19U557S (Pages: 2) Name: …….

Reg. No: …….

FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2021

(CUCBCSS-UG)

CC17U BCS5 B07 - COMPUTER ORGANIZATION AND ARCHITECTURE

(Computer Science – Core Course)

(2017, 2018 Admissions – Supplementary/Improvement)

Time: Three Hours Maximum: 80 Marks

PART A

Answer ***all*** questions. Each question carries 1 mark.

1. What is edge triggering?
2. Define PC.
3. What is a stack?
4. Define DMA.
5. Differentiate hit and miss.
6. List any four CPU registers.
7. What is IOP.
8. List different types of control unit.
9. What are addressing modes?
10. List the universal logic gates.

(10 × 1 = 10 Marks)

PART B

Answer ***all*** questions. Each question carries 3 marks.

11. Explain any two logic gates with truth table.
12. Define memory hierarchy.
13. What is an Instruction cycle?
14. What are peripheral devices?
15. What is control memory?

(5 × 3 = 15 Marks)

PART C

Answer any *five* questions. Each question carries 5 marks.

16. What are shift registers?
17. Describe briefly about flip-flops.
18. Write a note on Input-output interface.
19. Briefly explain about instruction cycle.

20. Explain data transfer and manipulation instructions with examples.

21. Explain design of accumulator.

22. Describe about memory reference instructions with examples.

23. Write a note on stack organization.

(5 × 5 = 25 Marks)

PART D

Answer any ***three*** questions. Each question carries 10 marks.

24. Describe in detail about Ring counter and Johnson's counter.

25. Write a detailed note on various types of flip-flops.

26. Explain about Cache memory and various mapping techniques associated with Cache.

27. Write a short note on asynchronous data transfer methods.

28. Write a detailed note on associative memory.

(3 × 10 = 30 Marks)

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