Reg. No. : | | | | | | | | | | |

Question Paper Code: 43023

B.E. / B.Tech. DEGREE EXAMINATION, AUGUST 2021

Third Semester

Computer Science and Engineering

14UCS303 - COMPUTER ORGANIZATION AND ARCHITECTURE

(Regulation 2014)

Duration: 1:45 hour Maximum: 50 Marks

PART A - (10 x 2 = 20 Marks)

(Answer any ten of the following questions)

1. State the basic functional units of a computer.
2. What do you mean by stored program concept?
3. What is Subword Parallelism?
4. List the features of booth multiplication algorithm.
5. What is meant by Data path?
6. Define branch folding.
7. Give an example for WAW Hazard.
8. What is instruction level parallelism?
9. Define TLB hit and Miss.
10. What is meant by bus arbitration?
11. Why the data bus is bidirectional while the address bus is unidirectional?
12. What is the purpose of guard bits in floating point operations?

13. How do you handle the data hazard?

14. Define interleaved or fine grained multithreading.

15. What is polling?

PART – B (3 x 10= 30 Marks)

(Answer any three of the following questions)

16. What do you mean by addressing modes? Explain the types of addressing modes that exists in modern processors? (10)

17. Illustrate non-restoring division algorithm with an example. (10)

18. Explain the super scalar operations with a neat diagram. (10)

19. Explain Flynn's classification of computers. (10)

20. (a) Explain the virtual memory address translation and TLB with necessary diagram. (10)