (D) **Vancomycin**

**Q24:** Which statement about vancomycin is accurate?

- (A) **Active against methicillin-resistant staphylococci**
- (B) Bacteriostatic
- (C) Binds to penicillin-binding proteins (PBPs)
- (D) Hepatic metabolism

**Q25:** Which statement about imipenem is accurate?

- (A) Active against methicillin-resistant staphylococci
- (B) Has a narrow spectrum of antibacterial action
- (C) **In renal dysfunction, dosage reduction is necessary to avoid seizures**
- (D) Is highly susceptible to beta-lactamases produced by *Enterobacter* species

**Q26:** A 36-year-old woman recently treated for leukemia is admitted to the hospital with malaise, chills, and high fever. Gram stain of blood reveals the presence of gram-negative bacilli. The initial diagnosis is bacteremia, and parenteral antibiotics are indicated. The records of the patient reveal that she had a severe urticarial rash, hypotension, and respiratory difficulty after oral penicillin V about 6 months ago. The most appropriate drug regimen for empiric treatment is

- (A) **Erythromycin**
- (B) Cefazolin
- (C) Imipenem
- (D) Nafcillin

**Q27:** A 2-year-old child is brought to the hospital after ingesting pills that a parent had used for bacterial dysentery when traveling outside the United States. The child has been vomiting for more than 24 h and has had diarrhea with green stools. He is now lethargic with an ashen color. Other signs and symptoms include hypothermia, hypotension, and abdominal distention. The drug most likely to be the cause of this problem is

- (A) Ampicillin
- (B) **Chloramphenicol**
- (C) Clindamycin
- (D) Doxycycline

**Q28:** The mechanism of antibacterial action of doxycycline involves

- (A) Antagonism of bacterial translocase activity
- (B) Binding to a component of the 50S ribosomal subunit
- (C) Inhibition of DNA-dependent RNA polymerase
- (D) **Interference with binding of aminoacyl-tRNA to bacterial ribosomes**

**QA-C:** A 52-year-old man (weight 70 kg) is brought to the hospital emergency department in a confused and delirious state. He has had an elevated temperature for more than 24 h, during which time he had complained of a severe headache and had suffered from nausea and vomiting. Lumbar puncture reveals an elevated opening pressure, and cerebrospinal fluid findings include elevated protein, decreased glucose, and increased neutrophils. Gram stain of a smear of cerebrospinal fluid reveals gram-positive diplococci, and a preliminary diagnosis is made of purulent meningitis. The microbiology report informs you that for approximately 15% of *S pneumoniae* isolates in the community, the minimal inhibitory concentration for penicillin G is 20 mcg/mL.

**Q29-A:** Treatment of this patient should be initiated immediately with intravenous administration of

- A. Ampicillin-sulbactam
- B. Cefazolin
- C. Cefotaxime plus vancomycin**
- D. Nafcillin

**Q30-B:** Resistance of pneumococci to penicillin G is due to

- A. Beta-lactamase production
- B. Changes in chemical structure of target penicillin-binding proteins**
- C. Changes in porin structure
- D. Changes in the D-Ala-D-Ala building block of peptidoglycan precursor

**Q31-C:** If this patient had been 82 years old and the Gram stain of the smear of cerebrospinal fluid had revealed gram-positive rods resembling diphtheroids, the antibiotic regimen for empiric treatment would include

- A. Ampicillin**
- B. Aztreonam
- C. Cefazolin
- D. Fosfomycin

**QA-B:** A 33-year-old man was seen in a clinic with a complaint of dysuria and urethral discharge of yellow pus. He had a painless clean-based ulcer on the penis and nontender enlargement of the regional lymph nodes. Gram stain of the urethral exudate showed gram-negative diplococci within polymorpho-nucleocytes. The patient informed the clinic staff that he was unemployed and had not eaten a meal for 2 days.

**Q32-A:** The most appropriate treatment of gonorrhea in this patient is

- A. Ampicillin orally for 7 d
- B. Ceftriaxone intramuscularly as a single dose**
- C. Procaine penicillin G intramuscularly as a single dose plus oral probenecid
- D. Tetracycline orally for 5 d

**Q33-B:** Immunofluorescent microscopic examination of fluid expressed from the penile chancre of this patient revealed treponemes. Because he appears to be infected with *Treponema pallidum*, the best course of action would be to

- A. Administer a single oral dose of fosfomycin
- B. Give no other antibiotics because drug treatment of gonorrhea provides coverage for incubating syphilis
- C. Inject intramuscular benzathine penicillin G**
- D. Treat with oral tetracycline for 7 d

**Q34:** Clarithromycin and erythromycin have very similar spectra of antimicrobial activity. The major advantage of clarithromycin is that it

- A. Does not inhibit hepatic drug-metabolizing enzymes
- B. Eradicates mycoplasmal infections in a single dose
- C. Has greater activity against *M avium-intracellulare* complex**
- D. Is active against strains of streptococci that are resistant to erythromycin + *H pylori*

**Q35:** 9. A 5-d course of treatment for community-acquired pneumonia would be effective in this patient with little risk of drug interactions if the drug prescribed were

- (A) Ampicillin
- (B) Azithromycin**
- (C) Clindamycin
- (D) Erythromycin

**Q36:** Concerning quinupristin-dalfopristin, which statement is accurate?

- (A) Active in treatment of infections caused by *E faecalis*
- (B) Bacteriostatic
- (C) Hepatotoxicity has led to FDA drug alerts
- (D) Used in management of infections caused by multidrug-resistant streptococci**

**Q37:** A 26-year-old woman was treated for a suspected chlamydial infection at a neighborhood clinic. She was given a prescription for oral doxycycline to be taken for 10 d. Three weeks later, she returned to the clinic with a mucopurulent cervicitis. On questioning she admitted not having the prescription filled. The best course of action at this point would be to

- (A) Delay drug treatment until the infecting organism is identified
- (B) Rewrite the original prescription for oral doxycycline
- (C) Treat her in the clinic with a single oral dose of cefixime
- (D) Treat her in the clinic with a single oral dose of azithromycin**

**Q38:** A 55-year-old patient with a prosthetic heart valve is to undergo a periodontal procedure involving scaling and root planing. Several years ago, the patient had a severe allergic reaction to procaine penicillin G. Regarding prophylaxis against bacterial endocarditis, which one of the following drugs taken orally is most appropriate?

- (A) Amoxicillin 10 min before the procedure
- (B) Clindamycin 1 h before the procedure**
- (C) Erythromycin 1 h before the procedure and 4 h after the procedure
- (D) Vancomycin 15 min before the procedure

**Q39:** Which of the following antimicrobials act by inhibition of 50s ribosomal subunit and given topically for acne?

- A. Neomycin
- B. Tetracycline
- C. Rifampin
- D. Sodium fusidate**

**Q40:** Regarding the mechanism of action of aminoglycosides, the drugs

- (A) Are bacteriostatic
- (B) Bind to the 50S ribosomal subunit
- (C) Cause misreading of the code on the mRNA template**
- (D) Inhibit peptidyl transferase

**Q41:** A 67-year-old man is seen in a hospital emergency department complaining of pain in and behind the right ear. Physical examination shows edema of the external otic canal with purulent exudate and weakness of the muscles on the right side of the face. The patient informs the physician that he is a diabetic. Gram stain of the exudate from the ear shows many polymorphonucleocytes and gram-negative rods, and samples are sent to the microbiology laboratory for culture and drug susceptibility testing. A preliminary diagnosis is made of external otitis. At this point, which of the following is most appropriate?

