Unit -1

1 What do you mean by register transfer? Explain in detail. Also discuss three-state bus buffer.

2. List and explain types of shift operations on accumulator.

3. Deﬁne RTL. Explain how register transfer takes place in basic computer system

4. What is multiplexing? Explain the multiplexing of control signals in ALU.

6. Draw the block diagram of 4-bit arithmetic circuit and explain it in detail.

9. Explain 4-bit adder-subtractor with diagram.

14. Explain selective set, selective complement and selective clear.

16. Explain Micro operation.

19. What is a Bus?

20. What is an ALU

23. Draw a diagram of 4-bit binary incrementer and explain it brieﬂy

Unit -2

1. Write a detailed note on instruction cycle with neat diagrams.

2. Explain control unit of basic computer and its working with diagram.

3. For the basic computer explain following instructions

1. LDA

2. ADD

3. AND

4. CLA

4. Draw and explain flowchart for interrupt cycle.

5. For the basic computer explain following instructions

1. BUN

2. BSA

3. CIL

4. SZE

7. State the differences between hardwired control and microprogrammed control.

9. Draw and explain basic computer instruction formats.

10. Differentiate MRI and non-MRI.

11. Explain Direct and Indirect Addressing.

13. What is Interrupt? How it is useful for a system?

14. Explain CLA, ISZ, INP instruction.

15. Explain seven register common bus system.

17. What is a Program Counter?

18. What is an Accumulator?

19. What is an Instruction Register?

20. What do you understand by Memory Address?

21. What is a Carry Flag?

22. Explain Instruction Fetch.

24. Enlist major components of CPU.

25. Effective address.

Unit -3

1 .What is an Assembler? With clear flowcharts for first and second pass, explain its working.3. Write a brief note on: Subroutine call and return.6. What is machine language? How it differs from assembly language?

7. Define pseudo-instruction.

Unit --4

1. Draw and explain flow chart of address sequencing.

3. What is micro-programmed control architecture?

4. Explain Control Memory