

**National University**



of Computer

and

Emerging Sciences

Chiniot

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Faisalabad Campus



**EE1005 – Digital Logic Design**

**Quiz# 4**

**Instructor:** Muhammad Adeel Tahir **Section:** SE-2B **Time:** 20 Minutes

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Roll No: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Total: 15 marks**

***Note:*** *Use the back side of the page if needed. Make sure the handwriting is neat and clean, quiz will be marked as 0 if attempted in a writing that is not readable at all.*

**Q:** An **M-bit** thermometer code for the number **k** consists of (**k) 1’s** in the least significant bit positions and **(M – k) 0’s** in more significant bit positions. A binary-to-thermometer code converter has **N inputs** and  **outputs**. It produces a bit thermometer code for the number specified by the input. Design a combinational circuit for binary-to-thermometer code converter provided the number of inputs = 3 by finding the following. **Also draw circuit diagram. (5 marks)** Note: Incase the truth table/equations are not correct, the question will receive 0 mark

**No of Inputs: \_\_\_\_ No of Outputs: \_\_\_\_\_\_ (1 marks)**

**Truth Table: (5 marks)**

**Use**

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**Equations: (1.75 each = 4 marks)**