- (A) Amikacin should be administered by intramuscular injection, and the patient should be sent home
- (B) Analgesics should be prescribed for pain, but antibiotics should be withheld pending the results of cultures
- (C) Oral cefaclor should be prescribed together with analgesics, and the patient should be sent home
- (D) The patient should be hospitalized and treatment started with gentamicin plus ticarcillin**

**Q42:** Regarding the toxicity of aminoglycosides, which statement is accurate?

- (A) Gentamicin and tobramycin are the least likely to cause renal damage
- (B) Ototoxicity due to amikacin and gentamicin includes vestibular dysfunction that is often irreversible**
- (C) Ototoxicity is reduced if loop diuretics are used to facilitate aminoglycoside renal excretion
- (D) Skin reactions are rare with use of topical neomycin

**Q43:** All of the following statements about the clinical uses of the aminoglycosides are accurate EXCEPT

- (A) Effective in the treatment of infections caused by *Bacteroides fragilis***
- (B) Gentamicin is used with ampicillin for synergistic effects in the treatment of enterococcal endocarditis
- (C) Netilmicin is more likely to be effective than streptomycin in the treatment of a hospital-acquired infection caused by *Serratia marcescens*
- (D) Often used in combination with cephalosporins in the empiric treatment of life-threatening bacterial infections

**Q44:** This drug has characteristics almost identical to those of gentamicin but has much weaker activity in combination with penicillin against enterococci.

- (A) Amikacin
- (B) Erythromycin
- (C) Netilmicin
- (D) Tobramycin**

**Q45:** Your 23-year-old female patient is pregnant and has gonorrhea. The medical history includes anaphylaxis following exposure to amoxicillin. The most appropriate drug to use is

- (A) Azithromycin**
- (B) Cefixime
- (C) Ceftriaxone
- (D) Ciprofloxacin

**Q46:** Which statement about “once-daily” dosing with aminoglycosides is not accurate?

- (A) Convenient for outpatient therapy
- (B) Dosage adjustment is less important in renal insufficiency**
- (C) Less nursing time is required for drug administration
- (D) Often less toxic than conventional (multiple) dosing regimens

**Q47:** Trimethoprim-sulfamethoxazole is established to be effective against which of the following opportunistic infections in the AIDS patient?

- (A) Cryptococcal meningitis
- (B) Disseminated herpes simplex
- (C) Oral candidiasis
- (D) Toxoplasmosis**

**Q48:** A 24-year-old woman has returned from a vacation abroad suffering from traveler’s diarrhea, and her problem has not responded to antidiarrheal drugs. A pathogenic gram-negative bacillus is suspected. Which drug is most likely to be effective in the treatment of this patient?

- (A) Amoxicillin
- (B) Ciprofloxacin**
- (C) Sulfacetamide
- (D) Trimethoprim
- (E) Vancomycin

**Q49:** Which of the following statements about the clinical uses of the aminoglycosides is accurate?

- A) Effective in the treatment of infections caused by anaerobes such as *Bacteroides fragilis*
- B) Gentamycin and ampicillin can be combined for synergistic effects in the treatment of enterococcal endocarditis**
- C) Often used as monotherapy in the empiric treatment of life-threatening bacterial infections
- D. Aminoglycosides are well absorbed after oral administration

**Q50:** Which statement about the fluoroquinolones is accurate?

- (A) A fluoroquinolone is the drug of choice for treatment of an uncomplicated urinary tract infection in a 7-year-old girl
- (B) Antacids increase the oral bioavailability of fluoroquinolones
- (C) Gonococcal resistance to fluoroquinolones may involve changes in DNA gyrase**
- (D) Modification of moxifloxacin dosage is required in patients when creatinine clearance is less than 50 mL/min

**Q51:** A 55-year-old man complains of periodic bouts of diarrhea with lower abdominal cramping and intermittent rectal bleeding. Seen in the clinic, he appears well nourished, with blood pressure in the normal range. Examination reveals moderate abdominal pain and tenderness. His current medications are limited to loperamide for his diarrhea. Sigmoidoscopy reveals mucosal edema, friability, and some pus. Laboratory findings include mild anemia and decreased serum albumin. Microbiologic examination via stool cultures and mucosal biopsies do not reveal any evidence for bacterial, amebic, or cytomegalovirus involvement. The most appropriate drug to use in this patient is

- (A) Amoxicillin
- (B) Ciprofloxacin
- (C) Doxycycline
- (D) Sulfasalazine**

**Q52:** Which adverse effect is most likely to occur with sulfonamides?

- (A) Fanconi’s aminoaciduria syndrome
- (B) Hematuria
- (C) Kernicterus in the newborn
- (D) Skin reactions**

**Q53:** Which drug is effective in the treatment of nocardiosis and, in combination with pyrimethamine, is prophylactic against *Pneumocystis jirovecii* infections in AIDS patients?

- (A) Amoxicillin
- (B) Ciprofloxacin
- (C) Clindamycin
- (D) Sulfadiazine**

**Q54:** Supplementary folinic acid may prevent anemia in folate deficient persons who use this drug; it is a weak base achieving tissue levels similar to those in plasma

- (A) Ciprofloxacin
- (B) Moxifloxacin
- (C) Sulfacetamide
- (D) Trimethoprim**

**Q55:** Which of the following changes will result in methicillin-resistant *S. aureus*?

- A. Change in muramyl pentapeptide
- B. Change in porin structure
- C. Presence of penicillinase
- D. Structural changes in penicillin-binding proteins (PBP)**

**Q56:** A 7-year-old child presents with pharyngitis and fever of 2 days' duration, and microbiology reveals small, translucent, beta-hemolytic colonies sensitive in vitro to bacitracin. Past history includes a severe allergic reaction to amoxicillin when used for an ear infection. The physician needs to treat this infection but prefers not to use a drug that needs parenteral administration. Which one of the following agents is most likely to be appropriate in terms of both effectiveness and safety?

- A. Azithromycin**
- B. Cefaclor
- C. Doxycycline
- D. Penicillin G

**Q57:** A woman has a sexually transmitted disease, and the decision is made to treat her with antibiotics as an outpatient. She is warned that unpleasant reactions may occur if she consumes alcoholic beverages while taking this drug. The antibiotic can be identified as which of the following?

- A. Trimethoprim
- B. Doxycycline
- C. Metronidazole**
- D. Ofloxacin

**Q58:** An 82-year-old hospitalized patient with creatinine clearance of 25 mL/min has a microbial infection requiring treatment with antibiotics. Which of the following drugs is least likely to require a dosage adjustment, either a smaller dose than usual or an increased interval between doses?

