

**JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT**

**TEST -3 EXAMINATION- 2025**

**BCA-I Semester**

**COURSE CODE (CREDITS): 25BC1MA111**

**MAX. MARKS: 35**

**COURSE NAME: DIGITAL LOGIC**

**COURSE INSTRUCTORS:SRT**

**MAX. TIME: 2 Hours**

**Note: (a) All questions are compulsory.**

**(b) The candidate is allowed to make suitable numeric assumptions wherever required.  
for solving problems**

Q. No	Question	CO	Marks
Q1.	Explain full adder along with its truth table, logic circuit and block diagram?	CO-3	5
Q2.	Explain full subtractor along with its truth table, logic circuit and block diagram?	CO-3	5
Q3.	Explain the following terms- a. Digital circuits and Analog circuits b. States in a digital system c. Mechatronics d. Pulse e. Switching circuits	CO-1	5
Q4.	State the DeMorgan's Theorem along with its truth table in detail?	CO-2	5
Q5.	Explain registers with respect to digital systems? Explain the different types and applications of shift registers	CO-4	5
Q6.	What is sequential logic? Explain latches/flip flops? Explain any one flip flop of your choice	CO-4	5
Q7.	What do you understand by primary memory and secondary memory? Explain its different categories in detail?	CO-5	5