**\*\* ONLY TEXT AND IMAGES APPEARING INSIDE THE RED BOXES WILL BE GRADED\*\***

I. Enzymes: In one sentence, define the following

1. Catalysis

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| INSERT HERE |

1. Active Site

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| INSERT HERE |

1. Substrate

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| INSERT HERE |

1. Transition State

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| INSERT HERE |

1. Intermediate

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| INSERT HERE |

1. Product

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1. Cofactor

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| INSERT HERE |

1. Prosthetic Group

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1. Coenzyme

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| INSERT HERE |

1. Allosterism

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| INSERT HERE |

1. Cooperativity

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1. Lock and Key

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1. Induced Fit

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II. From the class reading material and web, find at least one example of an enzyme that uses each of the following prosthetic groups

1. Iron-sulfur center

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| INSERT HERE |

1. Iron heme

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| INSERT HERE |

1. Non-heme Iron

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| INSERT HERE |

1. Iron–molybdenum

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| INSERT HERE |

III. Iron.  
Iron is toxic. Iron and oxygen produce radicals that cause all sorts of damage to molecules and tissues. But iron is necessary. Iron is required for many important enzymes. Why would nature do this to us? Why would nature make us dependent on something that is toxic?

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| INSERT HERE |