Ref. No.: EX/PHY/TE/301/20/2019

EX/PHY/TE/301/22/2019

MASTER OF SCIENCE EXAMINATION, 2019

(2ndYear, 1st Sem. for Day

& 3rd Year 1st Sem. for Evening)

Biophysics (PHY/TE/301)

Time: Two hours Full Marks: 40

GROUP-A

Answer any *two* questions (5×2=10)

1. What do you mean by "CODON". Explain why at least 3 nucleotides are necessary for each CODON. Give example of a stop CODON.
2. What is 'Gene'? What are the different types of gene you can find in biological system?
3. What is coupled transport. Describe different types of coupled transport with example .
4. Explain the structure and activity of synapse with suitable diagram .

GROUP-B

Answer any *two* questions (15×2=30)

1. "The mode of DNA replication is Semi-conservative" – Explain with suitable experiment. What were the bases to develop "Watson - Crick DNA model"? What do you mean by "DNA pitch"?
   [10 + 3 +2]
2. Write down the different structures of protein molecule. How protein is formed in a prokaryotic system? How the molecular weight of a protein molecule is determined by centrifugation technique? [4 + 3 + 8]
3. Explain different parts of auditory system with their work function. What is auditory hair cell explain its activity with diagram. (10 +5)
4. What is **Myopia** or nearsightedness and **Hyperopia** or farsightedness defect of eye and how these defect can be rectified? Explain various types of photosensitive dyes present in the eye with their activity.
   (4+4+7)