Course: Operating Systems	Course Code: CS 2006
Section: BSE-5B	Total Marks:10
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Question 1: [10 Marks]

You are building a file transfer system between a parent and child process. The parent process sends chunks of a file to the child process, and the child acknowledges receipt of each chunk by sending a confirmation message back to the parent.

Instructions:

1. The parent reads a file in chunks and sends each chunk to the child through one pipe.
2. After receiving a chunk, the child sends a confirmation message through another pipe indicating successful receipt.
3. The parent should continue sending the next chunk only after receiving the confirmation from the child.
4. Once the file is fully transferred, the child sends a final confirmation, and both processes terminate.

```
int main() {
    string filename = "temp.txt";
    int p_to_c[2]; // fd's
    int c_to_p[2]; // fd's
    pipe(p_to_c);
    pipe(c_to_p);


    pid_t pid = fork();
    if (pid < 0) { cout << "Error" << endl;
                    exit(1);
                 }


    if ( pid == 1) // parent
    {   const char* cha = new char[100];
        int st = open(*filename, 0); // Here O is 0_RDONLY
        if (st == -1) { exit(1);}
            read(0, &char, sizeof(ch));
        close(p_to_c[0]);    int status = 0;
        close(c_to_p[1]);
        while( true){
            read(0, &cha, sizeof(ch));  ──→ if {ch == Eof}
            write (p_to_c[1], &ch, sizeof (ch));      { break;}
            read ( c_to_p[0] , &status, sire of (status);
               ...    0}{
```