



9. A narrow-spectrum antibiotic is active against \_\_\_\_\_  
a) Gram-positive or gram-negative bacteria      b) Gram-negative bacteria only.  
c) Single organism or one disease                      d) both gram-positive and gram-negative bacteria.
10. Paracetamol is contradicted in \_\_\_\_\_  
a) Chronic hepatitis                      b) Bleeding disorders                      c) Fever                      d) Nephritis

**PART – B**

**ANSWER ALL THE QUESTIONS**

**(5\*7=35)**

11. a) Illustrate the oxidation property of  $\text{OsO}_4$  and ozone  
**(OR)**  
b) Describe the mechanism of oxidation of Dess-Martin reagent
12. a) Narrate the stereochemistry of  $\text{S}_{\text{N}}1$  and  $\text{S}_{\text{N}}2$  reactions  
**(OR)**  
b) What are elimination reactions? Discuss the mechanism of  $\text{E}_1$  elimination
13. a) How are amino acids prepared? Describe their chemical properties  
**(OR)**  
b) Paraphrase the elementary treatment of DNA
14. a) Elaborate the types of electronic transitions in UV spectroscopy  
**(OR)**  
b) Discuss the IR spectrum of acetamide and acetic acid
15. a) Describe the preparation and uses of sulphathiazole  
**(OR)**  
b) Define the following  
i) Hypnotics                      ii) Analgesics                      iii) Stimulants

**PART – C**

**ANSWER ANY THREE QUESTIONS**

**(3\*10=30)**

16. Explain the reducing property with mechanism for the following.  
i)  $\text{LiAlH}_4$                       ii)  $\text{Na}(\text{CN})\text{BH}_3$
17. Describe the mechanism of bromination and sulphonation of benzene
18. Sketch and explain the secondary and tertiary structures of proteins
19. Define chemical shift. Discuss the factors affecting chemical shift
20. Explain the structure, mechanism of action and uses of penicillin