

Either:

4. a) Draw a block diagram of 3-bit ripple counter and explain its construction and working. 8
b) What is Ring Counter? Explain in detail. 8

OR

- c) What is T-FF? Explain its construction and working? 8
d) Explain the construction and working of clocked RSFF. 8
5. Attempt **all** the questions.
- a) Explain in brief Real Number Representation. 4
b) Perform following: 4
i) $(11101)_2 + (1111)_2$
ii) $(1010)_2 + (1011)_2$
c) Write a short note on encoder and decoder. 4
d) Explain D-Flip-Flop in detail. 4
