

10. Illustrate the concept of inter-process communication using message queue with a C program.

```
#include <stdio.h>
#include <sys/ipc.h>
#include <sys/msg.h>
#include <string.h>
#include <unistd.h>
#include <sys/wait.h>

struct msg { long type; char text[50]; };

int main() {
    key_t key = ftok("file", 65);
    int qid = msgget(key, 0666 | IPC_CREAT);
    pid_t pid = fork();

    if(pid == 0) {
        struct msg m;
        msgrcv(qid, &m, sizeof(m.text), 1, 0);
        printf("Child received: %s\n", m.text);
    } else {
        struct msg m; m.type = 1;
        strcpy(m.text, "Hello from Parent");
        msgsnd(qid, &m, sizeof(m.text), 0);
        wait(NULL);
        msgctl(qid, IPC_RMID, NULL);
    }
    return 0;
}
```

OUTPUT:

Child received: Hello from Parent