

Week 1: Proficiency

Answers

1. Three differences between High Level Language and Low Level Language.

High Level Language	Low Level Language
High level languages are near to human languages	Low level languages are far from human languages
Deep knowledge of hardware is not required to write programs.	Deep knowledge of hardware is required to write programs.
High level languages do not provide much facility at hardware level.	Low level languages provide facility to write programs at hardware level

2. The **3 translators** are:

- Assembler
- Compiler
- Interpreter

3. Two differences between Compiler and Interpreter

Compiler	Interpreter
Compiler converts a program into machine code as a whole	Interpreter converts a program into machine code one statement at a time
Program execution is fast .Since once program is compiled successfully an object code file is produced.Now this object file is executed. No need of re-compilation unless we change the source code.	Program execution is slow because every time we want to run a program it is interpreted again.

4. **Convert the following:**

a) Binary to Decimal

I. $11001011 = 203_{10}$

II. $11100011 = 227_{10}$

b) Decimal to Binary

I. $197 = 11001011_2$

II. $252 = 11111100_2$

c) Binary to Hexadecimal

I. $10100111 = 67_{hex}$

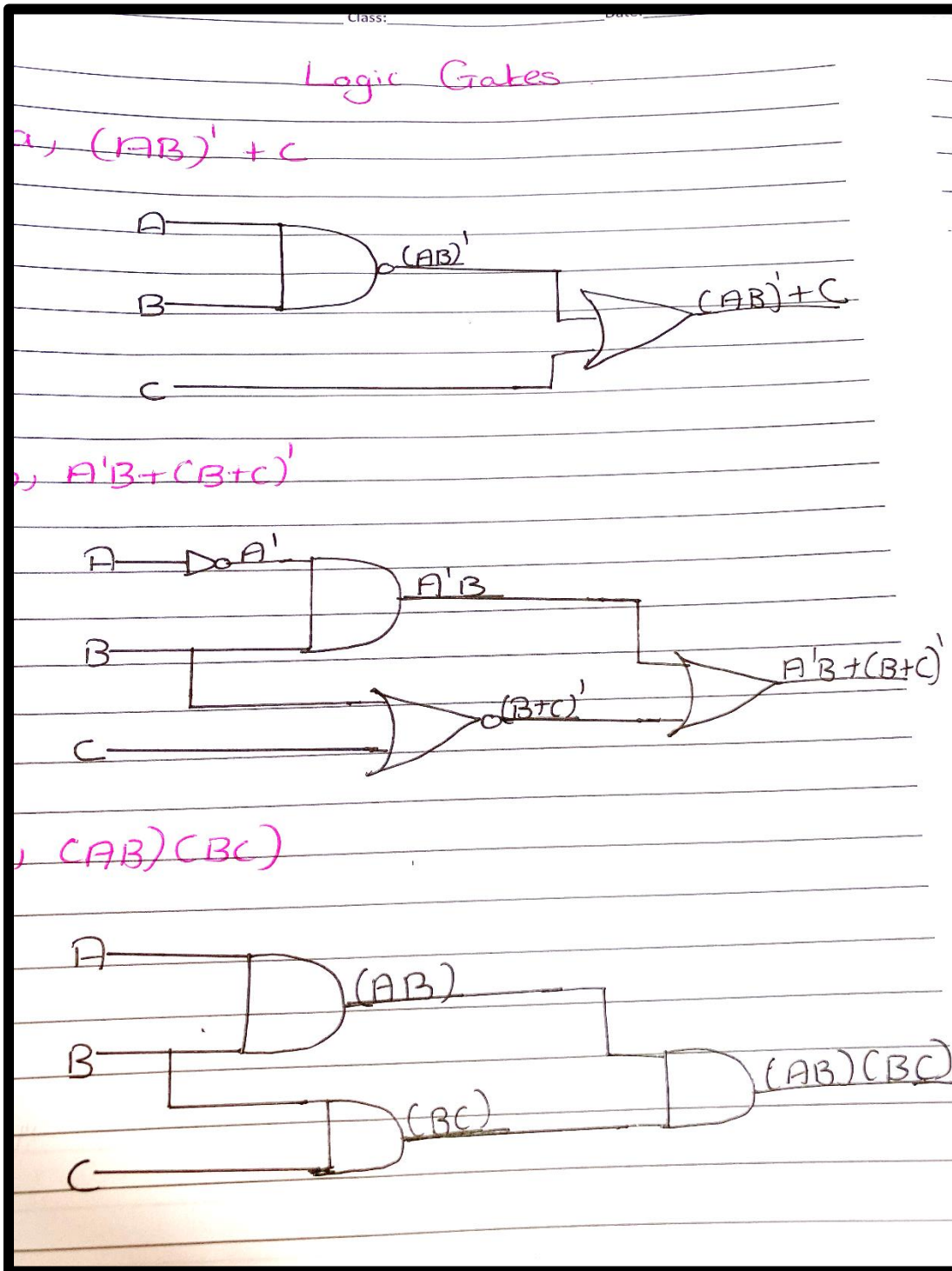
II. $11001100 = CC_{hex}$

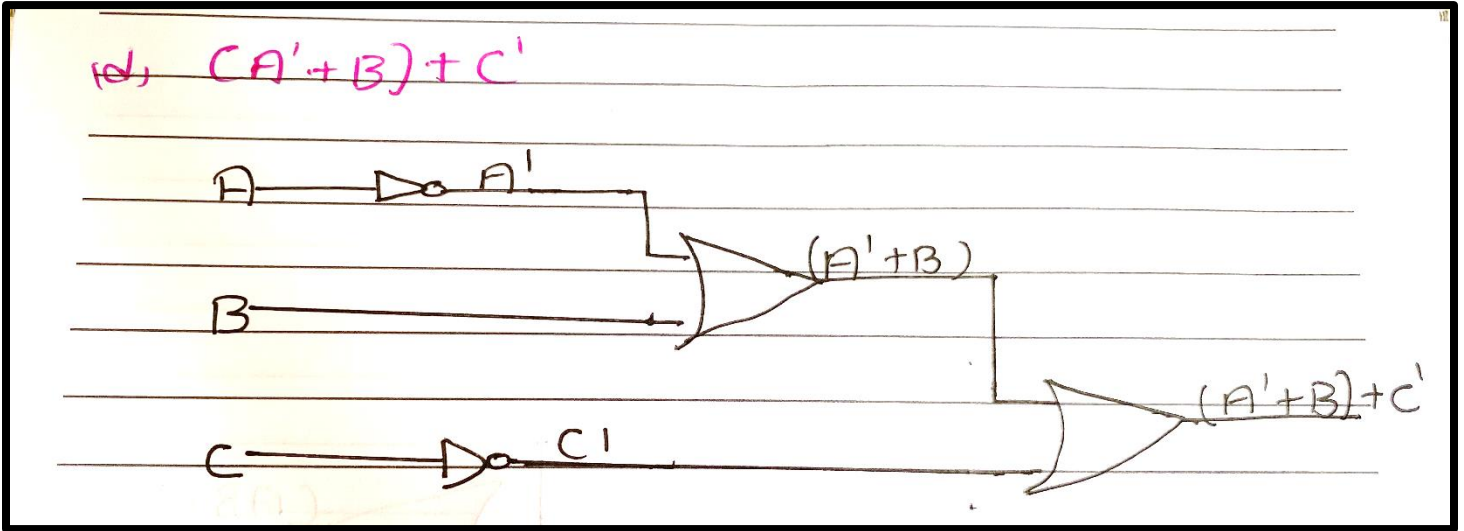
d) Hexadecimal to Binary

I. $FB_{Hex} = 11111011_2$

II. $CC_{Hex} = 11001100_2$

5. The logic gates of the following circuits.





6. The following **steps** should be done to send the letters to each parents

- Should draft a sample letter
- Click on the Mailings tab, and in the Start Mail Merge group, click Start Mail Merge.
- Click Step-by-Step Mail Merge Wizard
- Select your document type. In this demo we will select Letters. Click Next: Starting document
- Select the starting document. In this demo we will use the current (blank) document. Select Use the current document and then click Next: Select recipients.
