

Undergraduate Computer Architecture – Online Quiz Example

Instructions: Locate the file with your name and student ID. Upload the PDF with the filled-out answers in the form. Answers outside the form will be ignored. This is an individual quiz.

Name:

Pickle Rick

ID:

987654

Consider a half-precision floating-point representation using 16 bits with the following characteristics:

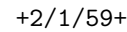
- Sign Bit (Bit 15)
- 5-bit Exponent (Bits 14–10)
- 10-bit Fractional Part (Bits 9–0)
- Exponent bias equal to 15

This representation follows all the conventions of the IEEE 754 floating-point representations, including normalization, value conversion, representation of infinity and NaN, denormal numbers, etc.

Question 1

How is the number 13.75 represented in half-precision floating-point notation?

[illegible]



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123456

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[illegible]