



# 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

**PHY 3292/2287/3287**

**HAM Radio practice**

**Time: 2 hrs**

**Max. Marks: 60**

**Answer any FOUR questions.**

**4 x 15 = 60**

1. Explain in detail about following:
  - a. conductors and insulators
  - b. permanent magnets and electromagnets
2. Describe about Ionosphere and radio wave communication.
3. Discuss the working principle of HAM radio with neat diagram. Mention its uses.
4. Explain the types of propagation of electromagnetic waves in detail.
5. Draw the block diagram of a super heterodyne receiver and explain its function.
6. Explain in detail the functioning of AM transmitter.