**Hall Ticket No:**

**Question Paper Code: 16MCA103**

# MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE
## (UGC-AUTONOMOUS)
### MCA I Year I Semester (R16) Supplementary End Semester Examinations – September 2021
### (Regulations: R16)
## COMPUTER ORGANIZATION

**Time: 3Hrs**                                                                 **Max Marks: 50**

Attempt all the questions. All parts of the question must be answered in one place only.
**In Q.no 1 to 5 answer either Part-A or B only**

| | | |
|---|---|---|
| Q.1(A) | Explain the different logic gates with their truth tables and logical circuits | 10M |
| | **OR** | |
| Q.1(B) | What is number system? Explain fixed point and floating point operations with examples | 10M |
| Q.2(A) | Draw 4-bit carry-look ahead adder and explain? | 10M |
| | **OR** | |
| Q.2(B) | Perform multiplication for -13 and +09 using Booth's algorithm. | 10M |
| Q.3(A) | What is Addressing Mode? Explain briefly with examples. | 10M |
| | **OR** | |
| Q.3(B) | What is stack? Explain its role in subroutine nesting? | 10M |
| Q.4(A) | What is memory explain the memory organization influence the system performance. | 10M |
| | **OR** | |
| Q.4(B) | What is volatile and nonvolatile? Explain briefly the functionalities of SRAM and DRAM. | 10M |
| Q.5(A) | What is DMA? Explain the advantages of DMA. | 10M |
| | **OR** | |
| Q.5(B) | What is interface? Explain the different types of interfaces with examples. | 10M |

*** END***