



# THE AMERICAN COLLEGE, MADURAI

(An Autonomous Institution Affiliated to Madurai Kamaraj University)  
Re-accredited (2<sup>nd</sup> Cycle) by NAAC with Grade "A", CGPA – 3.46 on a 4-point scale

## Backlog Arrear Examination, March 2021

Course code: PHS 2561

Time: 3 Hrs

Course Title: BIOPHYSICS

Marks: 75

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### Part -A

Answer any FIVE of the following questions.

5 X 15 = 75 marks

1. Derive and explain Helmholtz and Gibb's free energy of a system.
2. Discuss on Ultraviolet-visible spectroscopy.
3. Explain Raman spectroscopy in detail.
4. With a neat diagram, explain the biomechanism of cardio vascular system.
5. Write a note on the physics of membrane potential with necessary diagram.
6. Describe the construction and working mechanism of GM counter and scintillation counter for the measurement of radioactivity with neat diagrams.
7. Explain in detail on CT scanning along with its applications.

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