- A. Amphotericin B
- B. Ceftriaxone**
- C. Gentamicin
- D. Imipenem-cilastatin

**Q59:** What antibiotic effectively treats a variety of causative organisms for bacterial pneumonia, and also works at the 50S ribosomal subunit?

- A. Azithromycin**
- B. Ceftriaxone
- C. Doxycycline
- D. Ofloxacin

**Q60:** In bacterial meningitis, third-generation cephalosporins are common drugs of choice. However, in neonatal meningitis they not provide coverage if the infection was due to which of the following organisms?

- A. Meningococci
- B. *L. monocytogenes***
- C. Pneumococci
- D. *E. coli*

**Q61:** Which one of the following drugs inhibits bacterial protein synthesis, preventing the translocation step via its interaction with the 50S ribosomal subunit?

- A. Clindamycin**
- B. Gentamicin
- C. Vancomycin
- D. Imipenem

**Q62:** Which of the following is a mechanism underlying the resistance of strains of *S. pneumoniae* to the widely used antibiotic ciprofloxacin?

- A. Reduced topoisomerase sensitivity to inhibitors**
- B. Increased synthesis of PABA**
- Anti**
- B. Formation of methyltransferases that change receptor structure
- C. Structural changes in porins
- D. Formation of drug-inactivating hydrolases

**Q63:** Gentamicin would be an ineffective drug for which of the following organisms?

- A. *E. coli*
- B. *B. fragilis***
- C. *Pseudomonas*
- D. *Listeria* if combined with ampicillin

**Q64:** In the treatment of a urinary tract infection in a patient known to have a deficiency of glucose-6-phosphate dehydrogenase, it would not be advisable to prescribe which of the following?

- A. Ciprofloxacin
- B. Amoxicillin
- C. Cephalexin
- D. Doxycycline
- E. Sulfamethoxazole**

**Q65:** What is the most likely mechanism of resistance for methicillin-resistant *Staphylococcus aureus* to antistaph penicillins?

- A. Methylation of the binding site
- B. Active efflux of the drug from the bacteria
- C. B-lactamase production
- D. Phosphorylation of the drug by bacterial enzymes
- E. Structural modifications of PBPs**

**Q66:** In a patient who has an established hypersensitivity to metronidazole, what is the most appropriate drug to use for the management of pseudo-membranous colitis?

- A. Ampicillin
- B. Clindamycin
- C. Doxycycline
- D. Vancomycin**

**Q67:** An AIDS patient who is being treated with multiple drugs, including AZI, lamivudine, indinavir, ketoconazole, and cotrimoxazole, develops breast hypertrophy, central adiposity, hyperlipidemia, insulin resistance, and nephrolithiasis. If these changes are related to his drug treatment, which of the following is the most likely cause?

- A. Azidothymidine
- B. Indinavir**
- C. Ketoconazole
- D. Sulfamethoxazole

**Q68:** Which recommendation should be provided to avoid photo-toxicity associated with fluoroquinolone therapy?

- A. Take with food
- B. Drink with 1L of water per day to minimize drug buildup in skin tissue
- C. Take the medication at night to avoid high drug concentration during the day
- D. Use sunscreen and avoid excessive exposure to UV light**

**Q69:** A 21 year old marathon runner reports to the clinic with acute Achilles rupture. The nurse noted that the patient recently took an antibiotic for community acquired pneumonia. Which antibiotic may have contributed to tendon rupture?

- A. Levofloxacin**
- B. Amoxicillin + augmentin
- C. Minocycline
- D. Cefdinir

**Q70:** Which one of the following drugs is most likely to be equally effective in the treatment of amebic dysentery and “backpacker’s diarrhea”?

- A. Ciprofloxacin
- B. Diloxanide
- C. Metronidazole**
- D. Quinacrine

**Q71:** Which of the following fluoroquinolones is effective against anaerobic bacteria?

- A. Ofloxacin.
- B. Trovafloxacin.**
- C. Norfloxacin.
- D. Ciprofloxacin.

**Q72:** An example of DNA gyrase enzyme inhibitor which can be given orally once a day is:

- A. Aztreonam.
- B. Spectinomycin.
- C. Vancomycin.
- D. Levofloxacin.**

**Q73:** Which of the following antimicrobials is anti-staph?

- A. Penicillin V.
- B. Ampicillin.
- C. Dicloxacillin.**
- D. Penicillin G I.M.



**Q74:** What is the Antimicrobial of choice for treatment of 10 years old child came to you with fever and pain due to typhoid fever?

- A. Tetracycline
- B. Ciprofloxacin
- C. Erythromycin
- D. Ampicillin + sulbactam**

**Q75:** Which one of the following antimicrobials is a cell wall synthesis inhibitor with activity against bacteroides fragillis?

- A. Metronidazole.
- B. Cefepime**
- C. Ofloxacin.
- D. Doxycyclin.

**Q76:** The rationale for the use of a bacteriostatic antibiotic is :

- A. Removal of viable organisms
- B. Cause cell death of pathogens
- C. Arrest growth of bacteria**
- D. Requirement for lower doses of medication

**Q77:** if you suspect neonatal sepsis, and IV ampicillin was started, which additional antibiotics could be given simultaneously to have a synergistic effect in controlling this infection?

- A. Imipenem
- B. Cephalexin
- C. Gentamicin**
- D. Aztreonam

**Q78:** Bactericidal Antimicrobial for treatment of pneumocystis craini pneumonia in 24 years old male with HIV with decreased leucocystic count is:

- A. Cephtriaxone
- B. Amikacin
- C. Augmentin (amoxicillin + clavulanic acid)
- D. Co-trimoxazole**

**Q79:** Which of the following antimicrobials can be used to treat mycoplasma pneumonia in a pregnant lady:

- A. Otioxacin.
- B. Moxifloxacin.
- C. Azithromycin.**
- D. co-trimoxazole

**Q80:** Which of the following antimicrobials is appropriate for oral treatment of pharyngitis caused by streptococcal infection in 8 years old boy?

- A. Ciprofloxacin
- B. Metronidazole.
- C. Penicillin V.**
- D. Vancomycin.

**Q81:** Which one of the following antimicrobials can be used to treat pharyngitis and fever in a young child who had past history of severe allergic reaction to amoxycillin?

- A. Impenem.)
- B. Cefacior Y
- C. Azithromycin**
- D. Procaine penicillin Y

**Q82:** A diabetic patient is diagnosed to have a septicemia due to E. coli. Since this organism tends to be resistant to nafcillin. Which of the following would you select to effectively treat this patient?

- A) Clarithromycin
- B) Cefepime**
- C) Polymyxin
- D) Oxytetracycline

**Q83:** A 65-year-old woman has returned from a vacation abroad suffering from traveler's diarrhea, and her problem has not responded to antidiarrheal drugs. A pathogenic gramnegative bacillus is suspected. Which drug is most likdy to be effective in the treatment of this patient?

