

Prabhat Kumar College Contai
M. Sc. 3rd Semester Examination, 2021
Subject: Chemistry
Paper: CEM 303

F.M: 40

Time: 2 h

Answer any four questions.

(4x10= 40)

1. Write down the activity of superoxide dismutase and catalase in the living body. 5+5
 2. What is the function of cytochrome P450? Where it is found? Why cytochrome P450 is named so? What are CYP450 inhibitors? 2.5 x 4
 3. Write down the similarities and differences between peroxidase and catalase. Mention the function of nitrate reductase. 3+3+4
 4. What do you mean by photosensitization and Frank Condon state. Why delayed fluorescence is called so. Write the Stern Volmer equation to determine quenching constant. 3+3+2+2
 5. What are the functional difference of Xanthine oxidase and sulphate oxidase. Name one vanadium containing protein and its function. 3+3+4
 6. Explain photochemical splitting of water and photochemical storage of solar energy. Write the structure of Vitamin B₁₂. 5+5
 7. Write down the basic difference of fluorescence and phosphorescence. How quantum yield of a reaction is determined? Write down the function of chlorophyll. 4+3+2
 8. Briefly discuss on the interaction of metal ions with nucleic acids. What do you mean by replication and transcription process? 5+5
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