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**2007 JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY**

II B.TECH I SEMESTER REGULAR EXAMINATIONS  
**BIO CHEMISTRY**  
(BIO-TECHNOLOGY)

SET NO-3  
NOVEMBER 2007

TIME: 3 HOURS  
MARKS: 80

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**Answer any FIVE Questions**  
**All Questions carry equal marks**

1. What do you mean by Glycoprotein's? Explain Glycoprotein's are information-rich Conjugates containing oligosaccharides. [16]
2. Summarize the events of oxidative decarboxylation pyruvate to acetyl-CoA by the pyruvate dehydrogenase complex. [16]
3. What do you understand by "redox" reaction? Write a note on oxidation versus reduction in the biological system. [16]
4. Describe proteins conformation is stabilized largely by weak interaction. [16]
5. (a) How non-oxidative deamination reactions occur in vivo? Illustrate with two examples indicating the role of coenzyme involvement.  
(b) How is proline biosynthesized from glutamate? [8+8]
6. What are the common features of biological membranes? What are the major class of membrane lipids? [16]
7. Enumerate the different stages involved in the extraction of energy from food stuffs. Outline the major pathways involved in this process. [16]
8. How do the biological systems get their free energy? What is the physiological significance of photosynthesis? How the basic equation of photosynthesis was discovered?