- A) Ampicillin
- B) Ofloxacin**
- C) Sulfadiazine
- D) Trimethoprim

**Q84:** Beta-lactamase production by strains of *Haemophilus influenzae* and *N gonorrhoeae* confers resistance against penicillin G. Which of the following drugs is most likely to be effective against resistant strains of these organisms?

- A) **Ceftriaxone**
- B) Amoxicillin
- C) Clindamycin
- D) Gentamicin

**Q85:** A 78-year-old alcoholic male with mild Alzheimer's disease and poor dental hygiene is to have his remaining teeth extracted. Because of his Alzheimer's disease, he is not a candidate for dentures. He also has a history of mitral valve stenosis with mild cardiac insufficiency. His current medications include captopril, digoxin, and furosemide. Which of the following medications would be the most appropriate for prophylaxis prior to his dental procedure?

- A) **Amoxicillin**
- B) Co-trimoxazole
- C) Imipenem
- D) Tetracycline

**Q86:** A 61 year old man is taking diltiazem for the management of classic angina. Which one of the following antimicrobials should be avoided in this patient due its hazardous effect?

- A) Doxycycline
- B) **Erythromycin**
- C) Isotretinoin
- D) Clindamycin

**Q87:** A 17-year-old woman presents to her primary care physician with polydipsia and polyuria. She is found to have high amounts of amino acids, phosphates, bicarbonate, and glucose in her urine. She reports that after complaining to a friend about her acne, her friend gave her some old acne medication that she had in her medicine cabinet. Which medication did she likely use?

- A) **Doxycycline**
- B) Erythromycin
- C) Isotretinoin
- D) Clindamycin

**Q88:** Which of the following is the most effective agent in the treatment of Rickettsia, Mycoplasma, Protozoa and Chlamydia infections?

- A) Penicillin G
- B) **Tetracycline**
- C) Gentamicin
- D) Vancomycin

**Q89:** A patient needs antibiotic treatment for infective enterococcal endocarditis. His medical history includes an allergic reaction to penicillin G during the last year. The best approach would be treatment with:

- A) Ceftriaxone
- B) **Vancomycin**
- C) Amoxicillin-clavulanate
- D) Cefuroxime

**Q90:** A 64-year-old immunocompromised woman acquired diffuse bilateral bronchopneumonia from contaminated respiratory therapy equipment. She was treated with piperacillin plus a 30S ribosomal protein synthesis inhibitor. This drug is most likely:

- A) Erythromycin
- B) Chloramphenicol
- C) **Amikacin**
- D) Linezolid

**Q91:** A 75-Year-Old woman is hospitalized for pneumonia and treated with an intravenous drug. On day three, she develops severe diarrhea. Stool is positive for clostridium difficile toxin. What is the best treatment?

- A) Lincomycin
- B) Cefuroxime
- C) **Vancomycin**
- D) Clarithromycin

**Q92:** An antimicrobial that is better to be avoided in patients with myasthenia gravis?

- A) Ampicillin
- B) **Gentamycin**
- C) Tetracycline
- D) Rifampicin

**Q93:** A 30-year-old male patient came to you with fever and abdominal pain. Investigations revealed positive widal test for typhoid fever. Safe treatment to start with is:

- A) Ampicillin + Clavulanic acid
- B) Roxithromycin
- C) Chloramphenicol
- D) Ofloxacin**

**Q94:** A 24-year-old primigravid woman's water breaks at 39 weeks gestation. Twenty-four hours later, she is having regular contractions 3 min apart. Her labor lasts 8 h. At the hospital, she gives birth to a baby boy, who initially appeared healthy. Within the next 12 h, the baby boy begins to have temperature fluctuations, difficulty breathing, and reduced movements. You suspect neonatal sepsis, so IV ampicillin is started. Which additional antibiotic could be given simultaneously to have a synergistic effect in controlling this infection?

- A) Meropenem
- B) Cefuroxime
- C) Amikacin**
- D) Imipenem cilastatin

**Q95:** A 55-year-old woman is hospitalized for treatment of osteomyelitis. The infectious organism is found to be susceptible to Netilmicin. Which of the following symptoms may be a signal to the physician to stop Netilmicin therapy?

- A) Salivation
- B) Headache
- C) Vertigo**
- D) Eosinophilia

**Q96:** In community acquired pneumonia, pathogen responsible for infection include pneumococci, gram negative rods, and C. pneumoniae. Which of the following drugs used as monotherapy is most likely to be both effective and safe if your patient is pregnant?

- A) Lomefloxacin
- B) Trovafoxacin
- C) Spiramycin**
- D) Clindamycin

**Q97:** Which of the following anti Microbials is bacteriocidal in action?

- A. Trimethoprim
- B. Sulfonamide
- C. Levofloxacin**
- D. All of the above

**Q98:** A 69-year-old paraplegic man developed a multi drug resistance, catheter associated urinary tract infection. He was treated with a drug that inhibits DNAgyrase and can be given orally once a day. This drug is:

- A. Bacitracin
- B. Moxifloxacin**
- C. Meropenem
- D. Vancomycin

**Q99:** A 75-year-old male developed a cough that produce blood-tinged sputum. He has a fever of 40oc: gram positive staphylococci in cultures are found in a sputum. A chest x-ray shows increased density in the right upper lobe. Of the following penicillin, which is most likely to be effective?

- A. Penicillin G procaine
- B. Ampicillin clavulanate
- C. Flucloxacillin**
- D. Piperacillin

**Q100:** Cilastatin can inhibit which of the following?

- A. Dihydrofolate reductase
- B. B lactamase
- C. Dihydropeptidase**
- D. Transpeptidase

**Q101:** A 40-year-old female with urinary tract infection treated with ciprofloxacin, which of the following enzymes inactivated by ciprofloxacin?

- A. Dihydrofolate reductase
- B. Glucose-6-phosphate dehydrogenase
- C. Na<sup>+</sup>/ k<sup>+</sup> ATPase
- D. Cytochrome P450**

**Q102:** A 23-year-old woman who underwent an open appendectomy is later found to have a wound infection. A culture grows *Pseudomonas aeruginosa*. Which of the following would be useful in treating this infection?

- A. Nafcillin
- B. Carbenicillin**
- C. Ampicillin
- D. Cloxacillin

**Q103:** A 13-year-old student came in the hospital complaining of fever and convulsions. CSF examination revealed gram positive pneumococcal meningitis. The treatment of choice can be started with:

- A. Streptomycin
- B. Clotrimazole
- C. Ceftriaxone**
- D. All of the above

**Q104:** A 39-year-old man in terminal stage of AIDS, has an overwhelming infection by *Mycobacterium avium-intracellulare* complex (MAC). He was treated with 3 egimen drugs one of them blocks RNA mediated protein synthesis by binding to 50s ribosomal subunit of R-RNA:

- A. Quinuprestin-dalfopristin**
- B. Piperacillin
- C. INH
- D. Paromomycin

**Q105:** A 26-year-old woman with chronic bronchitis lives in a region of the country where winter conditions are harsh. Her physician recommended prophylactic use of oral doxycycline, to be taken once daily, during the winter season. Which of the following statement about the characteristic and use of doxycycline in this patient is accurate?

