



AJEENKYA

D Y PATIL UNIVERSITY

End Term Examinations (December 2018)

School : Engineering **Program:** M.Tech Biotechnology

Course: Advanced Biochemistry **Course Code:** BEN508

Semester: I **Max Marks:** 50 **Duration (mins) :** 120 min

Note: Answer any 5 questions.

- Q1. What is Henderson Hasselbach equation? Describe. What is a buffer? Discuss some physiological buffer systems. (10)
- Q2. Write a note on Alpha helix. What are helix breaker amino acids? Explain the effect of different amino acids on stability of Alpha helix. (10)
- Q3. Explain the technique of Affinity Chromatography in protein purification. (10)
- Q4. Explain graphically the Michaelis Menten equation of enzyme kinetics. (10)
- Q5. Convert Michaelis Menten equation into Lineweaver Burk plot and explain its significance in enzyme studies. (10)
- Q6. What is membrane asymmetry? Explain. Describe a K⁺ ion channel in detail. (10)
- Q7. Discuss the signal transduction of vision in detail. (10)
- Q8. Draw and describe steps of Krebs Cycle. (10)
- Q9. What is oxidative phosphorylation? Describe the steps of mitochondrial oxidative phosphorylation. (10)
- Q10. Discuss the mechanisms of physiological integration of glucose metabolism. (10)