

**JAYPEE INSTITUTE OF INFORMATION TECHNOLOGY, NOIDA**  
**Electronics and Communication Engineering**  
**Digital Hardware Design (17B1NEC741)**  
**Tutorial Sheet: 4**

---

Q1 [CO3] Design the following types of generators

- (a) A sequence generator to generate the sequence 1011010.....
- (b) A pulse train generator to generate the sequence 1100010.....
- (c) A pulse train generator using indirect logic to produce the pulse trains 10000111 and 10011010
- (d) A shift register pulse train generator to generate the pulse train 101110
- (e) A shift register pulse train generator to generate the pulse train 11110010.

Q2 [CO3] Design a direct logic circuit to generate the sequences 100111 and 011101 simultaneously.

Q3 [CO3] Generate the pulse train 100110 using indirect logic.