- A. Elimination of doxycycline is predominantly via cytochrome P450-mediated hepatic metabolism
- B. Formation of drug-metabolizing enzymes is a primary mechanism of action of tetracycline
- C. Absorption from the gastrointestinal tract enhanced by yogurt
- D. The patient should discontinue the tetracycline if she becomes pregnant**

**Q106:** supplementary folic acid may prevent anaemia in folate-deficient person who use this drug: it is a weak base level similar to those in plasma:

- A. Linezolid
- B. Sulfamethoxazole
- C. Ciprofloxacin
- D. Trimethoprim**

**Q107:** A 39-year-old male with aortic insufficiency and a history of no drug allergies is given an intravenous dose of antibiotic as a prophylactic preceding the insertion of valve prosthesis. As the antibiotic infused, the patient becomes flushed over most of his body. What antibiotic is given?

- A. Trimethoprim
- B. Vancomycin**
- C. Spectinomycin
- D. All of the above

**Q108:** Bactericidal antimicrobial for treatment of pneumocystis pneumonia in 24-year-old man infected with HIV with decreased leucocytic count is:

- A. Tobramycin
- B. Cephoperazone
- C. Co-trimoxazole**
- D. Amoxicillin + clavulanic acid

**Q109:** A female patient has a pelvic inflammatory disease, and the decision is made to treat her as an outpatient with antibiotic which is a cell wall synthesis inhibitor with activity against gram negative rods including *Bacteroid fragilis*, you can identify is as:

- A. Cefoperazone**
- B. Chloramphenicol
- C. Nalidixic acid
- D. Clindamycin

**Q110:** A 10-year-old boy with glucose-6-dehydrogenase deficiency has typhoid fever, the best drug for treatment is:

- A. Ciprofloxacin
- B. Co-trim oxazole
- C. Chloramphenicol
- D. Amoxicillin**

**Q111:** The quinolone derivative that is most effective against *Pseudomonas aeruginosa* is:

- A. Liofofloxacin
- B. Nalidixic acid
- C. Domefloxacin
- D. Ciprofloxacin**

**Q112:** A 21-year-old man presents to the ambulatory care clinic with an erythematous, swollen, painful left elbow. History is significant for untreated impetigo on his left forearm. A joint aspirate reveals gram-positive cocci in cultures. The physician begins empiric treatment with vancomycin while the organism is cultured. It is found to be methicillin susceptible. Methicillin is not widely used, but which of the following is an equivalent drug that could be used to treat this man's infection?

- A. Ampicillin
- B. Penicillin V
- C. Amoxicillin subactam
- D. Dicloxacillin**

**Q113:** 50- A 6-year-old girl presented at the paediatric clinic with symptoms of sore throat, fever, chills, and general malaise. Upon examination, she was found to have intense erythema and swellings of the pharyngeal mucosa with enlarged tender anterior cervical lymph nodes. Which of the following is appropriate for oral treatment of pharyngitis caused by group A streptococcal infection?

- A. Ampicillin – sulbactam**
- B. Polymyxin B
- C. Ofloxacin
- D. Amikacin

**Q114:** The following measures are necessary for prevention of sulfonamide precipitation and crystalluria:

- A. Restriction of drinking tea and coffee
- B. Taking of drinks with alkaline pH**
- C. Taking of hot drinks
- D. Taking of drinks with acid pH

**Q115:** A 14-year-old male patient who is diagnosed with otitis media, requiring amoxicillin. The primary mechanism of antibacterial action of amoxicillin involves inhibition of:

- A. Peptidoglycan cross-linking**
- B. Transglycosylation
- C. Beta-lactamases
- D. Cell membrane synthesis

**Q116:** The antibacterial action of aminoglycoside is due to their ability to

- A. Bind to the 30s ribosomal subunit and block initiation of bacterial protein synthesis**
- B. Inhibit bacterial topoisomerases II and IV
- C. Activate autolytic enzymes
- D. Inhibit the synthesis of precursors of the linear peptidoglycan chain of the bacterial cell wall

**Q117:** A 22-year-old woman presents with left lower quadrant abdominal pain and a purulent vaginal discharge that reveals gram-negative rods. A diagnosis is made of pelvic inflammatory disease possible involving both *Neisseria gonorrhoeae* and *Chlamydia trachomatis*. A drug combination that provides adequate empiric coverage of the organisms involved in this infection is:

- A. Metronidazole, lincomycin
- B. Ceftriaxone plus doxycycline**
- C. Nalidixic acid plus ampicillin
- D. Cotrimoxazole, pyrimethamine

**Q118:** Antibiotic associated-pseudomembranous colitis is most likely to be due to:

- A. Azithromycin
- B. Vancomycin
- C. Clindamycin**
- D. Metronidazole

**Q119:** Sulfonamides may cause kernicterus in new born because sulfonamides:

- A. Decrease the binding of bilirubin to albumin**
- B. Decrease the metabolism of bilirubin
- C. Increase the breakdown of haemoglobin
- D. Increase the penetration of bilirubin to central nervous system

**Q120:** Which of the following anti-Microbials are contraindicated in pregnancy?

- A. Trimethoprim
- B. Sulfonamide
- C. Ciprofloxacin
- D. All of the above**

**Q121:** Which of the following may cause damage to growing cartilage?

- A. Fluoroquinolones.**
- B. Sulfonamides.
- C. Aminoglycosides
- d. Cephalosporins.

**Q122:** Concerning amoxicillin, all of the following statements are true EXCEPT:

- A. It is broad-spectrum penicillin.
- B. It is destroyed by  $\beta$ -lactamases.
- C. It is bactericidal.
- D. It is effective against influenza virus.**

**Q123:** Ampicillin and amoxicillin are in the same group of penicillins. Which of the following statements best characterizes amoxicillin?

- A. It has better oral absorption than does ampicillin.**
- B. It is classified as a broad - spectrum penicillin.
- C. It does not cause hypersensitivity reactions.
- D. It is effective against pseudomonas.

**Q124:** Which drug cause vertigo and imbalance and affect vestibulocochlear nerve as an adverse effect ?

- A. penicillin
- B. streptomycin**
- C. Tetracycline
- D. Bacitracin

**Q125:** 70 old female has problem in renal function which of the following antimicrobial has the lowest incident of toxicity ?

- A. polymyxin
- B. gentamycin
- C. Ceftriaxone**
- D. ampicillin

**Q126:** Which of the following have ototoxicity effect?

- A. Streptomycin
- B. Neomycin**
- C. Ciprofloxacin
- D. Tetracycline

**Q127:** All of the following techniques have been used to reduce the risk of crystalluria from sulfonamides EXCEPT:

- A. Excessive fluid intake.
- B. Combine sulfonamide with trimethoprim.
- C. Increase the solubility of the sulfonamide by decreasing the urinary pH.**
- D. Use sulfonamide with high solubility.

**Q128:** Trimethoprim-sulfamethoxazole is established to be effective against which of the following opportunistic infections in the HN-infected patient?

