

**LNCT UNIVERSITY**

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Enroll No.....

Class Roll No... ..

**First Mid Semester Examination, Dec 2023**

**Computer Architecture (LNCS-103)**

**Branch: B.Tech CSE Semester: I**

**Time 1:30 Hrs**

**Max. Marks 20**

**Note: All questions are compulsory**

**Q.1** Explain (i) MAR (ii) MBR (iii) IR (iv) PC (v) AC . Also explain Stack organization  
(CO 1 5marks)

**OR**

Differentiate between hardwired control unit and micro programmed control unit

**Q.2.** Explain addressing modes and its types. (CO1 5 marks)

**OR**

Explain (i) Fetch and Execute cycle (ii) Bus Structure.

**Q.3** Explain the design of Arithmetic Unit. (CO2 5 marks)

**OR**

Explain Booth's algorithm and also multiply +15 and -6 using Booth's method.

**Q.4** Convert the following pairs of decimal numbers to 5 bit 2's complement binary number and add them . State whether overflow has occurred (i)-5 and 7 (ii)-10 and -13 (iii)-14 and 11 (CO2 5 marks)

**OR**

Explain multiplication of floating point numbers with example and flowchart?