The Millennium Stars School and College
Rangpur Cantonment
**Assignment – 2020/March-April**
Class-XI
Subject: Information and Communication Technology
**(Answer All the Questions)**

Full Marks 10x8=80

1. **COVID-19 is the infectious disease caused by the most recently discovered corona virus. People can catch COVID-19 from others who have the virus. The disease can spread from person to person through small droplets from the nose or mouth which are spread when a person with COVID-19 coughs or exhales. Almost 1 Million people from 200 countries have infected by COVID19. It becomes irresistible. Scientists from all over the world are trying to make an anti-dot. In Bangladesh scientist Dr. Hasan and his team are also trying to do the same.**
   a. What is Biometrics?
   b. It is possible to read at library which is thousands miles away in different county- Explain how.
   c. Which trend of Information Technology will help Dr. Hasan to find out the characteristics of the COVID-19?
   d. If scientists want to change the characteristics of the COVID-19 to reduce its drastic behavior, which trend of Information Technology will help them?

2. **The Prime Minister of Bangladesh along with high level officials had a meeting with the Deputy Commissioners of 64 districts from her office in Dhaka on the COVID-19 issue. It was an interactive meeting. During meeting the Deputy Commissioner of Rangpur has proposed to implement the Face Recognition Identification System for all the citizens of Bangladesh so that it can help us in any emergency situation of the country.**
   a. What is Robotics?
   b. Treatment is possible in the excessive cool temperature with the help of ICT- Explain
   c. What are the benefits of the technology that is used for meeting from remote places? Explain according to the stem.
   d. Analyze the technology is required to implement the proposed attendance system mentioned in the stem.

3. Observe the figures and answer the following question:
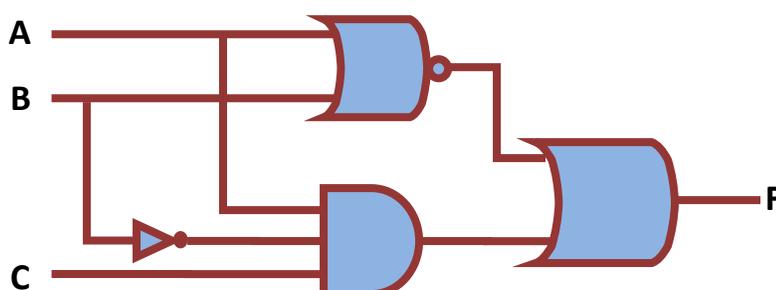

Figure 1

Figure 2

   a. What is the ASCII?
   b. Name and give brief description of the circuit which can convert Computer Language into Human Language.
   c. Is it possible to add 3 bits using **Figure 1**? Analyze your answer.
   d. Find out the value of **F** in **Figure 2** and Simplify. Draw the logic circuit of simplified value.

4. **Since it is not safe to go outside due to COVID-19, Mr. Asif told his son that he has paid his monthly internet bill 1F4 Taka and electricity bill 101100101 Taka from his mobile phone. His school going son understands that he has used bKash mobile banking system to pay the bill but could not understand the amount value his father told him.**
   a. What is Logic Gate?
   b. Write down the D'Morgan's Theorem on main principles of Boolean Algebra.
   c. Convert the bill amounts mentioned in the stem into a Number System that can be understood by general person like Mr. Asif's son.
   d. Find out the difference between 2 bill amounts using 2's complement.