- A) Cryptococcal meningitis
- B) Herpes simplex
- C) Oral candidiasis
- D) Pneumocystis pneumonia**

**Q129:** In community acquired pneumonia, pathogen responsible for infection include pneumococci, gram negative rods, and C. pneumonia. Which of the following drugs used as monotherapy is most likely to be both effective and safe if your patient is pregnant?

- A. Ofloxacin,
- B. Co-trimoxazole.
- C. Moxifloxacin,
- D. Azithromycin,**

**Q130:** : A 77-year-old woman was started on antibiotics for pneumonia treatment. After 3 days of antibiotic therapy, the serum creatinine doubled. Which of the following antibiotics is most likely responsible for this increase in serum creatinine?

- A. Doxycycline
- B. Clarithromycin
- C. Tobramycin**
- D. Linezolid

**Q131:** A 24-year-old pregnant woman was diagnosed with community-acquired pneumonia and will be managed in the outpatient setting. Which antibiotic is a safe option for this patient to treat her pneumonia?

- A. Azithromycin**
- B. Doxycycline
- C. Fidaxomicin
- D. Gentamicin

**Q133:** We can add \_\_\_\_\_ to the ampicillin to skip killing of normal flora :

- A. ester**
- B. salbactam
- C. clavulanic acid
- D. procaine

**Q134:** Which of the following anti Microbials can be indicated in the case of septic abortion?

- A. Co-trimxazole
- B. Nalidixic Acid
- C. Lincomycin**
- D. All of the above

**Q135:** Which statement regarding the adverse effects of macrolides are true?

- A. Mild GI Upset are not likely to occur with erythromycin
- B. Azithromycin has been reported to inhibit CYP-450 enzymes
- C. Bacterial resistance is likely to develop if used alone for more than 1 week**
- D. Combination of erythromycin with penicillin enhances the bactericidal effect of penicillin

**Q136:** Which statement about the clinical use of sulfonamides is correct?

- A. Cannot be used topically for treatment of chlamydia! infections of the eye
- B. Effective as sole agents in the treatment of prostatitis
- C. In some bacterial strains resistance occurs via reduced PABA formation
- D. Reduced intracellular uptake is a mechanism of sulfonamide resistance in some bacterial strains**

**Q137:** A 31-year-old man has gonorrhea. He has no drug allergies, but a few years ago acute hemolysis followed use of an antimalarial drug. The physician is concerned that the patient has an accompanying urethritis caused by *C trachomatis*, although no cultures or enzyme tests have been performed. Which of the following drugs will be reliably effective against both gonococci and *C trachomatis* and safe to use in this patient?

- A) Cefixime
- B. Spectinomycin
- C. Sulfamethoxazole-trimethoprim
- D. None of the above**

**Q138:** After 5 days of clindamycin treatment for a skin infection, a patient develops diarrhea (10 watery stools/day), severe abdominal pain, and fever. Which of the following organisms would you be concerned about as the causative pathogen of diarrhea?

- A. Escherichia coli
- B. Bacteroides fragilis
- C. Staphylococcus aureus
- D. Clostridium difficile**

**Q139:** Which statement about ciprofloxacin is accurate?

- A) Antagonism occurs if used with dihydrofolate reductase inhibitors
- B) Ciprofloxacin is active against MRSA strains of staphylococci
- C) Most " first-time" urinary tract infections are resistant to Ciprofloxacin
- D. Tendinitis may occur during treatment**

**Q140:** A 55-year-old woman was recently started on an antimicrobial medication to treat *Pneumocystis pneumonia* caused by *Pneumocystis jirovecii*. She returns two days later complaining of a rash and fever. Which drug was she most likely prescribed?

- A) Ciprofloxacin
- B) Clindamycin
- C) Moxifloxacin
- D) Trimethoprim-sulfamethoxazole**

**Q141:** A 32-year-old G2P1 woman in her third trimester presents to the ambulatory care clinic with dysuria and urgency. Urine is nitrite positive and leukocyte esterase positive. A drug commonly used to treat urinary tract infections is trimethoprim–sulfamethoxazole, but the physician is reluctant to use it. What risk is the physician worried about and would be a contraindication in a pregnant woman?

- A) Gray baby syndrome
- B) Kernicterus**
- C) Limb defects
- D) Premature labor

**Q142:** A 21-year-old woman college student complains of a skin lesion near her knee on the inside of her thigh. She recently returned from a trip to Africa where she played a handmade goatskin drum. The lesion is painless with a black center. The physician suspects cutaneous anthrax and prescribes oral ciprofloxacin. Which of the following should this patient avoid taking with ciprofloxacin?

- A) Alcohol
- B) Grapefruit juice
- C) Milk**
- D) Ciprofloxacin does not interact with any of these substances

**Q143:** A 3-year-old girl presents to the emergency department with a history of recurrent UTIs with costovertebral angle tenderness, high fever, and dysuria. A urine culture grows gram-negative lactose-fermenting rods. The physician suspects *E. coli* pyelonephritis. Ciprofloxacin is highly effective against *E. coli* in vitro, but the physician chooses not to use it in this case. Why would she choose not to prescribe ciprofloxacin?

- A) Ciprofloxacin is bacteriostatic, not bactericidal
- B) Ciprofloxacin is contraindicated in patients younger than 18 years old**
- C) Ciprofloxacin is effective against *E. coli* in vitro, but not efficacious in vivo
- D) Ciprofloxacin is nephrotoxic and should not be used to treat kidney infections

**Q144:** Aminoglycosides are commonly used for their concentration-dependent bactericidal activity against which group of organisms?

- A. Gram-positive aerobes
- B. Gram-negative aerobes**
- C. Gram-positive anaerobes
- D. Gram-negative anaerobes

**Q145:** Cotrimoxazole provides activity against which organism?

- A. MRSA**
- B. *Pseudomonas aeruginosa*
- C. Anaerobes
- D. *Mycoplasma*

**Q146:** A 55-year-old man presents to primary care clinic with an erythematous and tender abscess on his left thigh. He has a history of MRSA skin infections. Which is an appropriate antibiotic for empiric treatment?

- A. Ciprofloxacin
- B. Cotrimoxazole**
- C. Pyrimethamine
- D. Cephalexin

**Q147:** Which of the following anti-Microbials is first line treatment in uncomplicated UTI?

- A. Vancomycin
- B. Doxycycline
- C. Trovafloxacin**
- D. Co-Trimaxazole

**Q148:** Which aminoglycoside can be used in Gonorrhea in patients who are allergic to penicillin or there's penicillin resistance?

- A. Neomycin
- B. Paramomycin
- C. Tobramycin
- D. Spectinomycin**

**Q149:** A 24-year-old woman comes to the emergency department presenting with flank pain and high fever. The pain and fever have been associated with dysuria and increased frequency of urination. She is diagnosed with pyelonephritis and placed on IV antibiotics. After a couple of days, she develops ringing in her ears and feels unbalanced on her feet. What antibiotic was she most likely given?

