## ESCUELA SUPERIOR POLITÉCNICA DEL LITORAL FACULTAD DE INGENIERÍA EN ELECTRICIDAD Y COMPUTACIÓN



CALIDAD DE SERVICIOS DE RED (TLMG1005) MIDTERM - 2019-2T



## STUDENT:

ID:

Quien firma, acepta cumplir como estudiante lo dispuesto en el Código de Ética de la ESPOL, con respecto al capítulo "Comportamiento de la Comunidad Politécnica" en todos sus artículos. En caso de no cumplimiento, aceptaré acatar las sanciones que disponga la ESPOL hacia mi persona.

Student signature:

Provide answers with technical criteria. Each argued answer will pass through an exhaustive revision.

- 1) Provide an opinion:
  - a. What constituencies would win or lose with the elimination of net neutrality?

b. Are there any benefits for the end-users with the introduction of the network neutrality?

c. What penalties would face ISPs if they apply the rule without the consent of the regulators?

d. Would be any shortcomings for remote users at the moment of accessing streaming content?

- 2) Respect to the Resource Distribution in Integrated Services (IntServ) QoS architecture model:
  - a. It is not recommended for managing flows in small networks.

True False

b. It needs an end-to-end resource reservation protocol to enable a host to establish a connection over connectionless IP Internet.

True False



c. Resource allocation is distributed among some routers domain, allowing for a greater flexibility and efficiency in the routing process.

True False

- d. The processing is per-flow based through signaling and load processing. True False
- 3) Explain at least two differences between Class of Service (CoS) and Quality of Service (QoS).

4) Summarize the potentials advantages of the best effort technique compared to IntServ.

5) Briefly explain how a controlled delay could benefit a packet transmission in a) a QoS-based network; and b) in a non-QoS-based network.

6) Provide an explanation of the router's performance in a Differentiated Service (DiffServ) QoS network.

7) Mention at least two parameters that could be compromised if a DiffServ classification is not attained. Provide a detailed explanation.

8) Define the shaping and policing actions that a DiffServ QoS network approaches when transmitting through different autonomous system.

9) Explain with an example the network boundary tasks in the border marking technique throughout a DiffServ scenario.

- 10) Regarding Integrated Services (IntServ)
  - a. How is possible to control the flow for not dropping into a best effort zone and in what devices and/or stages of the transmission rules are typically defined?

b. What would happen if a classification is attained but a prioritization cannot be performed?

- c. Explain how data network granularity contributes to improve the packet classification.
- 11) The QoS parameters of error rate, addressing, and integrity are related to the QoS category of :
  - a. Security
  - b. Traffic volume
  - c. Timing
  - d. Precision
  - e. Accuracy

Chosen option \_\_\_\_\_