QP Code: RM22MSC127 Reg. No | | | | | | | | | | | AY 22

GIET UNIVERSITY, GUNUPUR – 765022

M. Sc. (Fourth Semester) Examinations, May – 2024

20CHPE403 - Bio-inorganic and Supra Molecular Chemistry

(Chemistry)

Time: 3 hrs Maximum: 70 Marks

(The figures in the right hand margin indicate marks.)

PART – A **(2 x 10 =20 Marks)**

Q.1. Answer ALL Questions	CO	Blooms Level
a. How PS-II works?	CO1	K2
b. Write down number of Pie bond present in Porphine, Chorin and Corrin ring.	CO1	K1
c. Explain Blood clotting mechanism.	CO1	K2
d. Draw the structure of deoxy and oxyhemocyanin.	CO2	K2
e. Conversion of Xanthine to uric acid.	CO2	K1
f. Explain Bohr Effect in Hb.	CO2	K2
g. Write note on Transferrin.	CO3	K1
h. Write note on liver alcohol dehydrogenase.	CO3	K2
i. Write note on MRI.	CO4	K2
j. Explain Siderosis.	CO4	K1

PART – B **(10 x 5=50 Marks)**

Answer ***ANY FIVE*** the questions	Marks	CO#	Blooms Level
2. a. What is photosynthesis? Describe dark and light reaction.	5	CO1	K1
b. Explain with the structure of Metalloprotein responsible for photo synthesis.	5	CO1	K2
3.a. What is meant by active transport in Na/K pump? Give a diagrammatic representation of the process and explain the mechanism involved in it.	5	CO1	K2
b. Explain the non-heme protein like Hemerythrin.	5	CO2	K1
4. a. Explain the role of nitrogenase enzymes in Nitrogen Fixation.	5	CO2	K2
b. Draw the structure of Ruberodoxin and also explain the oxidized and reduced form.	5	CO2	K1
5.a. Describe Blue copper proteins like Plastocyanin and Azurin with structure.	5	CO3	K2
b. Briefly explain Superoxide dismutase with structure.	5	CO4	K2
6. a. Explain the catalytic cycle of cytochrome P-450.	5	CO4	K1
b. Explain three major type of Ferrodoxins (Fe_2S_2, Fe_3S_4 and Fe_4S_4).	5	CO1	K1
7.a. Draw the catalytic cycle of Cyt C-Oxidase	5	CO1	K2
b. "Cis-Platin is an anti-cancer drug".Explain.	5	CO4	K2
8. a. Explain the deficiency symptoms of Zinc.	5	CO4	K1
b. Describe the use of chelating agent in metal poisoning: Cadmium, Mercury.	5	CO2	K2

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