- (A) Ceftriaxone
- B) Ciprofloxacin
- C) Gentamicin**
- D) Trimethoprim-sulfamethoxazole

**Q150:** Gentamicin would be an ineffective drug for which of the following organisms?

- A. *E. coli*
- B. B. Fragilis**
- C. *Pseudomonas*
- D. *Proteus mirabilis*

**Q151:** Parents of a 1-month-old baby are told their child has developed "gray baby syndrome." Which of the following antibiotics did the baby likely receive?

- A. Tobramycin
- B. Linezolid
- C. Erythromycin
- D. Chloramphenicol**



**Q152:** Which of the following is the drug of choice in acute prostatitis?

- A. Ciprofloxacin**
- B. Co-trimxazole
- C. Sulfonamide
- D. Trimethoprim

**Q153:** A 22-year-old sexually active male presents to his primary care physician with painful urination and urethral discharge. Gram stain of discharge fluid shows gram-negative diplococci. He is given ceftriaxone for gonococcal infection. What additional medication, if any, should he be given?

- A) Aztreonam
- B) Doxycycline**
- C) Imipenem/cilastatin
- D) No additional medication is needed; ceftriaxone is a suitable treatment for this patient

**Q154:** Which aminoglycoside have activity against mycobacterium T.B?

- A. Streptomycin**
- B. Amikacin
- C. Gentamicin
- D. All of the above

**Q155:** A 22-year-old woman presents with left lower quadrant abdominal pain and a purulent vaginal discharge that reveals gram-negative rods. A diagnosis is made of pelvic inflammatory disease possible involving both Neisseria gonorrhoeae and chlamydia trachomatis. A drug combination that provides adequate empiric coverage of the organisms involved in this infection is?

- A. Metronidazole, lincomycin
- B. Ceftriaxone plus doxycycline**
- C. Nalidixic acid plus ampicillin
- D. Cotrimoxazole, pyrimethamine

**Q156:** Which of the following anti Microbials is to be used in case of MRSA?

- A. Oxacillin
- B. Streptomycin
- C. Vancomycin**
- D. Ofloxacin

**Q157:** Which of the following anti Microbials is associated with severe bone marrow depression?

- A. Ofloxacin
- B. Penicillin G
- C. Chloramphenicol**
- D. Linezolid

**Q158:** 18 year old patient needs antibiotic treatment for native valve, culture positive infective enterococci endocarditis. His medical history includes a severe anaphylactic reaction to penicillin G during the last year. The best approach would be treatment with?

- A. Vancomycin**
- B. Amikacin
- C. Ceftriaxone
- D. Nalidixic Acid

**Q159:** Which of the following is fecally excreted, has rapid complete absorption, and can be given in a patient with renal failure?

- A. Ampicillin
- B. Tetracycline
- C. Minocycline
- D. Doxycycline**

**Q160:** Which statement is accurate regarding tetracyclines?

- A. They bind to the 30s ribosomal subunit with a bacteriocidal action
- B. Milk, antacids, and iron supplements can be given with tetracyclines to enhance their absorption
- C. They can be safely given as 1st line in pregnant females and children with mycoplasma pneumonia infection
- D. Photosensitivity is an abnormal skin pathology that can occur in doxycycline as well as in fluroquinolones**

**Q161:** Q: Which of the following antimicrobial is associated with inhibition of liver enzymes?

- A. Chloramphenicol
- B. Erythromycin
- C. Ciprofloxacin
- D. All of the above**

**Q162:** 22 year old patient is presented to the clinic with abdominal pain, fever, and severe frequent diarrhea. Further investigation reveals there's presence of blood as well as shreds of mucosa in the stool with large numbers of neutrophils. The patient mentions use of an antibiotic before to treat for his atypical pneumonia. What could be the likely medication + appropriate treatment?

- A. Amoxicillin + Vancomycin.
- B. Tetracycline + Clindamycin
- C. Clindamycin + Ampicillin
- D. Tetracycline + Metronidazole**

**Q163:** An 8-month-old female infant is brought to the emergency department by her parents. She is febrile, tachycardic, and hypotensive. Sepsis is suspected and the physician wants to give chloramphenicol but is worried about gray baby syndrome. Why does chloramphenicol sometimes cause gray baby syndrome in infants?

- A) Chloramphenicol's narrow spectrum means empiric therapy is often ineffective
- B) Clindamycin, not chloramphenicol, causes gray baby syndrome
- C) Decreased absorption from the intestines
- D) Decreased conjugation in infant liver**

**Q164:** Which of the following statements are accurate regarding minor antibiotics?

- A. Polymyxin B, Bacitracin, and Neomycin are used as a triple antibiotic topical combination with hydrocortisone used to treat superficial skin infections**
- B. Vancomycin has a broad spectrum
- C. Redneck syndrome and Ototoxicity is associated with Polymyxin B
- D. Colistin as well as streptomycin can be safely given orally for those with myasthenia gravis and renal insufficiency

**Q165:** Which minor antibiotic has been shown to be useful topically as a bladder irrigant to reduce the risk of catheter associated infections?

- A. Colistin**
- B. Fucidin
- C. Bacitracin
- D. Vancomycin

**Q166:** Malabsorption is a side effect that can occur among which aminoglycoside?

- A. Neomycin
- B. Paromomycin
- C. Kanamycin
- D. All of the above**

**Q167:** Clarithromycin and erythromycin have very similar spectra of antimicrobial activity. The major advantage of clarithromycin is that it?

- (A) Does not inhibit hepatic drug-metabolizing enzymes
- (B) Eradicates mycoplasmal infections in a single dose
- (C) Has greater activity against H. Pylori activity**
- (D) Is active against strains of streptococci that are resistant to erythromycin

**Q168:** A 24-year-old woman comes to a clinic with complaints of dry cough, headache, fever, and malaise, which have lasted 3 or 4 d. The patient mentions that a colleague at work has similar symptoms to those she is experiencing. The patient has no history of serious medical problems. She takes loratadine for allergies and supplementary iron tablets, and she drinks at least 6 cups of caffeinated coffee per day. The physician makes an initial diagnosis of community-acquired pneumonia. If this patient were to be treated with the macrolide erythromycin, she should?

- (A) Avoid exposure to sunlight
- (B) Avoid taking supplementary iron tablets
- (C) Decrease her intake of caffeinated beverages**
- (D) Have her plasma urea nitrogen or creatinine checked before treatment

**Q169:** Once weekly administration of which of the following antibiotics has prophylactic activity against bacteremia caused by M avium complex in AIDS patients?

- (A) Azithromycin**
- (B) Clarithromycin
- (C) Ethambutol
- (D) Kanamycin

**Q170:** Which of the following antimicrobials can be given as 1st choice for the eradication of C. Diphtheria from pharyngeal carriers?

