

GIRNE AMERICAN UNIVERSITY

FACULTY OF BUSINESS AND ECONOMICS

MANAGEMENT INFORMATION SYSTEMS DEPARTMENT

**CIS 218 Networking & Telecommunications**

Spring 2019-2020

**Quiz 2**

**April 2020, Start: 9:00, Duration: 60 minutes**

**(**solution will be not accepted after 10:00)

**Instructor: Alexander Kostin**

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| **Name** |  | **Student No** |  |
| **Surname** |  |  |  |

1. [10 pts] **Explain** the functions (duties) of the client and the server in a networked client/server system:

The client:

The server:

1. [9 pts} Give full name and explain the purpose (function) of each of the following protocols of the application layer of the Internet:

HTTP: **Full name**:

Purpose:

FTP: **Full name**:

Purpose:

SMTP: Full name:

Purpose:

1. [ 10 pts] How many **Hz** in **5 MHz**?

That is,

5 MHz = .................... ...... Hz

1. [10 pts] Explain the difference between **analog** and **digita**l signals.
2. [11 pts] Calculate period of a **sine signal** if its freqiency is **200 Hz.**

Indicate **unit** of period.

1. [10 pts] What are minimal and maximal frequencies in human voice in a usual telephone line?

**Minimal frequency** = …………………………………. (unit of measure?)

**Maximal frequency** = ………………………………… (unit of measure?)

1. [ 20 pts] For the digital signal shown below calculate bit rate and bit interval. As shown, **total duration of the signal is 90 ms.**

**90 ms**

Time

**Signal value**

**Data bits**

**1 0 1 0 1 1 0 0 1**

**Bit rate = .................................** (unit of measure?)

**Bit interval = ..........................** (unit of measure?)

1. [20 pts]One of the duties of the **data link layer** of the Internetis medium access control (MAC). Explain **what is done** in this duty.