



# 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: PSP 5404**  
**Course Title: Digital Electronics**

**Time: 3 Hours**  
**Max. Mark: 75**

### PART – A

**Answer Any FIVE Questions**

**(5 x 15 = 75)**

1. Describe the function of 555 Timer Used as an Astable Multivibrator with a circuit diagram.
2. Discuss the synchronous up/down counter in detail.
3. With a help of a neat diagram describe the R/2R ladder DAC.
4. Explain the binary weighted resistor DAC with neat diagram.
5. Explain TTL logic circuit operation for Low state and High state with diagram.
6. Describe RAM architecture with suitable diagram.
7. Explain the types of memory with a neat sketch.