Section - A (Marks : 2 each)

(a) $(10110111)_2$ convert to octal number system.

(b) $(736.4)_8$ convert to Decimal Number System.

(c) What is Full Adder ?

(d) What is flag ?

(e) What are decoders ?

(f) What is don't care condition ?

(g) What is shift register ?

(h) What is PAL ?

(i) What is Cache Memory ?

(j) Explain about Multivibrators.

Section - B (Marks : 5 each)

Simplify the Boolean Functions.

$F(w, x, y, z) = \sum (0, 1, 2, 4, 5, 6, 8, 9, 12, 13, 14)$

Explain about the Transistor, Transistor Logic (TTL).

Explain Edge Triggered Flip-Flop.

Explain about A/D conversion techniques.

Explain about Associative Memory.

Section - C (Marks : 10 each)

Explain about Memory Organization ?

Draw the gate implementation of the simple fixed Boole
Function.

$F(A, B, C) = A'C + A'B = A'B + AB'C + BC$ using AND and
gates.

Explain about Bus Structure.