- A. Clindamycin
- B. Linezolid
- C. Lincomycin
- D. Spiramycin**

**Q171:** All of the following techniques have been used to reduce the risk of crystalluria except:

- A. Excess fluid intake
- B. Combine sulfonamide with trimethoprim
- C. Use sulfonamide with high solubility
- D. Increase the solubility of sulfonamide by decreasing urinary pH**

**Q172:** A hospitalized AIDS patient is receiving antiretroviral drugs but no antimicrobial prophylaxis. He develops sepsis with fever, suspected to be caused by a gram-negative bacillus. A combination of drugs might be given to this patient to provide coverage against multiple organisms or to obtain a synergistic action. Examples of antimicrobial drug synergism established at the clinical level include the treatment of?

- A) Cryptococcal meningitis with amphotericin B and flucytosine
- B) Coliform infections with sulfamethoxazole and trimethoprim
- C) Pseudomonas infections with carbenicillin and gentamicin
- D) All of the Above**

**Q173:** Which of the following antibiotic agents should not be given to children less than 8 years of age due to its deposition in bone and teeth?

- A. Azithromycin
- B. Doxycycline**
- C. Linezolid
- D. Quinupristin/dalfopristin

**QA-B:** A 27-year-old pregnant patient with a history of pyelonephritis has developed a severe upper respiratory tract infection that appears to be due to a bacterial pathogen. The woman is hospitalized, and an antibacterial agent is to be selected for treatment.

**Q174-A:** Assuming that the physician is concerned about the effects of renal impairment on drug dosage in this patient, which drug would not require dosage modification in renal dysfunction?

- A. Amoxicillin
- B. Cefoperazone**
- C. Trimethoprim-sulfamethoxazole
- D. Vancomycin

**Q175-B:** Which antibacterial agent appears to be the safest to use in pregnant patient?

- A. Amikacin
- B. Azithromycin**
- C. Ciprofloxacin
- D. Tetracycline

**Q176:** A 48-year-old patient is scheduled for a vaginal hysterectomy. An antimicrobial drug will be used for prophylaxis against postoperative infection. It is proposed that cefazolin, a first-generation cephalosporin, be given intravenously at the normal therapeutic dose immediately before surgery and continued until the patient is released from the hospital. If the patient had been scheduled for elective colonic surgery, optimal prophylaxis against infection would be achieved by mechanical bowel preparation and the use of?

- A. Intravenous 3rd gen cephalosporin
- B. Oral amoxicillin
- C. Oral Ciprofloxacin
- D. Oral erythromycin and neomycin**

**Q177: Q:** Which drug increases the hepatic metabolism of other drugs?

- A) Clarithromycin
- B) Erythromycin
- C) Clofazimine
- D) Rifampin**

**Q178:** If ampicillin and piperacillin are used in combination in the treatment of infections resulting from *Pseudomonas aeruginosa*, antagonism may occur. The most likely explanation is that?

- A) Ampicillin is bacteriostatic
- B) Ampicillin induces beta-lactamase production**
- C) Autolytic enzymes are inhibited by Piperacillin
- D) Piperacillin blocks the attachment of ampicillin to PBPs

**Q179:** Tick the indications for trovafloxacin?

- A. UTI
- B. Bacterial diarrhea
- C. Respiratory tract infection
- D. All of the above**

**Q A-C:** A 24 year old woman comes to a clinic with complaints of dry cough, headache, and fever lasting a few days. The physician makes the initial diagnosis of pneumonia but investigations fail to reveal any specific bacterial pathogens.

**Q180A:** Which of the following drug is most suitable for treatment?

- A. Ampicillin
- B. Clindamycin
- C. Doxycycline**
- D. Linezolid

**Q181B:** A 5-d course of treatment for community acquired pneumonia would be effective in this patient with little risk of drug interactions if the drug prescribed were?

- A. Azithromycin**
- B. Clindamycin
- C. Doxycycline
- D. Erythromycin

**Q182C:** Concerning Linezolid, which statement is accurate?

- A. Active in treatment of infections caused by *E. Faecalis*
- B. An effective drug in treatment of multi drug-resistant streptococcal infections**
- C. Bacteriostatic
- D. Increased activity of hepatic enzymes

**Q183:** A pathogen commonly responsible for community-acquired pneumonia is *S pneumoniae*. In which of the following situations would you NOT suggest creating *S pneumoniae* with a macrolide antibiotic?

- A) The patient has a history of aplastic anemia
- B) The patient is over 65 years of age
- C) The patient is younger than 4 years of age
- D) The patient lives in a region where *S pneumoniae* is highly resistant to macrolides**

**Q184:** A 25-year-old G1P0 woman presents to the emergency department with shaking chills, chest pain, and productive cough. A chest X-ray reveals an area of opacity in the right lower lobe. The physician's choice of antibiotics is limited because some may harm this patient's fetus. Which of the following antibiotics may cause hearing loss in her fetus?

- A. Amoxicillin
- B. Ciprofloxacin
- C. Streptomycin**
- D. Doxycycline

**Q185:** Which of the following fluoroquinolones is effective against pseudomonas?

- A. Nalidixic Acid
- B. Pipedimic Acid
- C. Domefloxacin
- D. Ciprofloxacin**

**Q186:** : A 37-year-old woman with urinary frequency, urgency, and pelvic pain presents to her primary care physician. She has an allergy to quinolones and penicillin. Urinalysis reveals nitrates, leukocytes, and blood. What is the most appropriate treatment for this patient?

- A) Cefuroxime
- B) Cefazolin
- C) Clarithromycin**
- D) Amoxicillin

**Q187:** A 35-year-old male with ulcerative colitis has recently been diagnosed with colon cancer. He needs to have a partial colectomy to remove the distal portion of the colon. The patient has no other medical problems. What antibiotic is most appropriate prior to his upcoming colectomy?

- A) Ceftriaxone
- B) Clindamycin
- C) Metronidazole
- D) Neomycin**

**Q188:** An 18-year-old male college student presents to the emergency room with a fever of 103°F and stiff neck for the past 3 h. After a lumbar puncture and Gram stain, the diagnosis of meningococcal meningitis is established. Unfortunately, his college did not require students to have the meningococcal vaccine. What prophylaxis should be given to his close contacts in the dorm?

- A) Benzathine penicillin G
- B) Ceftriaxone
- C) Penicillin
- D) Rifampin**

**Q189:** Which of the following describes the mechanism of action of tetracycline antibiotics?

- A. Bind the 30S subunit of the bacterial ribosome, preventing binding of tRNA to the mRNA–ribosome complex.**
- B. Bind the 30S ribosomal subunit, interfering with assembly of the functional ribosomal apparatus.
- C. Bind irreversibly to a site on the 50S subunit of the bacterial ribosome, inhibiting translocation steps of protein synthesis.
- D. Bind the bacterial 23S ribosomal RNA of the 50S subunit, inhibiting the formation of the 70S initiation complex.

**Q190:** Linezolid would be a good choice for antibiotic treatment in which of the following patient scenarios?

- A. Bacteremia caused by *Staphylococcus aureus*
- B. Urinary tract infection caused by *Escherichia coli*
- C. Pneumonia caused by drugresistant *Streptococcus pneumoniae***
- D. Diabetic foot infection caused by *Pseudomonas aeruginosa*



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