

## **NR566 Week 2 Quiz**

### **1. How does gentamicin exert its antibacterial effect?**

Correct Answer: Binds to the 30S ribosomal subunit, causing misreading of mRNA.

### **2. What is the primary goal of antibiotic stewardship programs?**

Correct Answer: Optimize antibiotic use, reduce resistance, and protect patient safety.

### **3. When is a bactericidal agent preferred over a bacteriostatic agent?**

Correct Answer: Bacterial meningitis in an immunocompromised patient.

### **4. Why are Gram-positive bacteria more susceptible to penicillin?**

Correct Answer: Their thick peptidoglycan layer is directly targeted by cell-wall-synthesizing antibiotics.

### **5. Which cephalosporin best crosses the blood–brain barrier for meningitis?**

Correct Answer: Ceftriaxone (3rd generation).

### **6. Which penicillin subclass treats beta-lactamase–producing *Staphylococcus aureus*?**

Correct Answer: Narrow-spectrum, penicillinase-resistant (anti-staphylococcal) penicillins.

### **7. Most critical property of empiric antibiotics for meningitis?**

Correct Answer: Ability to penetrate the blood–brain barrier effectively.

### **8. Why are Gram-negative bacteria more resistant to antibiotics?**

Correct Answer: Outer membrane with lipopolysaccharides acting as a permeability barrier.

### **9. Best initial therapy for contact lens–related *Pseudomonas conjunctivitis*?**

Correct Answer: Besifloxacin ophthalmic drops.

### **10. Best description of a bacteriostatic agent?**