- From the Mail Merge task pane, select Use an existing list, then click Browse... to select the file.
- Locate your file and click Open.
- Click on Insert Merge Field
- Click on write your letter

7. **Two ways** in which computer technology has changed teaching in school

- **Digital Simulations And Models** : Digital simulations and models can help teachers more tangibly and clearly explain difficult concepts.
- **Improved Communication**: Technology can change the classroom into a network where teachers post assignments progressively, and students can ask questions more easily.

8. Two differences between **RAM** and **ROM**

RAM	ROM
RAM is volatile. So, its contents are lost when the device is powered off	It is non-volatile, i.e., its contents are retained even if the device is powered off
The price of RAM is quite high.	The price of ROM is comparatively low.

9. **Video conferencing** is a technology that allows users in different locations to hold face-to-face meetings without having to move to a single location together. Uses for video conferencing include holding routine meetings, negotiating business deals, and interviewing job candidates.

a)

Advantages of video Conferencing	Disadvantages of video Conferencing
Saves time and money.	Lack of Personal Connection
Increased efficiency and productivity	Time Zone Differences
Meeting can be held with people from many different offices /countries without any of them having travel	If the hardware breaks down for any of the participants they will not be able to attend the meeting

10. **Ecommerce** also known as electronic commerce or internet commerce, refers to the buying and selling of goods or services using the internet, and the transfer of money and data to execute these transactions.

- **Advantage of using E-Commerce**
 - Your business can also save money on rent, utilities, maintenance, and other costs associated with physical stores
- **Disadvantage of using E-Commerce**
 - Security and credit card fraud are also huge risks when dealing with online shopping.