5. Observe the figures and answer the following question:
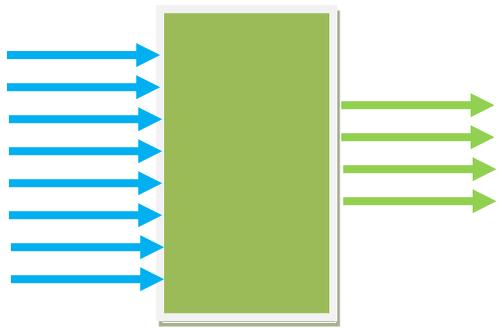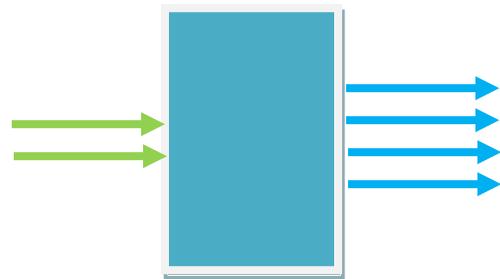
Figure 1

Figure 2

a. What is Register?

b. Draw a logic circuit diagram using only NAND Gate for the equation $F = \bar{X}Y + X\bar{Z} + YZ$

c. Write down the truth table and draw the logic circuit diagram of the Figure1.

d. In the above stem which block diagram is used to transfer First Generation Language to Fifth Generation Language? Explain.

6. Observe the following figures and answer the questions.
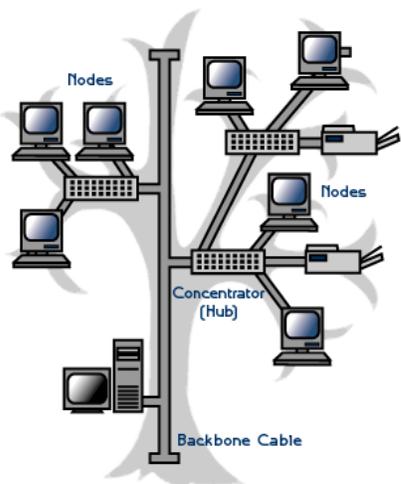
Figure 1
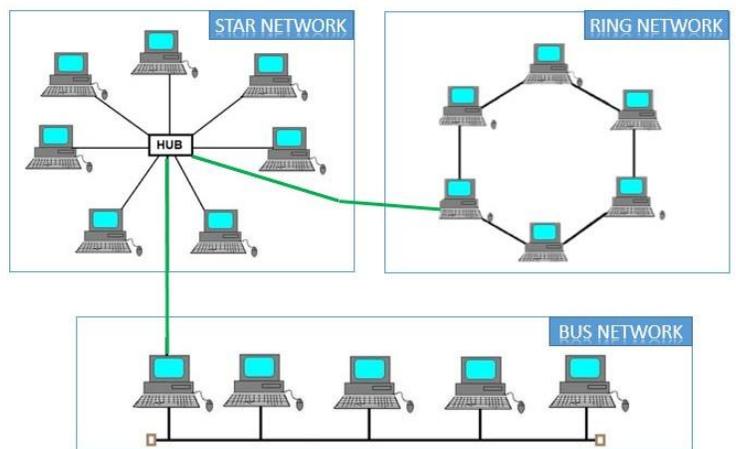
Figure 2

a. What is Bandwidth?

b. Write the Difference between Synchronous and Asynchronous Data Transmission Method.

c. Tree Topology is the extended version of Star Topology. Explain according to the Figure1.

d. Which Topology of the above stem is better? Why do you think so, explain.

7. Observe the following figures and answer the questions.

Figure: Data Transmission Method

a. What is cloud computing?

b. Give a short description of PaaS.

c. What is Data Transmission Method? Write down the difference between Serial and Parallel Data Transmission Method.

d. Explain the Data Transmission Method shown on the above stem.

8. **Notice the following table and answer the questions.**

Class Time Table

Class	Nursery		Remark
Shift	Morning	Day	
Start Time	8:30$_{AM}$	11:30$_{AM}$	
End Time	11:30$_{AM}$	01:30$_{PM}$	

    a. What is Empty Tag in HTML?

    b. Write down HTML code to create Unordered Nested List.

    c. Create the above mentioned table using HTML Table Tag.

    d. Table mentioned in the stem can be created using <div>…..</div> tag. Explain.