COMPUTER ORGANIZATION AND ARCHITECTURE Question Bank (Unit 1 and Unit 2)

Department of Computer Science and Engineering
XCS402 & COMPUTER ORGANIZATION AND ARCHITECTURE
QUESTION BANK

UNIT - I

PART-A (2 MARKS)

1. Define the term Computer Architecture.
2. Define Multiprocessing.
3. What is meant by instruction?
4. What is Bus? Draw the single bus structure.
5. Draw the basic functional units of a computer.
7. Briefly explain Primary storage and secondary storage.
8. What is register?
9. Define RAM.
10. Give short notes on system software.
11. Write down the operation of control unit?
12. Define Memory address register.
13. What is stack & queue?
14. Define Addressing modes.
15. Write the basic performance equation?
16. Define clock rate.
17. List out the various addressing techniques.
18. Draw the flow of Instruction cycle.
19. Suggest about Program counter.
20. List out the types in displacement addressing.
21. What is meant by stack addressing?
22. Define Data path.

PART - C (15 Marks)

1. Explain briefly about basic structures of computer Operational Concepts
2. Explain memory unit functions.
3. Explain memory locations and addresses.
4. Explain instruction set Architecture? Give examples.
5. What is bus explain it in detail?
6. Explain the operations of stacks and queues.
7. Discuss about different types of addressing modes.

8.How many address lines are required to access 16kb of memory size?

UNIT-II

PART-A (2 MARKS)

1. What are the types of ALU?
2. Give any 2‘s Complement Multiplier algorithm.
3. Give advanced features of ALU.
4. What is a Co-Processor?
5. Define Micro operation.
6.What are the types of micro operations?
7. Draw the circuits which perform both addition and subtraction.
8. Draw the block diagram of n-bit two’s complement adder –sub tractor.
9. Design 4 -bit combinational circuit using 4 full adders.
10. Write IEEE standard for floating point format.
11. Give a schematic of 2-bit array multiplier.
12. State the principle of carry look ahead adder.

PART-B(16 MARKS)

1. Explain Fixed point representation.
2. How floating point addition is implemented. Explain briefly with a neat diagram.
3. Write an algorithm for the division of floating point number and illustrate with
an example.
4.Explain the Half adder,Full adder and Binary adder with block diagram.
5.Describe the Design of fast adders
6.Construct the Multiplication of signed number
-13 and +11
7.Construct the Multiplication of signed number
-78 and +26