DR. SHYAMA PRASAD MUKHERJEE UNIVERSITY, RANCHI
MASTER OF COMPUTER APPLICATION
END SEMESTER, SEMESTER –1

TIME: 3 HOURS | FULL MARKS: 70
Sub: COMPUTER SYSTEM & ARCHITECTURE | Paper: CCMCA105

GROUP A

2*10=20

1. Define Number System?
2. Convert $(742)_8$ into $()_{16}$
3. What do you mean by CPU?
4. What is DRAM?
5. Define Un-signed number with example?
6. What do you mean by half Adder?
7. Convert $(1111100101010101010101)_2$ into $()_8$ and $()_{16}$
8. Draw 3*8 decoder?
9. Define Multiplexer and draw 4*1 multiplexer?
10. Define sequential and combinational circuit?

GROUP B

Direction: Answer any Four **5*4=20**

11. Define Boolean algebra with all the laws?
12. Write short notes on data path and control path?
13. What do you mean by computer architecture? Discuss about its components in detail?
14. Draw all logic gates with their truth table?
15. Make suitable comparison between RISC and CISC?
16. Explain the concept of micro-programmed and hard wired with their uses?

GROUP C

Direction: Answer any Two **15*2=30**

17. Represent all the logic gates by the help of NOR logic gate with their Boolean and TT?
18. Evaluate **a= (b + c) * d - e** for 3-2-1-0 address format without using any extra register?
19. Explain the concept of pipelining and their concept with the uses?
20. Define Adder and draw a full Adder logic circuit by using two half adders with their truth table?