

PART B

Answer the following each within 500 words.

(5 x 8 = 40 marks)

Draw diagrams wherever necessary.

21. (a) Derive the Hendersen Hasselbalch equation.

OR

(b)Mention the significance of hydrogen bonds in water molecule.

22. (a) Enumerate the functions of proteoglycans.

OR

(b) Highlight the significance of SDS in PAGE.

23. (a)Write the structure of ATP and mention the factors aiding its hydrolysis.

OR

(b)Discuss the regulation of phosphofructokinase and hexokinase in glycolysis.

24. (a) Write down the steps involved in the β - oxidation of fatty acids.

OR

(b) How are pyrimidines synthesized?

25) (a)Explain the reaction coordinate for a chemical reaction.

OR

(b)Comment on acid base catalysis and metal ion catalysis.

PART – C

Answer any TWO of the following, each within 100 words.

(2 x 20 = 40 Marks)

Draw diagrams wherever necessary.

26. Describe the ion product of water and working of pH meter.

27. Discuss the biosynthesis of proteins with a suitable flow chart.

28. Elaborate on the electron transfer from NADH to oxygen and ATP synthesis.

29. Write in detail about competitive and noncompetitive inhibition with examples.
