GUJARAT NATIONAL LAW UNIVERSITY
GANDHINAGAR
Course: **Information Technology**
Semester- II (Batch: 2019-24)

End Semester Online Examination: February 2021

Date: 12ᵗʰ February, 2021
Duration: 8 hours   **Max. Marks: 40**
Instructions:
- The respective marks for each question are indicated in-line.
- Indicate correct question numbers in front of the answer.
- No questions or clarification can be sought during the exam period, answer as it is, giving reason, if any.

Marks

Q.1 "X" is a businessman and is planning to explore the online platform in order to expand his business activities. Being unaware of the security and the operational mechanism of the e-commerce, "X" is bit worried and hence expects you to provide with information on the following: (2x2= 4)

     a) Explain any four advantages of e-commerce primarily highlighting the way it helps in lessening the financial burden on Organizations. (200-300 Words)

     b) In order to ensure that the electronic documents taken out by the Organization are authentic ones, explain the principle and working of the digital signature, with the help of neat diagram. (200-300 Words)

Q.2 "X" is a well-known lawyer of the city and keeps on receiving good number of cases. "X" plans to upgrade the office and to make it more technically equipped that will in-turn help in enhancing the work with better efficiency. In this regard, "X" requires the following information from you, being a student of law having knowledge of Information Technology: (2+1.5 +1.5= 5)

     a) Explain any four features of Cloud Computing that enhances its utility over normal computer systems. (2 Marks) (200-300 Words)

     b) Explain three characteristics of programming with Artificial Intelligence which makes it superior over general programming. (1.5 Marks) (200-250 Words)

     c) Explain the key attributes of Blockchain, a digital distributed ledger, so as to understand whether it's beneficial to implement the same in the Office. (1.5 Marks) (200-250 Words)

Q.3   "Y" is a Law Firm situated in city "W". During the vacation time, you have been taken   (2+3= 5)
there as an intern. The Law Firm has set-up a good computer network architecture
wherein the computers follow the standard protocols when they send or receive the
information through network. Today, when the Law Firm started functioning, it has
been observed that the computer network is not functioning properly. Accordingly, the
Service Provider was called up to rectify the problem of the computer network
architecture. However, due to some pre-engagements, the service provider informed that
he will be able to physically visit only after two days and in the meantime if details of the
problem are informed via phone, he can attempt to rectify from distance. The Law Firm
wants you to prepare a reply to the following so that the same can be handed over to the
operating staff of the firm to inform appropriately to the Service Provider:

   a)   Enlist and explain the main components of the computer network, which will
        enable the operating staff to inform about the faulty component(s). (2 Marks)
        (200-300 Words)

   b)   Explain any three layers, forming part of the attempt to present a complete
        protocol standard, representing to isolate a single factor that is relevant to
        communication between computers completely and successfully. (3 Marks)
        (300-400 Words)

Q.4   "Z" is aware that the microprocessor is a programmable electronics chip that has   (3x2= 6)
computing and decision-making capabilities similar to central processing unit of a
computer. However, is not aware in-detail, how it works and so not in a position to fully
utilize its capabilities. "Z" wants you, as a friend, to answer the following queries:

   a)   Draw the architecture of the microprocessor and explain the various components
        that form part of its architecture. (300-400 Words)

   b)   Explain the working of the RS Flip Flop that will provide output only at the
        positive edge of a pulse, with the help of neat diagrams and truth table. (300-400
        Words)

Q.5   Read the following facts related to the hacking case and answer the following questions: (10)
In the given case medical files are on the target of black-hat hackers because of their
comprehensive nature. The intension of these malicious actors is to collect millions of
different names, addresses, phone numbers and credit card or banking information, but
they can also get their hands on insurance policy data, which allows for the commission

of insurance fraud, an extremely profitable crime. Based on the above facts assess how secure Arogya Setu App is and suggest the steps to check the vulnerability. (900-1000 Words)

Q.6 How the information entered in the comments on social media portal, the Linkedin can be used for cyber stalking? Explain. Suggest some precautionary actions for the same. (500-600 Words) (5)

Q.7 Does network security has any creative angle? Is it proper creativity or we need to focus on set directions? Share your view point with the help of scientific reasonings. (500-600 Words) (5)

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